

## **APPENDIX B – AGENCY CORRESPONDENCE**

**APPENDIX B1 – Section 106 Documentation**

**APPENDIX B2 – Section 4(f) Documentation**

**APPENDIX B3 – U.S. Fish and Wildlife Service Documentation**

**APPENDIX B4 – U.S. Army Corps of Engineers Documentation**

**APPENDIX B5 – Mecklenburg County Land Use and Environmental Services Agency  
Air Quality Division Documentation and MOVES 2010a Documentation**

**APPENDIX B6 – Federal Highway Administration (FHWA) Documentation**

**APPENDIX B7 – Comments on the Draft EIS**

**APPENDIX B8 – Responses to Comments on the Draft EIS**

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**APPENDIX B1 – Section 106 Documentation**

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U.S. Department  
of Transportation  
**Federal Transit  
Administration**

REGION IV  
Alabama, Florida, Georgia,  
Kentucky, Mississippi,  
North Carolina, Puerto  
Rico, South Carolina,  
Tennessee

61 Forsyth Street, S.W.  
Suite 17T50  
Atlanta, GA 30303-8917  
404-562-3500  
404-562-3505 (fax)

March 4, 2005

Ms. Renee Gledhill Earley  
State Historic Preservation Office  
Division of Archives and History  
4617 Mail Service Center  
Raleigh, NC 27699-4617

Dear Ms. Earley:

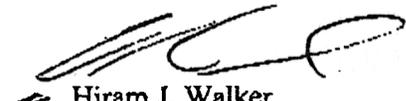
This letter is to notify you of the Federal Transit Administration (FTA) determination that a number of corridors in Charlotte are currently under evaluation by the Charlotte Area Transit System (CATS) for major transit investments, and will be Federal undertakings if FTA provides financial assistance. As such, the projects are subject to Section 106 of the National Historic Preservation Act of 1966, as amended, and associated implementing regulations 36 CFR 800. These corridors are as follows:

- North Corridor
- Northeast Corridor
- Southeast Corridor
- West Corridor
- Center City Streetcar Corridor

Per Subpart A, Section 800.2(a)(3) and 800.2(c)(4) of these regulations, FTA is authorizing CATS, as an applicant for Federal assistance, to prepare information, analyses, and recommendations regarding Section 106 consultation for these projects. The delegated authority to initiate consultation does not extend to making determinations, such as the area of potential effects or consulting parties.

Thank you in advance for your assistance on this project. Please contact Alex McNeil of the FTA Regional Office on (404) 562-3511 with any questions. A CATS representative will be contacting your office as the project proceeds.

Sincerely,



Hiram J. Walker  
Regional Administrator

cc: John Muth, Deputy Director, CATS



November 7, 2008

Renee Gledhill-Earley  
Environmental Review Coordinator  
NC State Historic Preservation Office  
4617 Mail Service Center  
Raleigh, NC 27699-4617

RE: Charlotte Area Transit System, LYNX Blue Line Extension Light Rail Project, Northeast Corridor, Charlotte, Mecklenburg County, **ER 06-1957**  
Phase II Historic Architectural Resources Survey Report

Dear Ms. Gledhill-Earley:

In accordance with the National Historic Preservation Act of 1966, as amended, and its implementing regulations, 36 CFR Part 800, as published in the Federal Register on December 12, 2000, the Federal Transit Administration and the Charlotte Area Transit System seek Section 106 Consultation comments for the CATS LYNX Blue Line Extension Light Rail Project in Charlotte/Mecklenburg County, North Carolina.

The enclosed documentation is the result of the Phase II Historical Architectural Resources Survey Report that was undertaken in compliance with Section 106 of the National Historic Preservation Act of 1966. This survey was undertaken to identify resources listed in or eligible for listing in the National Register of Historic Places that may be affected by the proposed project. The survey included all resources within the defined Area of Potential Effects/Historic Architectural Resources that was discussed in our coordination meeting on September 11, 2008.

The Phase II Historical Architectural Resources Survey Report was prepared by Frances Alexander and Richard Mattson of Mattson, Alexander and Associates, Inc., a Charlotte-based cultural resource firm.

The Charlotte Area Transit System (CATS) is in the process of preparing a Draft Environmental Impact Statement for the LYNX Blue Line Light Rail Extension Project and would like to include your consultation comments on Eligibility in the DEIS. Therefore, we seek consultation comments within the 30-day provision cited in 800.3(c) of the revised regulations.

Continued ...



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600 East Fourth Street  
Charlotte, NC 28202  
PH: 704-336-6917  
FAX: 704-353-0797

Thank you in advance for your assistance on this project. Please send your responses back to me at: Charlotte Area Transit System, 400 East Trade Street, Charlotte, NC 28202. I may be reached at (704) 336-3513 if you have any questions regarding the project. We look forward to continuing our coordination with you on this project.

Sincerely,



Kelly Goforth  
Assistant Project Manager

Cc: Keith Melton, FTA Region IV  
John Muth, Deputy Director, CATS  
Danny Rogers, Senior Project Manager, CATS



**North Carolina Department of Cultural Resources  
State Historic Preservation Office**

Peter B. Sandbeck, Administrator

Beverly Eaves Perdue, Governor  
Linda A. Carlisle, Secretary  
Jeffrey J. Crow, Deputy Secretary

Office of Archives and History  
Division of Historical Resources  
David Brook, Director

April 8, 2009

Kelly Goforth  
Charlotte Area Transit System  
600 East Fourth Street  
Charlotte, NC 28202



Re: Archaeological Survey of the Proposed LYNX Blue Line Extension, Charlotte Area Transit System,  
Mecklenburg County, ER 06-1957

Dear Ms. Goforth:

Thank you for your letter of March 25, 2009, transmitting the archaeological survey report by Dennis Gosser of Coastal Carolina Research, Inc. for the above project. We have reviewed the report and offer the following comments.

During the course of the survey, no Native American or historic period archaeological sites were located within the area of potential effect (APE). One site, 31MK1075\*\* was recorded within a proposed station location that has since been eliminated from the project and will not be affected. Due to the absence of cultural resources, Mr. Gosser has recommended that no further archaeological investigation be conducted in connection with this project. We concur with this recommendation since the project will not involve significant archaeological resources.

The report meets our office's guidelines and those of the Secretary of the Interior.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, please contact Renee Gledhill-Earley, environmental review coordinator, at 919/807-6579. In all future communication concerning this project, please cite the above referenced tracking number.

Sincerely,

A handwritten signature in blue ink that reads "Renee Gledhill-Earley".

Peter Sandbeck

cc: Loretta Lautzenheiser, Coastal Carolina Research, Inc.



September 21, 2009

ER 06-1957

Ms. Renee Gledhill-Earley  
Environmental Review Coordinator  
NC State Historic Preservation Office  
4617 Mail Service Center  
Raleigh, NC 27699-4617



RE: Determinations of Effects, Proposed LYNX Blue Line Extension, Northeast Corridor Light Rail Project, Charlotte Area Transit System (CATS), Charlotte, Mecklenburg County, ER # 06-1957

Dear Ms. Gledhill-Earley:

Thank you for meeting with our team to discuss the September 4, 2009 Evaluation of Effects Report prepared by Mattson Alexander and Associates for the LYNX Blue Line Extension Northeast Corridor Light Rail Project. As summarized from our meeting of September 15, 2009, the effects for the LYNX Blue Line Extension were determined to be:

Light Rail Alternative:

Phillip Carey Company Warehouse – No Effect  
McNeil Paper Company Warehouse Complex – No Effect  
Orient Manufacturing Company/Chadwick-Hoskins No. 3 – No Adverse Effect  
Chadbourn Hosiery Mills – No Effect  
North Charlotte Historic District – No Adverse Effect  
Herrin Brothers Coal and Ice Company Complex – No Adverse Effect  
Standard Chemical Products Plant – No Adverse Effect  
Republic Steel Corporation Plant – No Effect  
General Motors Training Facility – No Adverse Effect

Light Rail Alternative - Sugar Creek Design Option:

Standard Chemical Products Plant – No Effect  
Republic Steel Corporation Plant – No Adverse Effect  
General Motors Training Facility – No Effect

continued . . .



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Page 2  
Renee Gledhill-Earley  
September 21, 2009

In accordance with Section 106 and NEPA, these results will be reported in the Draft EIS anticipated to be released for public and agency comments next spring. We appreciate the opportunity to consult with you on the effects of our project on historic resources and look forward to receiving your concurrence on the line below identifying your agreement with the determinations documented on the first page of this letter.

Please feel free to contact me at (704) 336-3513 with any questions.

Sincerely,



Kelly Goforth  
Assistant Project Manager

Concurrence:

 10.1.09  
Renee Gledhill-Earley                      Date

c: Keith Melton, FTA Region IV  
John Muth, Interim CEO, CATS  
Danny Rogers, Senior Project Manager, CATS



December 28, 2009

ER 06-1957

Ms. Renee Gledhill-Earley  
Environmental Review Coordinator  
NC State Historic Preservation Office  
4617 Mail Service Center  
Raleigh, NC 27699

H-

Due 1/19/10

RE: Historic Evaluation of Effects Report Addendum, Sugar Creek Park-and-Ride Option 2, Proposed LYNX Blue Line Extension, Charlotte Area Transit System (CATS), Charlotte, Mecklenburg County, ER # 06-1957

Dear Ms. Gledhill-Earley:

Enclosed please find two copies of the above referenced report addendum for your review in accordance with Section 106 of the National Historic Preservation Act. In October, your office provided a review of the proposed LYNX Blue Line Extension. Since that time, an additional location option for a proposed park-and-ride garage has been added to the project and is referenced as the "Sugar Creek Park-and-Ride Option 2." The enclosed report provides information to document that "no effect" would occur at the newly proposed location.

We would like to request your review and concurrence on this project change. If you concur, please sign on the concurrence line provided below and return this letter. Thank you in advance for your assistance on this project. Please feel free to contact me at (704) 336-3513 with any questions.

Sincerely,

Kelly R. Goforth  
Project Development Manager

Concurrence: *of No Effect for Option 2*

  
Renee Gledhill-Earley

1.11.2010  
Date

c: Keith Melton, FTA, Region IV  
John Muth, Interim CEO, CATS (w/o report)  
Danny Rogers, Senior Project Manager, CATS (w/o report)



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**North Carolina Department of Cultural Resources  
State Historic Preservation Office**

Peter B. Sandbeck, Administrator

Beverly Eaves Perdue, Governor  
Linda A. Carlisle, Secretary  
Jeffrey J. Crow, Deputy Secretary

Office of Archives and History  
Division of Historical Resources  
David Brook, Director

January 25, 2010

Kelly Goforth  
Charlotte Area Transit System  
600 East Fourth Street  
Charlotte, NC 28202



Re: Archaeological Survey Addendum of the Proposed LYNX Blue Line Extension, CATS,  
Mecklenburg County, ER 06-1957

Dear Ms. Goforth:

Thank you for your letter of January 5, 2010, transmitting the archaeological survey report by the staff of Coastal Carolina Research, Inc. for the above project.

During the course of the survey, no Native American or historic period archaeological sites were located within the project area. Due to the absence of archaeological resources, Mr. Gosser has recommended that no further archaeological investigation be conducted in connection with this project. We concur with this recommendation since the project will not involve significant archaeological resources.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, please contact Renee Gledhill-Earley, environmental review coordinator, at 919/807-6579. In all future communication concerning this project, please cite the above referenced tracking number.

Sincerely,

Peter Sandbeck

cc: Loretta Lautzenheiser, Coastal Carolina Research, Inc.



October 26, 2010

Ms. Renee Gledhill-Earley  
Environmental Review Coordinator  
NC State Historic Preservation Office  
4617 Mail Service Center  
Raleigh, NC 27699

Re: LYNX-Blue Line Extension Northeast Corridor Light Rail Project  
Historic Evaluation, ER # 06-1957

Dear Ms. Gledhill-Earley:

This letter is notify you of minor changes in the above-referenced project. Previous Historic Evaluation reviews by the State Historic Preservation Office and subsequent Determination of Effects were based on 15% Preliminary Engineering Plans. Since that time, 30% Preliminary Engineering Plans have been completed, resulting in refinements to the design and subsequently, minor changes to the effects of three properties eligible for the National Register (NR) of Historic Places. A description of the changes is as follows:

**McNeil Paper Company Warehouse Complex** (NR-Eligible), 301-307 East 8th Street

At 15% Preliminary Engineering Design, the proposed light rail station at 9th Street, located one block from the McNeil Paper Company Warehouse Complex, was configured as a center platform station. To accommodate the platform between the light rail tracks, the tracks had to be spread apart as they approached the station (Figure 1, 15% Preliminary Engineering Design). The existing northbound track between 7th Street and 9th Street was to remain in the existing location, but a second southbound track was to be constructed to the west – away from the McNeil Paper Company Warehouse Complex, located along the east side of the corridor. No right-of-way was required. A finding of No Effect was determined.

Upon completion of 30% Preliminary Engineering Design, the 9th Street Station is now a side platform station. While the tracks no longer need to be spread apart to accommodate the platform, the existing northbound track needs to be realigned to maintain 14-foot centers approaching and leaving the station. This will result in a slight alignment shift to the west, away from the McNeil Paper Company Complex. As before, no right-of-way will be required, and the final conditions will result in the light rail tracks being slightly further away from the property (Figure 1, 30% Preliminary Engineering Design). However, removal and replacement of the existing northbound track could potentially result in construction activities closer to the warehouse complex than originally anticipated.

**Herrin Brothers Coal and Ice Company Complex** (NR-Eligible), 315 East 36th Street

As presented at 15% Preliminary Engineering Design, an effect would occur to this property due to the depression of 36th Street under the future light rail and relocation of existing freight tracks adjacent to this resource. The relocated freight tracks would extend through the southern edge of the property within the existing rail corridor (Figure 2, 15% Preliminary Engineering Design). Also, construction of a retaining wall for the depression of 36th Street would necessitate a temporary construction easement and introduction of a new visual element (the 36th Street Station on the south side of the corridor). A minor amount of land was to be acquired, but no buildings located on the property were to be altered or demolished and access would be maintained. While some effects

Continued . . .



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would occur as a result of the proposed project, the alterations would not change the characteristics which make the Herrin Brothers Coal and Ice Company Complex eligible for the National Register. A finding of No Adverse Effect was determined.

Upon completion of 30% Preliminary Engineering Design, minor changes were noted at this location. Due to the above-referenced depression of 36th Street, the retaining wall needs were further refined, resulting in an approximate 100-foot extension of the wall (Figure 2, 30% Preliminary Engineering Design). The extension of the wall further minimizes impacts to the Herrin Brothers property by keeping grading needs for slopes to a minimum. As before, a minor amount of land (approximately 344 square feet, less than 1 percent) would be acquired; however, no buildings located on the property would be altered or demolished and access would be maintained.

**Standard Chemical Products Plant (NR-Eligible), 600 East Sugar Creek Road**

Two Park-and-Ride Options were previously submitted for the proposed Sugar Creek Station, known as Sugar Creek Park-and-Ride Option 1 and Sugar Creek Park-and-Ride Option 2. Option 1 consisted of the development of three separate surface parking lots on the north side of the existing railroad tracks and the Sugar Creek Station (Figure 3a). Option 2 consisted of a multiple level parking garage on three parcels south of the existing tracks and the Sugar Creek Station (Figure 3b).

Due to engineering constraints, safety concerns and cost considerations, a third option known as Sugar Creek Park-and-Ride Option 1A has been proposed. Sugar Creek Park-and-Ride Option 1A consists of a parking garage located north of the existing railroad tracks and the Sugar Creek Station, located between Raleigh Street and the rail corridor (Figure 3c). The parking garage would be located directly west of the Standard Chemicals Products Plant on a parcel that was previously proposed as one of the three parcels for a surface lot under the Sugar Creek Park-and-Ride Option 1. The parking garage would be located outside the National Register boundaries of the Standard Chemical Products Plant property. The Sugar Creek Station platform shifts slightly south to better serve the new park and ride location. The southeast corner of the Standard Chemical Products Plant would still need to be acquired to accommodate a sidewalk and ramp for the station. As before, no buildings or significant features would be demolished for the proposed project, and the characteristics which make this property eligible for the National Register would remain unchanged.

**Conclusion**

As detailed, each of these refinements results in relatively minor changes to previously-determined impacts to historic resources. In consultation with Mattson, Alexander and Associates, Inc., and STV/Ralph Whitehead Associates, we feel that it is important to keep you apprised of changes that may affect these important resources. Please advise whether you require any additional information and whether the previous findings remain valid, namely: No Effect to the McNeil Paper Company Warehouse Complex; No Adverse Effect to the Herrin Brothers Coal and Ice Company Complex; and No Adverse Effect to the Standard Chemical Products Plant.

We appreciate the opportunity to consult with you on the effects of the project on historic resources and look forward to hearing from you.

Should you have any questions, please contact me at (704) 336-3513.

Sincerely,



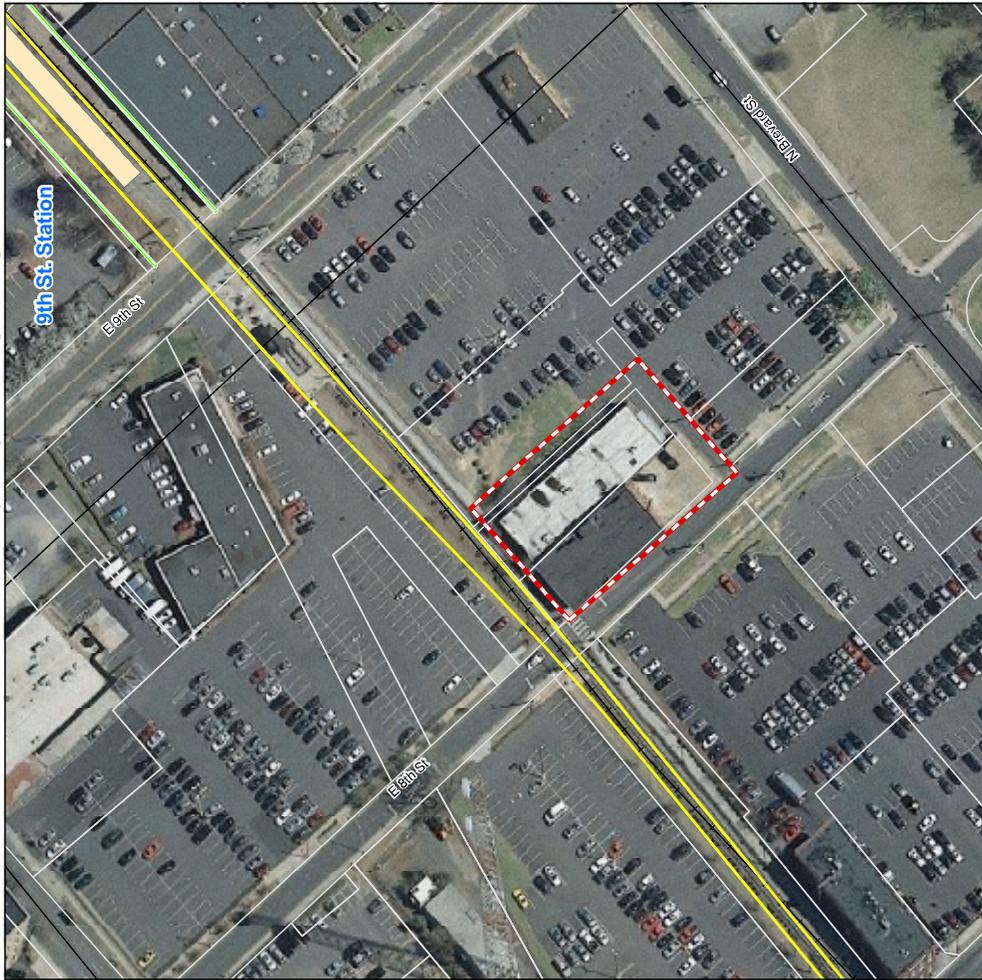
Kelly Goforth

Project Development Manager

**Enclosures**

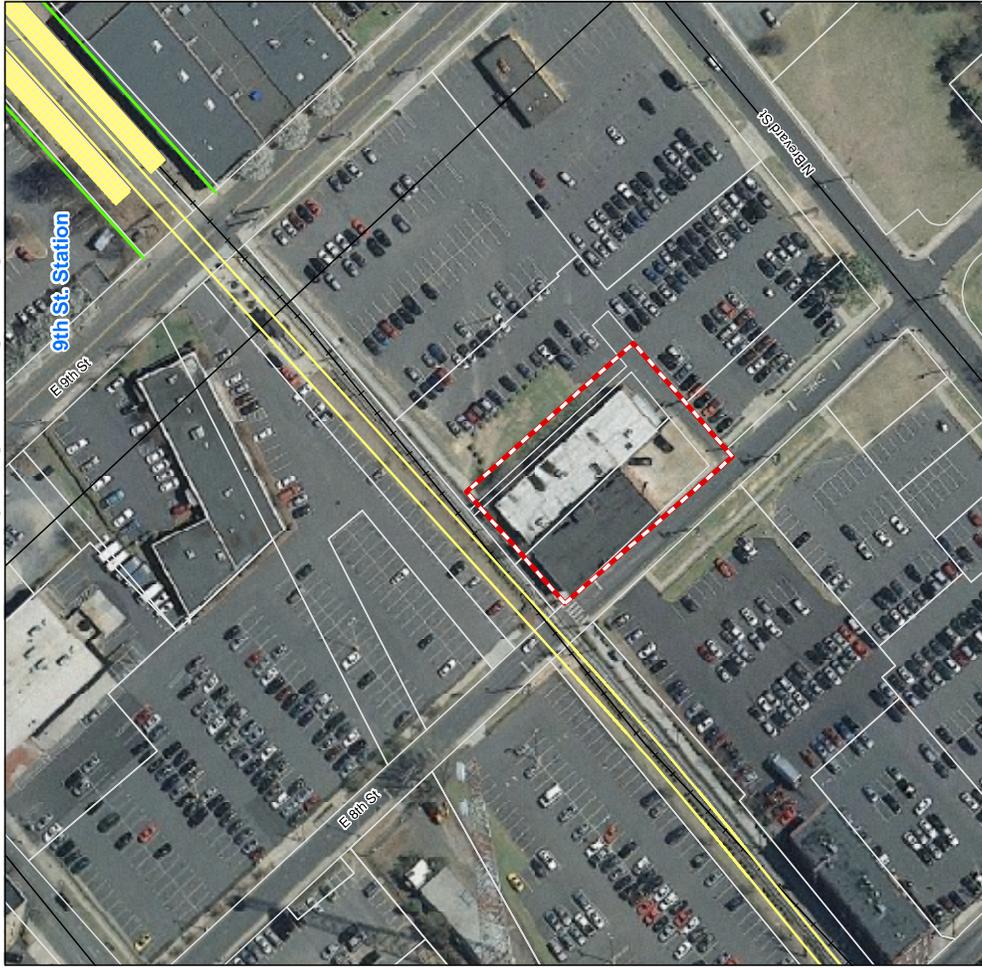
c: Danny Rogers, CATS Senior Project Manager  
Robert Baughman, Project Manager, STV/RWA  
Jennifer Schwaller, Environmental Task Manager, STV/RWA

15% Preliminary Engineering Design

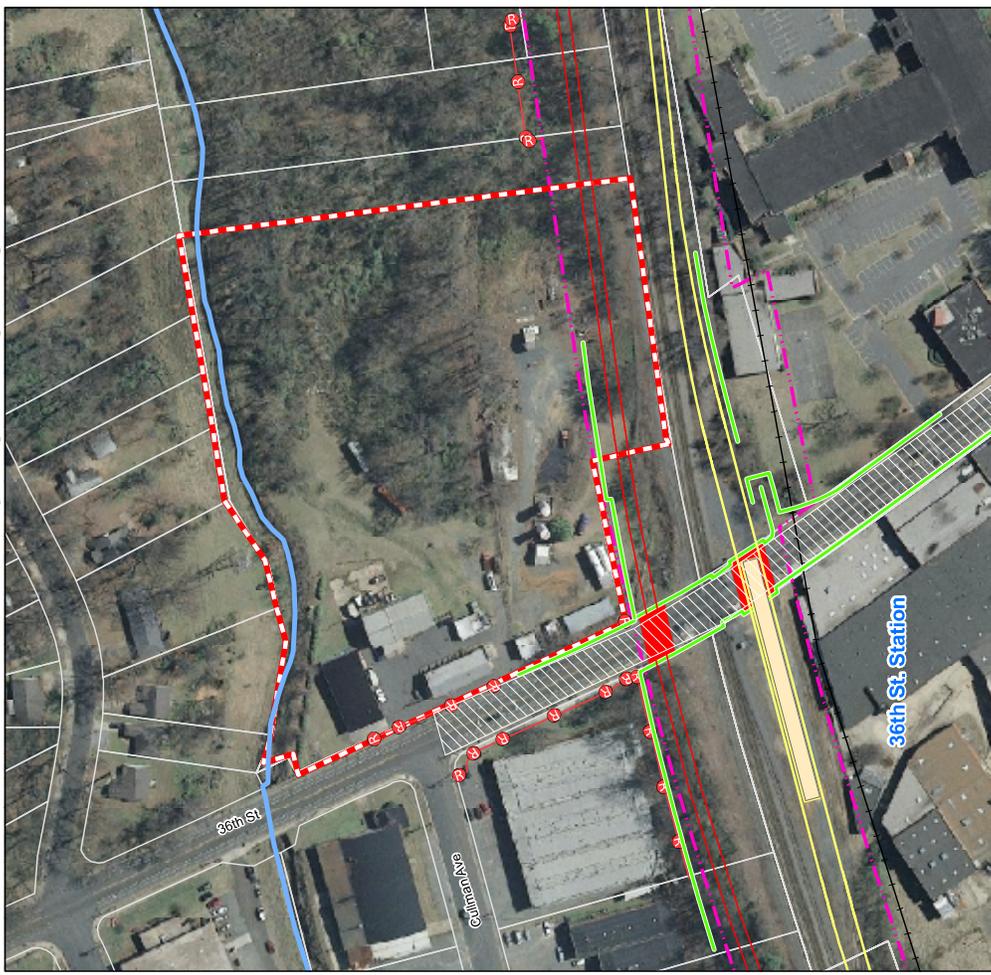


- 15% Design Plans Legend**
- Proposed Light Rail Alternative
  - Design Option
  - Proposed Structures
  - Proposed Station Platforms
  - Proposed Right-of-Way
  - Proposed Retaining Walls
  - Proposed Signal House
  - Proposed Substation
  - Proposed Park-and-Ride Facilities
  - Streams
  - Railroad
  - Roads
  - Historic Resource Site
  - Railroad Right-of-Way
  - Parcels

30% Preliminary Engineering Design



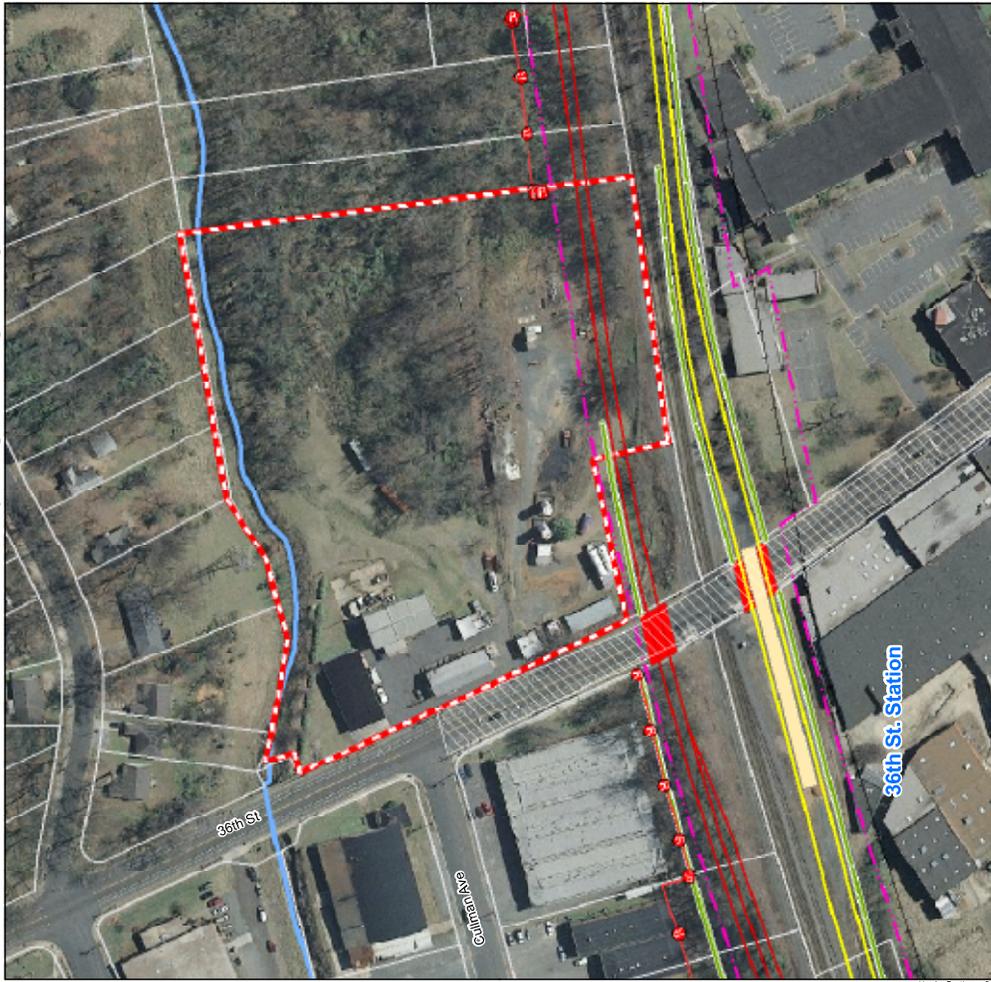
- 30% Design Plans Legend**
- Proposed Light Rail Alternative
  - Design Option
  - Proposed Structures
  - Proposed Station Platforms
  - Proposed Right-of-Way
  - Proposed Retaining Walls
  - Proposed Signal House
  - Proposed Substation
  - Proposed Park-and-Ride Facilities
  - Streams
  - Railroad
  - Roads
  - Historic Resource Site
  - Railroad Right-of-Way
  - Parcels



**30% Design Plans Legend**

- Proposed Light Rail Alternative
- Design Option
- Proposed Structures
- Proposed Station Platforms
- Proposed Right-of-Way
- Proposed Retaining Walls
- Proposed Signal House
- Proposed Substation
- Proposed Park-and-Ride Facilities
- Streams
- Railroad
- Roads
- Historic Resource Site
- Railroad Right-of-Way
- Parcels

Scale: 1 inch = 150 feet  
 75 37.5 0 75 Feet  
 Data Source: Mattson Alexander, Inc. (MAI), Rockwell, KY, VA, Rockwell County, GIS Aerial (2007)



**15% Design Plans Legend**

- Proposed Light Rail Alternative
- Design Option
- Proposed Structures
- Proposed Station Platforms
- Proposed Right-of-Way
- Proposed Retaining Walls
- Proposed Signal House
- Proposed Substation
- Proposed Park-and-Ride Facilities
- Streams
- Railroad
- Roads
- Historic Resource Site
- Railroad Right-of-Way
- Parcels

Map Vicinity

Figure 3A - 30% Preliminary Engineering Design Option 1

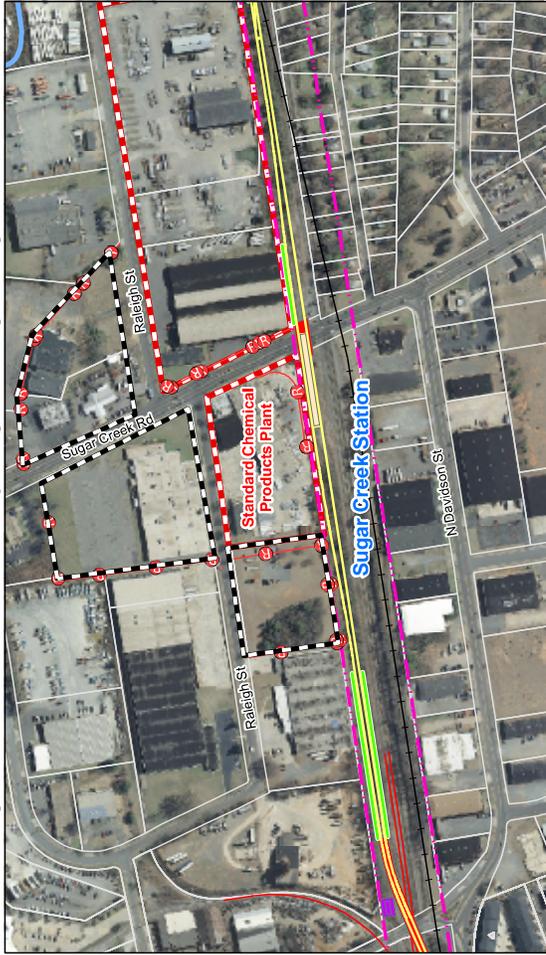


Figure 3C - Revised 30% Preliminary Engineering Design Option 1A

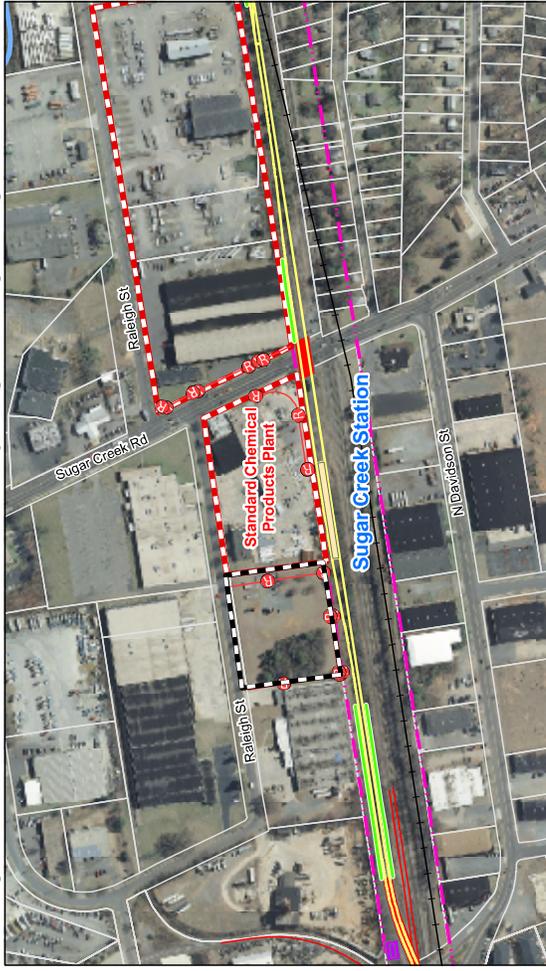
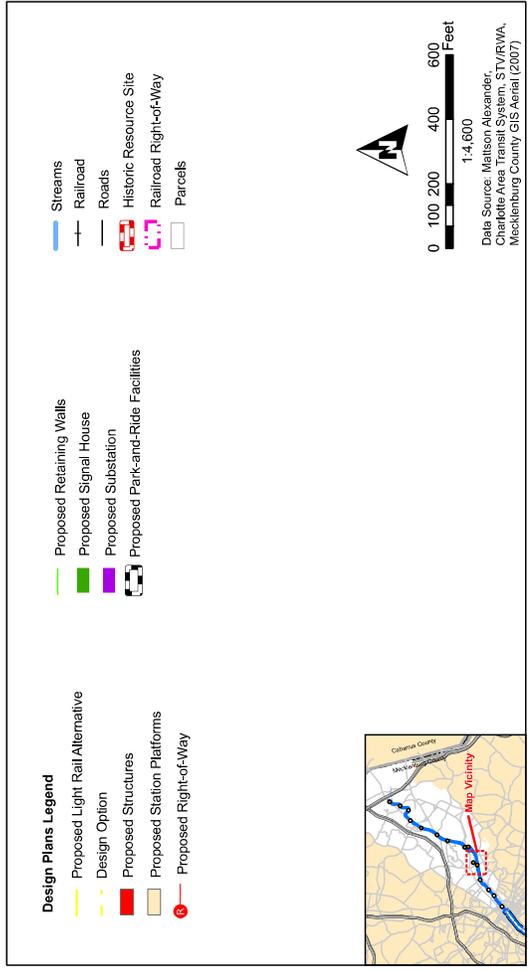
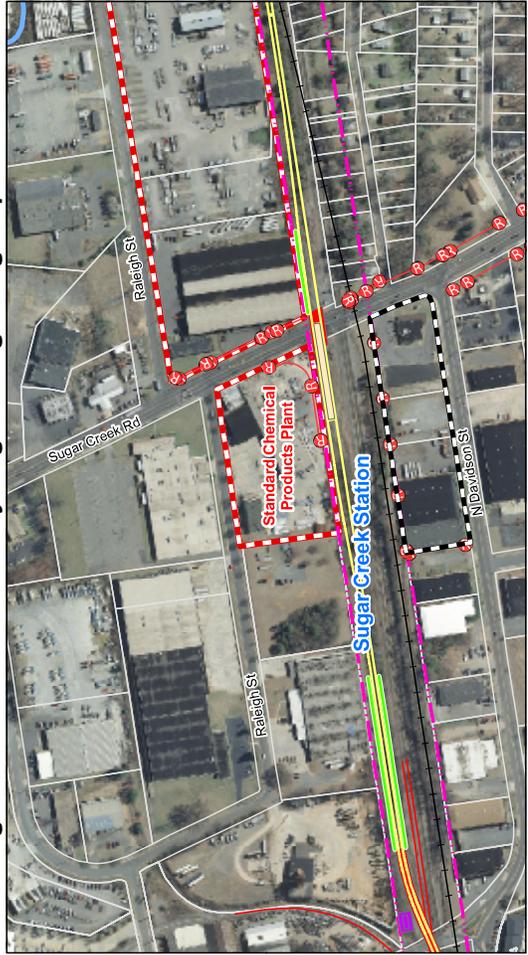


Figure 3B - 30% Preliminary Engineering Design Option 2





## North Carolina Department of Cultural Resources

### State Historic Preservation Office

Peter B. Sandbeck, Administrator

Beverly Eaves Perdue, Governor  
Linda A. Carlisle, Secretary  
Jeffrey J. Crow, Deputy Secretary

Office of Archives and History  
Division of Historical Resources  
David Brook, Director

February 7, 2011

Kelly Goforth  
Charlotte Area Transit System  
600 East Fourth Street  
Charlotte, NC 28202



RE: 30% design changes for LYNX – Blue Line Extension Northeast Corridor Light Rail Project,  
Charlotte, Mecklenburg County, ER 06-1957

Dear Ms. Goforth:

Thank you for your letter of October 26, 2010, transmitting the 30% design changes at three locations along the Blue Line northeast corridor extension. We apologize for our much delayed response. Having reviewed the changes between the 15% and 30% designs at the three locations that involved historic properties, we offer the following comments.

**McNeil Paper Company Warehouse Complex** – we concur that the changes shown in the 30% designs will not affect this National Register-eligible property. Care should be taken during construction to avoid the site either through construction fencing or some other clearly understood construction/staging technique.

**Herrin Brothers Coal and Ice Company Complex** – we concur that the changes shown in the 30% design will not adversely affect the National Register-eligible site, if the newly included retaining wall do not take any right-of-way from the historic property and that the use of pile/panel walls does not create vibrations that could damage the historic structures.

**Standard Chemical Products Plant** - we concur that the new, third option (1A) will not adversely affect the National Register-eligible property, if no additional right-of-way is required.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, please contact Renee Gledhill-Earley, environmental review coordinator, at 919-807-6579. In all future communication concerning this project, please cite the above-referenced tracking number.

Sincerely,



 Claudia Brown

cc: Frances Alexander, Matteson & Alexander, [falexander3@carolina.rr.com](mailto:falexander3@carolina.rr.com)



March 17, 2011

Ms. Renee Gledhill-Earley  
Environmental Review Coordinator  
NC State Historic Preservation Office  
4617 Mail Service Center  
Raleigh, NC 27699

Re: LYNX-Blue Line Extension Northeast Corridor Light Rail Project  
Historic Evaluation, ER # 06-1957

Dear Ms. Gledhill-Earley:

As we discussed on March 15, 2011, CATS has received some updated information regarding the property lines for the Herrin Brothers Coal and Ice (NR-Eligible) property, which is adjacent to the CATS Blue Line Extension light rail alignment. The previous property lines for the Herrin Brothers Coal and Ice site that were shown on the 15% and 30% design drawings were based on GIS files from Mecklenburg County and the North Carolina Railroad (NCRR). Our design consultant has recently completed property surveys which show that the actual property lines are slightly different. Please refer to the attached drawing.

The area shown in yellow is the amount of right-of-way (ROW) previously identified for acquisition, and the area shaded in green on the attached drawing is the area between the previous GIS-based property boundary and new surveyed property boundary. The green shaded area is the additional ROW needed for the project. The ROW is needed for the retaining wall and sidewalk along 36th St. and for maintenance access along the retaining wall in the NCRR ROW. The location of the retaining walls, tracks and other project features has not changed. The total amount of ROW needed is approximately 5874 sf, and represents about 2 percent of the total property area. As before, no buildings located on the property would be altered or demolished, and the characteristics which make this property eligible for the National Register would remain unchanged.

Construction of the proposed project would introduce short-term vibration sources to the environment. As such, properties near to construction activities, including the Herrin Brothers Coal and Ice property, may warrant special attention for vibration during construction and have been evaluated as part of a detailed vibration analysis, currently being prepared by HMMH, Inc. The recommended mitigation measure is a requirement for the contractor to develop a Vibration Monitoring Program for potentially-impacted properties, including historic properties. As previously discussed, CATS will ensure that measures are implemented to ensure that construction of the project, including the use of pile/panel walls along 36<sup>th</sup> Street, does not result in vibrations that could damage the historic structures.

Continued . . .



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Thank you for taking the time to review this information. Please let me know whether the previous No Adverse Effect determination remains valid. If you have any questions or need more information, please call me at 704-336-3513.

Sincerely,

A handwritten signature in black ink, appearing to read "Kelly R. Goforth". The signature is fluid and cursive, with a large initial "K" and a stylized "G".

Kelly R. Goforth  
Project Development Manager  
LYNX Blue Line Extension Light Rail Project

C: Keith Melton, FTA (via e-mail)  
Dale Youngkin, FTA (via e-mail)  
Danny Rogers, CATS (via e-mail)





**North Carolina Department of Cultural Resources  
State Historic Preservation Office**

Claudia R. Brown, Acting Administrator

Beverly Eaves Perdue, Governor  
Linda A. Carlisle, Secretary  
Jeffrey J. Crow, Deputy Secretary

Office of Archives and History  
Division of Historical Resources  
David Brook, Director

March 24, 2011

Kelly R. Goforth  
LYNX Blue Line Extension Light Rail Project  
CATS  
600 East Fourth Street  
Charlotte, NC 28202



RE: LYNX- Blue Line Extension, NE Corridor Light Rail Project, Herrin Brothers Coal and Ice, Charlotte, Mecklenburg County, ER06-1957

Dear Ms. Goforth:

Thank you for your March 17, 2011 letter concerning the above reference undertaking and the need for additional right-of-way at Herrin Brothers Coal and Ice, a property determined eligible for listing in the National Register of Historic Places.

We understand from your letter that CATS will need to obtain 5874 square feet of additional right-of-way in front of and along the track side of the historic property. The reason is to accommodate the sidewalk and retaining wall along 36<sup>th</sup> Street and maintenance of the training wall along the trackside of the Herrin Brothers property.

We have reviewed the materials submitted and still believe that the proposed undertaking within the limits shown will not adversely affect the qualities, which qualify Herrin Brothers Coal and Ice for listing in the National Register conditioned upon no additional need for right-of-way, vibration monitoring during construction (if warranted by the vibration analysis), and our review of the proposed pile/panel walls along the edges of the historic property.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, contact Renee Gledhill-Earley, environmental review coordinator, at 919-807-6579. In all future communication concerning this project, please cite the above referenced tracking number.

Sincerely,

*Renee Gledhill-Earley*

*CB* Claudia R. Brown



May 10, 2011

Ms. Renee Gledhill-Earley  
Environmental Review Coordinator  
NC State Historic Preservation Office  
4617 Mail Service Center  
Raleigh, NC 27699

ER 06-1957

S-1880 5/20/11

Re: LYNX-Blue Line Extension Northeast Corridor Light Rail Project  
Historic Evaluation, ER # 06-1957

Dear Ms. Gledhill-Earley:

Due 5/27/11

This letter is notify you of a design consideration for the subject project that involves the Grinnell Manufacturing Building, a contributing resource of the North Charlotte Historic District. As presented in the Evaluation of Effects report (September 4, 2009), portions of the proposed LYNX Blue Line Extension Northeast Corridor Light Rail Project (LYNX BLE) lie within the boundary of the North Charlotte Historic District. Several actions including new track installation, new alignment, retaining walls, the depression of 36th Street, development of the 36th Street Station, and construction of a new freight line and bridge would occur near to and/or within the area of the North Charlotte Historic District. Of particular note, and the purpose of this letter, is the proposed retaining wall that would be built along 36th Street, adjacent to the Grinnell Manufacturing Building (see attached exhibit).

The tops of retaining walls deflect, or move slightly when placed under load. While normally not a problem, further development of our engineering analysis has determined that the deflections of the previously proposed retaining wall along 36th Street could potentially cause structural impacts to the Grinnell Manufacturing Building due to its close proximity. In an effort to protect this historic resource, the LYNX BLE engineering team evaluated two types of support systems for the retaining wall. The conventional support system includes the use of a tieback system, which would intrude further onto the Grinnell Manufacturing Building property and could still result in some slight movement of the building. The second type of support system evaluated is the use of an underpinning system beneath the foundations of the building to support the building and protect it from deflections of the retaining wall.

Essentially, this technique involves the use of helical pier supports (i.e., steel supports with helix-shaped bearing plates that are screwed into the ground) beneath the foundations of the building. Rugged steel galvanized helical piers would be installed in the soil to transfer the weight of the historic building onto competent, load-bearing strata or bedrock. During the installation, helical pier supports would be mechanically screwed into the soil. Once appropriate depths and capacities are reached, a heavy-duty steel foundation bracket would be connected to the piers and secured to the building foundation's footing (see Figures 1 and 2 in the attached exhibit). The weight of the building would then carefully be transferred to the piers and onto the competent soils below, preventing any future settlement of the building. It should be noted that while this technique would require a physical attachment to the building, its purpose is to protect the building from damage and it is located completely underground. Use of the underpinning system could allow for a slightly thinner wall, but the overall length and height would be the same as previously shown. From the building and street viewshed, there would be no noticeable difference in the wall from what has been proposed to date.

Continued . . .



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CATS would not require permanent acquisition of any of the property, including any portion of the Grinnell Manufacturing Building. However, additional temporary construction easements would be needed for installation of the foundation brackets. It is anticipated that underpinning would need to be placed around the entire side of the building that faces 36th Street, and potentially up to approximately 20 additional feet along the perpendicular faces of the building (see attached exhibit). It is anticipated that an approximate 5-foot temporary construction easement would be needed beneath the building for subsurface construction in these three areas. While no additional temporary construction easement would be needed on the exterior of the building along 36th Street (because the property boundary is located along the exterior of the building), a temporary construction easement of approximately 10 feet would be needed along the exterior perpendicular faces of the building in the area of underpinning. The attached exhibit shows a plan view of the property and a typical section showing the proposed easements and the building foundation underpinning.

As detailed, the proposed action would not result in negative impacts to the Grinnell Manufacturing Building. As such, we feel that the previously-determined finding of No Adverse Effect for the North Charlotte Historic District is still valid. Additionally, based on this No Adverse Effect determination, it is the intent of the Federal Transit Administration to make a *de minimis* Section 4(f) finding for the North Charlotte Historic District as the proposed action does not constitute a constructive use of the property.

We appreciate the opportunity to consult with you on the effects of the project on historic resources. If you agree with the determinations documented in this letter, namely No Adverse Effect to the North Charlotte Historic District, we look forward to receiving your concurrence on the line below. If, however, you disagree, or require any additional information, please do not hesitate to contact me at (704) 336-3513.

Sincerely,

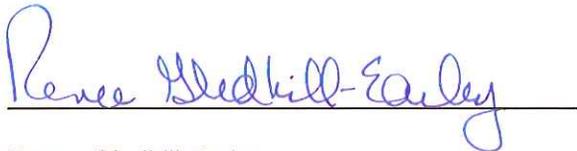


Kelly Goforth  
Project Development Manager

Enclosure

- c: Danny Rogers, CATS Senior Project Manager
- Keith Melton, Community Planner, FTA Region IV
- Robert Baughman, Project Manager, STV/RWA
- Jennifer Schwaller, Environmental Task Manager, STV/RWA

**Concurrence: Finding of No Adverse Effect - North Charlotte Historic District**



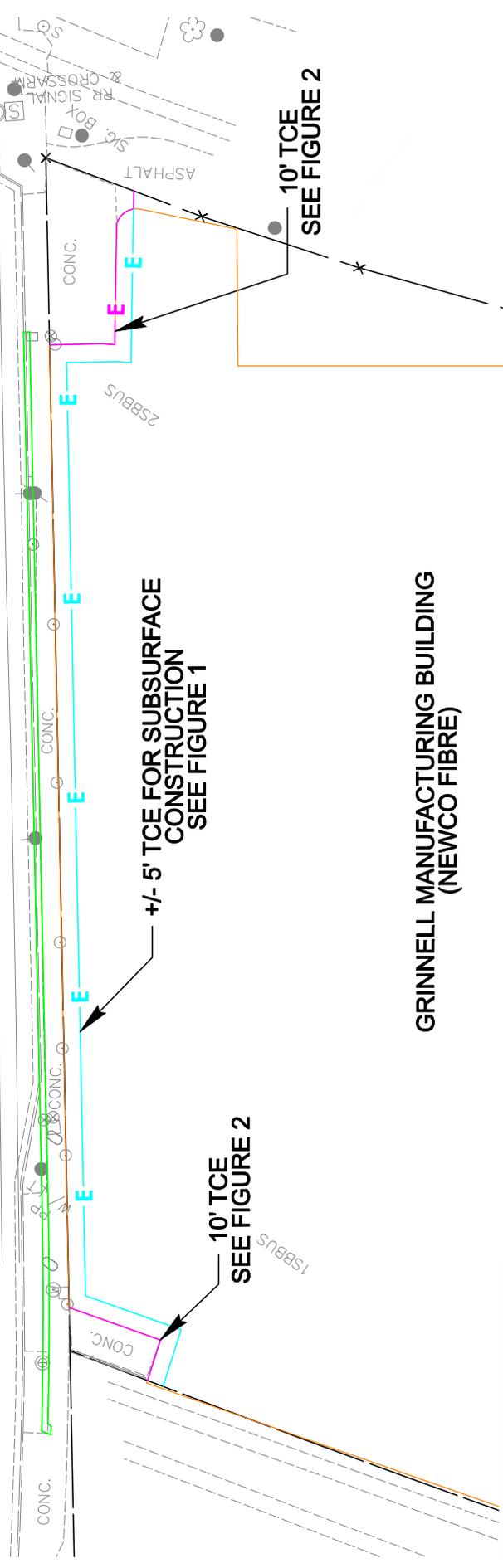
Renee Gledhill-Earley  
NC State Historic Preservation Office

5/20/11

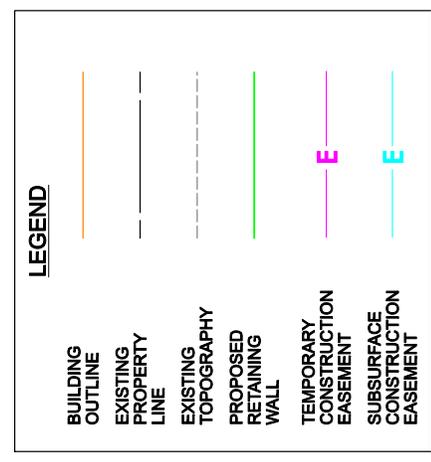
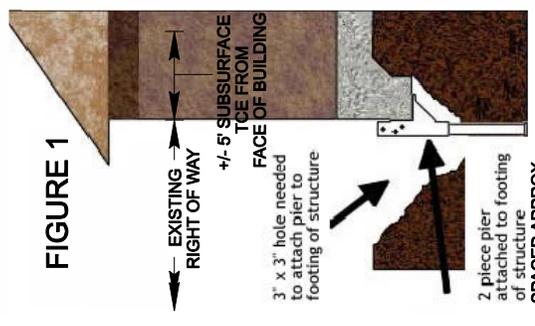
Date

**CONCEPTUAL DRAWING**  
SUBJECT TO CHANGE WITHOUT NOTICE

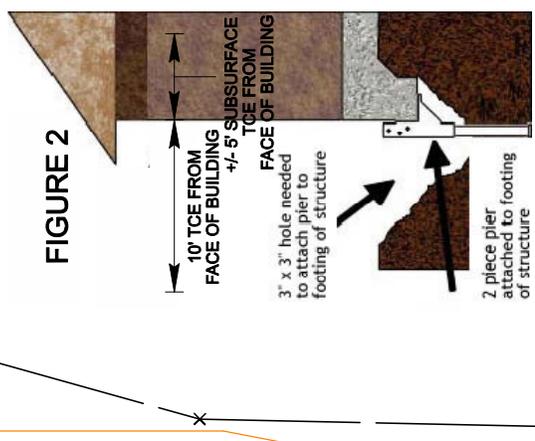
36TH STREET



**GRINNELL MANUFACTURING BUILDING  
(NEWCO FIBRE)**



NTS: NOT TO SCALE



NO.	DATE	REVISION	BY	CHK	APP

STV / Rajah Whitehead Associates, Inc.  
1000 W. Salisbury St., Suite 200  
Wilmington, NC 28403  
NC License Number F-0991

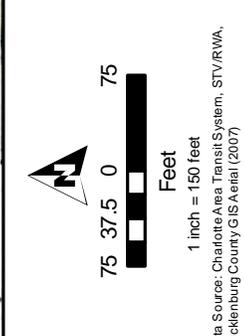
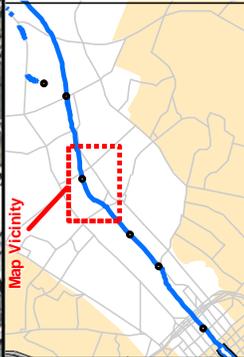
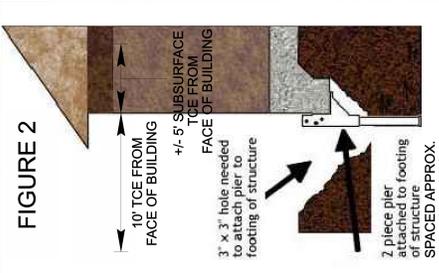
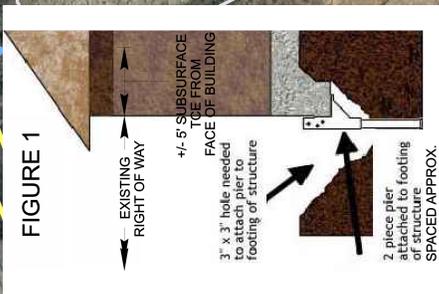
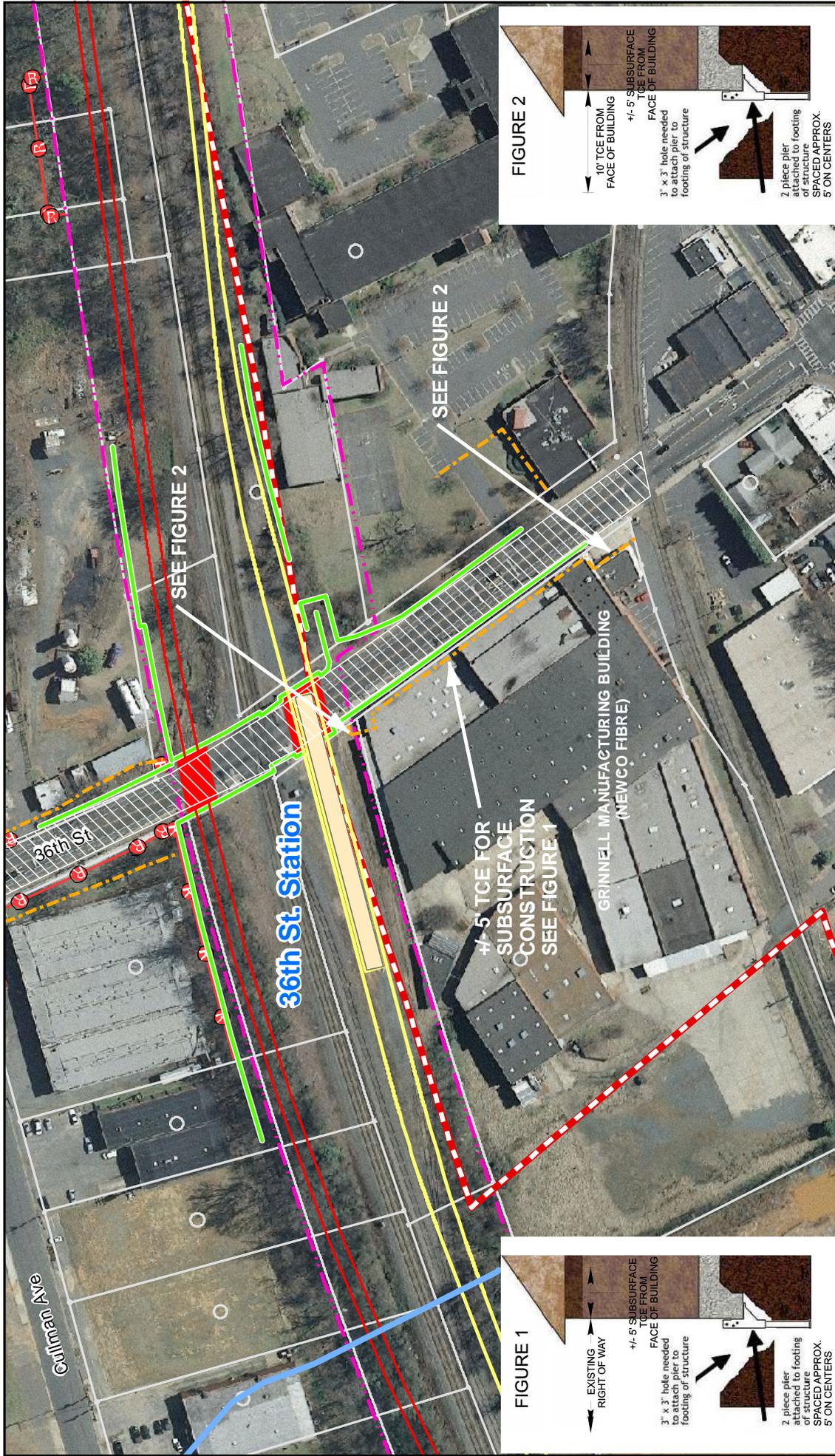
PREPARED BY	DRAWN BY	CHECKED BY	WORKED BY

LYNX BLUE LINE EXTENSION  
NORTHEAST CORRIDOR LIGHT RAIL PROJECT

NEWCO FIBRE

DWG: 05/03/11  
DATE: 05/03/11  
DRAWN: 05/03/11  
CHECKED: 05/03/11  
WORKED: 05/03/11

# Exhibit 1 Grinnell Manufacturing Building



- 30% Design Plans Legend**
- Proposed Light Rail Alternative
  - Proposed Structures
  - Proposed Station Platforms
  - Proposed Right-of-Way
  - Proposed Retaining Walls
  - Proposed Construction Easement
  - Proposed Signal House
  - Proposed Substation
  - Proposed Park-and-Ride Facilities
  - Streams
  - Roads
  - Historic Resource Site
  - Railroad Right-of-Way
  - Parcels

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**APPENDIX B2 – Section 4(f) Documentation**

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January 11, 2010

Mr. James Garges, Director  
Mecklenburg County Park and Recreation Department  
5841 Brookshire Boulevard  
Charlotte, NC 28216-2403

**RE: CATS LYNX Blue Line Extension, Northeast Corridor Light Rail Project**

Dear Mr. Garges:

The Federal Transit Administration (FTA) and the Charlotte Area Transit System (CATS) are currently planning the 10.6 mile extension of the existing LYNX Blue Line light rail service to the Northeast Corridor. The project is proposed to be constructed with local, state, and federal funding. As such, an Environmental Impact Statement (EIS), in accordance with the National Environmental Policy Act, is in the process of being developed that will document the potential for impacts to publicly-owned parklands, recreation facilities, greenway trails, and wildlife and waterfowl refuges. The project's impacts are also evaluated pursuant to Section 4(f), a provision of federal transportation law at Title 49, USC 303 that affords certain protections to public parks, historic sites, and wildlife refuges.

On 3/30/09, a draft EIS section on parklands was provided for your department's review and comments were addressed accordingly (final revision attached). A coordination meeting was held with Park and Recreation Department staff and CATS representatives in July 2009 to discuss the project and the potential short and long-term effects of the project. This input was used to arrive at a *de minimis* finding and is consistent with the regulations as set forth in Section 6009 of SAFETEA-LU.

After careful review of the resources within the study area and the potential impacts and consultation with your Department, CATS has determined that the project would result in no impact to nine park resources and a *de minimis*, or minimal, impact on three of these resources.

*De minimis* impacts would be expected to occur at:

- The Kirk Farm Fields wetland viewing area. The light rail alignment and Mallard Creek station platform would be located adjacent to this resource. No permanent or temporary use of park property is planned. A short-term visual impact would be anticipated to



Continued next page. . .

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occur as the station platforms and canopies would be visible from the boardwalk until the existing vegetation within the wetland area reach sufficient height to block the view. Mitigation to provide a vegetative screen is not feasible as this could alter the wetland vegetation planted in this area. A potential moderate impact (.5 decibel into the impact criteria range during a general assessment) from light rail operations has also been identified. In consultations over the past year, Park and Recreation staff indicated that the noise impact on the activities, features and attributes of the viewing area would be minor, and the visual impact would be relieved by the continued growth of the planted wetland species.

- The planned Toby Creek Greenway where the light rail would pass over this trail on a bridge structure would require temporary closure of the trail for short periods of time for certain construction activities, if this trail is constructed prior to the light rail project. CATS will notify Mecklenburg County Park and Recreation at least 48 hours in advance as to when the greenway will be temporarily closed, and CATS will work closely with Park and Recreation to communicate the closings to greenway users.
- The planned Mallard Creek Greenway Extension where the light rail would pass over this trail on a bridge structure would require temporary closure of the trail for short periods of time for certain construction activities, if this trail is constructed prior to the light rail project. CATS will notify Mecklenburg County Park and Recreation at least 48 hours in advance as to when the greenway will be temporarily closed, and CATS will work closely with Park and Recreation to communicate the closings to greenway users.

CATS is seeking your concurrence with these findings for inclusion in the Draft EIS. Following the release and public review of the Draft EIS, your concurrence will permit FTA to conclude its Section 4(f) responsibility, with respect to these resources, with a determination that the project will have *de minimis* impacts on the resources. If you concur, please sign and date this letter in the space below and return a copy.

We appreciate your Department's participation in the planning process. If you have any questions or concerns, please contact me at (704) 336-3513 or [kgoforth@charlottenc.gov](mailto:kgoforth@charlottenc.gov).

Sincerely,

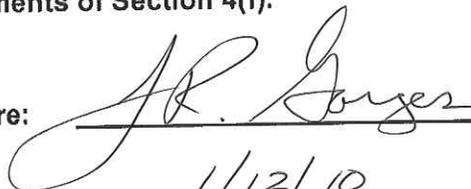


Kelly R. Goforth  
Project Development Manager  
LYNX Blue Line Extension Light Rail Project

C: Keith Melton, FTA Region IV  
Danny Rogers, CATS

Transmitted via e-mail on January 11, 2010

As the official with jurisdiction over the referenced park resources, I concur that the proposed LYNX Blue Line Extension project, as described in this letter, will not adversely affect the activities, features, and attributes of the Kirk Farm Fields Wetland Viewing Area, the planned Toby Creek Greenway and the planned Mallard Creek Greenway Extension. I have also been informed that, based on my concurrence, the FTA intends to make a *de minimis* finding regarding impacts to these resources, thus satisfying the requirements of Section 4(f).

Signature:   
Date: 11/21/10



January 28, 2010

ER 06-1957  
H. Pyle 2/3/10

Ms. Renee Gledhill-Earley  
Environmental Review Coordinator  
NC State Historic Preservation Office  
4617 Mail Service Center  
Raleigh, NC 27699

Due 2/17/10

RE: Proposed LYNX Blue Line Extension, Charlotte Area Transit System (CATS), Charlotte, Mecklenburg County, ER # 06-1957

Dear Ms. Gledhill-Earley:

The Federal Transit Administration (FTA) and the Charlotte Area Transit System (CATS) are currently planning the 10.6 mile extension of the existing LYNX Blue Line light rail service to the Northeast Corridor. The project is proposed to be constructed with local, state, and federal funding. As such, an Environmental Impact Statement (EIS), in accordance with the National Environmental Policy Act, is in the process of being developed that will document the potential for impacts to historic resources. The project's impacts are also evaluated pursuant to Section 106 and Section 4(f), a provision of federal transportation law at Title 49, USC 303 that affords certain protections to public parks, historic sites, and wildlife refuges.

Pursuant to the requirements of Section 106 of the National Historic Preservation Act, on 10/1/2009, you concurred with the determinations of No Effect and No Adverse Effect by the LYNX Blue Line Extension Light Rail Project on historic resources. In addition, on 1/11/2010, you concurred with the No Effect determination for a second park and ride option for the Sugar Creek station.

Based on your No Adverse Effect determinations on these properties, *de minimis* impacts are expected for the following resources:

- **Orient Manufacturing Company/Chadwick Hoskins No. 3 (NR Listed)** – The historic boundary for this property extends into the existing railroad right-of-way, owned by the City of Charlotte. The light rail tracks would be constructed within the existing right-of-way. Temporary use of the property during construction may occur. The uses would not alter the characteristics for which this resource is listed on the National Register.
- **North Charlotte Historic District (NR Listed)** – The existing North Carolina Railroad right-of-way lies within the historic district boundary. The light rail tracks would be added at the location of the existing freight tracks and the freight tracks would be shifted within the existing right-of-way to the north. Temporary use of property during construction would occur due to the grade separation of 36th Street. The uses, permanent and

Continued next page. . .



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temporary, would not alter the characteristics for which this resource is listed on the National Register.

- **Herrin Brothers Coal and Ice Company Plant (NR Eligible)** – The historic boundary for this property extends into the existing North Carolina Railroad right-of-way. The relocated freight tracks would be located within the existing railroad right-of-way. A temporary construction easement would also be required. The uses would not demolish any structures and would not alter the characteristics which make it eligible for the National Register.
- **Standard Chemical Products Plant (NR Eligible)** – Permanent acquisition of minor amounts of property for sidewalks and landscaping. Temporary use of property during construction. The uses would not demolish any structures and would not alter the characteristics which make it eligible for the National Register.
- **Republic Steel Corporation Plant (NR Eligible) (Light Rail Alternative - Sugar Creek Design Option only)** – Permanent acquisition of property for alignment would bisect areas used for storage. Temporary use of property during construction. No demolition of contributing resources or buildings. Access to the site would not be restricted by the project, except during construction. The uses would not demolish any structures and would not alter the characteristics which make it eligible for the National Register.
- **General Motors Corporation Training Plant (NR Eligible)** - Permanent acquisition of minor amounts of property. Temporary use of property during construction. The uses would not demolish any structures and would not alter the characteristics which make it eligible for the National Register.

CATS is seeking your concurrence with these findings for inclusion in the Draft EIS. Following the release and public review of the Draft EIS, your concurrence will permit FTA to conclude its Section 4(f) responsibility, with respect to these resources, with a determination that the project will have *de minimis* impacts on these resources. If you concur, please sign and date this letter in the spaces below and return a copy.

We appreciate your review and consideration. If you have any questions or concerns, please contact me at (704) 336-3513 or [kgoforth@charlottenc.gov](mailto:kgoforth@charlottenc.gov).

Sincerely,



Kelly R. Goforth  
Project Development Manager  
LYNX Blue Line Extension Light Rail Project

C: Keith Melton, FTA Region IV  
Danny Rogers, CATS

**As the official with jurisdiction over the referenced historic resources, in accordance with Section 106 of the National Historic Preservation Act, I concur that the proposed**

LYNX Blue Line Extension project, as described in this letter, will not adversely affect the activities, features, and attributes of the Orient Manufacturing Company/Chadwick Hoskins No. 3 (NR-Listed), North Charlotte Historic District, Herrin Brothers Coal and Ice Company Plant, Standard Chemical Products Plant, Republic Steel Corporation Plant (Light Rail Alternative - Sugar Creek Design Option only), and the General Motors Corporation Training Plant. I have also been informed that, based on my concurrence in the Section 106 determination, the FTA intends to make a *de minimis* finding regarding impacts to these resources, thus satisfying the requirements of Section 4(f).

Signature: Renee Gledhill-Earley  
Renee Gledhill-Early  
NC State Historic Preservation Office

Date: 2/3/10

**APPENDIX B3 – U.S. Fish and Wildlife Service Documentation**

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## United States Department of the Interior

### FISH AND WILDLIFE SERVICE

Asheville Field Office  
160 Zillicoa Street  
Asheville, North Carolina 28801

December 2, 2005

Mr. Andrew R. Mock  
Assistant Project Manager  
Northeast Corridor Light Rail Project  
Charlotte Area Transit System  
600 East 4<sup>th</sup> Street  
Charlotte, North Carolina 28202

Dear Mr. Mock:

Subject: Scoping Letter for the Preparation of a Draft Environmental Impact Statement for the Northeast Corridor Light Rail Project, Charlotte, Mecklenburg County, North Carolina

In your letter of October 31, 2005, you requested our comments on the subject project. We have reviewed the information you presented and are providing the following comments in accordance with the provisions of the Fish and Wildlife Coordination Act, as amended (16 U.S.C. 661-667e), and section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531-1543) (Act).

Your letter indicates that the Charlotte Transit Authority is in the process of preparing a draft Environmental Impact Statement for a proposed light rail project that will extend about 12 miles, from Center City Charlotte to the Mecklenburg/Cabarrus County line. The project would be configured with two tracks, one for northbound service and one for southbound service. The tracks would be located at grade and would roughly parallel North Tryon Street/US 29.

You do not present evidence of any surveys of the project area for federally listed species known from Mecklenburg County. Unless an area has been specifically surveyed for listed species or no appropriate habitat exists, a survey should be conducted to ensure that these resources are not inadvertently lost. Because the federally endangered Schweinitz's sunflower (*Heliopsis scweinitzii*) has been found very near the northern terminus of the proposed project, we would like to see a detailed account of the botanical analysis for this project. Schweinitz's sunflower is difficult to identify at any time, but even more so outside the flowering season (late August to October). Surveys should be conducted during the flowering season to ensure proper identification. Enclosed is a list of federally endangered and threatened species and federal species of concern for Mecklenburg County. In accordance with the Act, it is the responsibility of the appropriate federal agency or its designated representative to review its activities or programs and to identify any such activities or programs that may affect endangered or threatened species or their habitats. If it is determined that the proposed activity may adversely affect any species federally listed as endangered or threatened, formal consultation with this office must be initiated. Please note that federal species

of concern are not legally protected under the Act and are not subject to any of its provisions, including section 7, unless they are formally proposed or listed as endangered or threatened. We are including these species in our response to give you advance notification and to request your assistance in protecting them.

To protect and conserve fish and wildlife resources, we offer the following recommendations (where applicable) to help address the potential negative impacts (direct, secondary, and cumulative) associated with this project:

1. The construction of travel corridors can produce short-term direct impacts as well as long-term cumulative effects. Studies have shown a serious decline in the health of receiving waters when impervious surfaces increase within a watershed. Impervious surfaces should be limited to no more than 7 percent, curb and gutter should be limited in new developments, and the direct discharge of storm water into streams should be prevented. The project should include on-site storm-water management (i.e., bioretention areas) that will result in no net change in the hydrology of the watershed.
2. Stringent measures to control sediment and erosion should be implemented prior to any ground disturbance and should be maintained throughout project construction. Temporary or permanent herbaceous vegetation should be planted on all bare soil as soon as possible. We recommend revegetating within 5 days, but no longer than 15 days, after ground-disturbing activities in order to provide long-term erosion control.
3. Efforts should be made to avoid the removal of large trees at the edges of construction corridors. Disturbed areas should be reseeded with seed mixtures that are beneficial to wildlife. Fescue-based mixtures should be avoided; fescue is invasive and provides little benefit to wildlife. Native annual small grains appropriate for the season are preferred and recommended. Where feasible, use woody debris and logs from corridor clearing to establish brush piles and downed logs at the edges (just in the woods) of the cleared rights-of-way to improve habitat for wildlife. Allowing the right-of-way to develop into a brush/scrub habitat would maximize benefits to wildlife. Right-of-way maintenance should be minimized, and mowing should be prohibited between April 1 and October 1 in order to reduce impacts to nesting wildlife. We suggest a maintenance schedule that incorporates a portion of the area (e.g., one-third) each year instead of the entire project every 2 or 3 years. Additionally, herbicides should not be used in wetland areas or near streams.
4. All wetland/stream crossings should be made perpendicular to the stream, and spanning structures should be used rather than culverts.
5. Wetland/stream buffers (a minimum of 100 feet on perennial streams and 50 feet on intermittent streams and wetlands) should be maintained throughout the project area.

6. All work in or adjacent to streams should be conducted in a dry work area. Where possible, sandbags, cofferdams, or other diversion structures should be used to prevent excavation in flowing water. These diversion structures should be removed immediately after the instream work is finished.
7. Bridge supports (bents) should not be placed in the stream. Bridges can be supported by various means, including log cribs, steel pipes, steel bin walls, cast-in-place concrete, and pre-cast lock block walls, timber, and piers. Where practicable, instream piers should be avoided. Piers can collect debris during flood events, resulting in the scouring of bridge foundations. Instream piers can also result in hydrological changes, such as bedload scour or deposition, which may adversely affect instream habitat.
8. Deck drains of spanning structures should not discharge directly into a stream; instead, they should drain through a vegetated area before entering a stream.
9. Side ditches should not be allowed to drain directly into the stream. Divert ditch water into a constructed sump or, where possible, onto stable forested vegetation that can filter sediment before the water reaches the stream. Ensure that adequate cross drainage is in place before the culvert approach in order to minimize the water volume directed into approach ditches at culvert sites. Consider the use of rolling grades to divert surface runoff. Where cross-ditches are used, ensure that they are properly armored at the outlet and along the base.
10. Do not allow wet concrete to contact any stream or any other water that has the potential to enter a stream. Uncured concrete or grout can kill aquatic organisms, including fish, by altering the pH of the water. Precast concrete and carefully protected grout should be used to eliminate the risk to fish. However, when cast-in-place concrete is required, all work should be done "in the dry," and the site should be effectively isolated from any water that may enter the stream for a minimum of 48 hours.
11. If culverts are used (instead of a bridge), they should be 48 inches or larger in diameter and should be buried approximately 1 foot into the streambed; culverts that are less than 48 inches in diameter should be buried to a depth equal to or greater than 20 percent of their size to allow for aquatic life passage. These measurements must be based on natural thalweg depths. Any perched outlets should be corrected during construction.

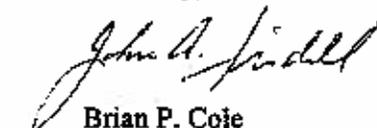
At this stage of project development and without more specifics about construction locations or techniques, it is difficult for us to assess potential environmental impacts (direct, indirect, and cumulative). We therefore recommend that any environmental document prepared for this project include the following (if applicable):

1. A complete analysis and comparison of the available alternatives (the build and no-build alternatives).

2. A description of the fishery and wildlife resources within existing and required additional rights-of-way and any areas, such as borrow areas, that may be affected directly or indirectly by the proposed project.
3. The acreage and a description of the wetlands that will be filled as a result of the proposed project. Wetlands affected by the proposed project should be mapped in accordance with the *Federal Manual for Identifying and Delineating Jurisdictional Wetlands*. We recommend contacting the U.S. Army Corps of Engineers to determine the need for a Section 404 Clean Water Act permit. Avoiding and minimizing wetland impacts is a part of the U.S. Army Corps of Engineers' permitting process, and we will consider other potential alternatives in the review of any permits.
4. The extent (linear feet as well as discharge) of any water courses that will be impacted as a result of the proposed project. A description of any streams should include the classification (Rosgen 1995, 1996) and a description of the biotic resources.
5. The acreage of upland habitat, by cover type, that will be eliminated because of the proposed project.
6. A description of all expected secondary and cumulative environmental impacts associated with this proposed work.
7. A discussion about the extent to which the project will result in the loss, degradation, or fragmentation of wildlife habitat from direct construction impacts and from secondary development impacts.
8. Mitigation measures that will be employed to avoid, eliminate, reduce, or compensate for habitat value losses (wetland, riverine, and upland) associated with any phase of the proposed project.

We appreciate the opportunity to provide these comments. If we can be of any assistance or if you have any questions, please do not hesitate to contact Mr. Allen Ratzlaff of our staff at 828/258-3939, Ext. 229. In any future correspondence concerning this project, please reference our Log Number 4-2-06-051.

Sincerely,



Brian P. Cole  
for Field Supervisor

Enclosure

## ENDANGERED, THREATENED, AND CANDIDATE SPECIES AND FEDERAL SPECIES OF CONCERN, MECKLENBURG COUNTY, NORTH CAROLINA

This list was adapted from the North Carolina Natural Heritage Program's County Species List. It is a listing, for Mecklenburg County, of North Carolina's federally listed and proposed endangered, threatened, and candidate species and Federal species of concern (for a complete list of rare species in the state, please contact the North Carolina Natural Heritage Program). The information in this list is compiled from a variety of sources, including field surveys, museums and herbaria, literature, and personal communications. The North Carolina Natural Heritage Program's database is dynamic, with new records being added and old records being revised as new information is received. Please note that this list cannot be considered a definitive record of listed species and Federal species of concern, and it should not be considered a substitute for field surveys.

**Critical habitat:** Critical habitat is noted, with a description, for the counties where it is designated or proposed.

**Aquatic species:** Fishes and aquatic invertebrates are noted for counties where they are known to occur. However, projects may have effects on downstream aquatic systems in adjacent counties.

COMMON NAME	SCIENTIFIC NAME	STATUS
<b>MECKLENBURG COUNTY</b>		
<b>Vertebrates</b>		
Carolina darter	<i>Etheostoma collis collis</i>	FSC
Bald eagle	<i>Haliaeetus leucocephalus</i>	Threatened (proposed for delisting)
<b>Invertebrates</b>		
Carolina heelsplitter	<i>Lasmigona decorata</i>	Endangered
Carolina creekshell	<i>Villosa vughaniana</i>	FSC
<b>Vascular Plants</b>		
Georgia aster	<i>Aster georgianus</i>	CI
Tall larkspur	<i>Delphinium exaltatum</i>	FSC*
Smooth coneflower	<i>Echinacea laevigata</i>	Endangered*
Schweinitz's sunflower	<i>Helianthus schweinitzii</i>	Endangered
Virginia quillwort	<i>Isoetes virginica</i>	FSC
Heller's trefoil	<i>Lotus helleri</i>	FSC
Michaux's sumac	<i>Rhus michauxii</i>	Endangered*

### KEY:

Status	Definition
Endangered	A taxon "in danger of extinction throughout all or a significant portion of its range."
Threatened	A taxon "likely to become endangered within the foreseeable future throughout all or a significant portion of its range."
CI	A taxon under consideration for official listing for which there is sufficient information to support listing.

FSC

A Federal species of concern--a species that may or may not be listed in the future (formerly C2 candidate species or species under consideration for listing for which there is insufficient information to support listing).

Species with 1, 2, 3, or 4 asterisks behind them indicate historic, obscure, or incidental records.

\*Historic record - the species was last observed in the county more than 50 years ago.

\*\*Obscure record - the date and/or location of observation is uncertain.

\*\*\*Incidental/migrant record - the species was observed outside of its normal range or habitat.

\*\*\*\*Historic record - obscure and incidental record.

**APPENDIX B4 – U.S. Army Corps of Engineers Documentation**

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**U.S. ARMY CORPS OF ENGINEERS  
WILMINGTON DISTRICT**

Action Id. 200901062

County: Mecklenburg

U.S.G.S. Quad: Charlotte East

**NOTIFICATION OF JURISDICTIONAL DETERMINATION**

Property Owner/Agent: City of Charlotte - Charlotte Area Transit System

Address: 600 East Fourth St.  
Charlotte, NC 28202

Telephone No.: \_\_\_\_\_

Property description:

Size (acres) 514 acres (study corridor)

Nearest Town Charlotte

Nearest Waterway Little Sugar Cr./Toby Cr./Mallard Cr. River Basin Catawba/Yadkin

USGS HUC \_\_\_\_\_ Coordinates N 35.2900 W -80.7570

Location description CATS LYNX BLE Northeast Corridor Light Rail project located from the intersection of East 6<sup>th</sup> Street and the existing rail line and extending to the intersection of N. Tryon St. and University Blvd.



**Indicate Which of the Following Apply:**

**A. Preliminary Determination**

- Based on preliminary information, there may be wetlands on the above described property. We strongly suggest you have this property inspected to determine the extent of Department of the Army (DA) jurisdiction. To be considered final, a jurisdictional determination must be verified by the Corps. This preliminary determination is not an appealable action under the Regulatory Program Administrative Appeal Process ( Reference 33 CFR Part 331).

**B. Approved Determination**

- There are Navigable Waters of the United States within the above described property subject to the permit requirements of Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act. Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.

- There are waters of the U.S. including wetlands on the above described project area subject to the permit requirements of Section 404 of the Clean Water Act (CWA)(33 USC § 1344). Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.

We strongly suggest you have the wetlands on your property delineated. Due to the size of your property and/or our present workload, the Corps may not be able to accomplish this wetland delineation in a timely manner. For a more timely delineation, you may wish to obtain a consultant. To be considered final, any delineation must be verified by the Corps.

The waters of the U.S. including wetland on your project area have been delineated and the delineation has been verified by the Corps. We strongly suggest you have this delineation surveyed. Upon completion, this survey should be reviewed and verified by the Corps. Once verified, this survey will provide an accurate depiction of all areas subject to CWA jurisdiction on your property which, provided there is no change in the law or our published regulations, may be relied upon for a period not to exceed five years.

The wetlands have been delineated and surveyed and are accurately depicted on the plat signed by the Corps Regulatory Official identified below on \_\_\_\_\_. Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.

- There are no waters of the U.S., to include wetlands, present on the above described property which are subject to the permit requirements of Section 404 of the Clean Water Act (33 USC 1344). Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.

- The property is located in one of the 20 Coastal Counties subject to regulation under the Coastal Area Management Act (CAMA). You should contact the Division of Coastal Management in Washington, NC, at (252) 946-6481 to determine their requirements.

Placement of dredged or fill material within waters of the US and/or wetlands without a Department of the Army permit may constitute a violation of Section 301 of the Clean Water Act (33 USC § 1311). If you have any questions regarding this determination and/or the Corps regulatory program, please contact Steve Chapin at (828) 271-7980 x224.

### C. Basis For Determination

Mallard Creek>Rocky River>Yadkin River which is navigable-in-fact at Blewett Falls dam. Little Sugar Creek>Sugar Creek>Catawba River which is navigable-in-fact at Lake Wylie.

### D. Remarks

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### E. Appeals Information (This information applies only to approved jurisdictional determinations as indicated in B. above)

This correspondence constitutes an approved jurisdictional determination for the above described site. If you object to this determination, you may request an administrative appeal under Corps regulations at 33 CFR part 331. Enclosed you will find a Notification of Appeal Process (NAP) fact sheet and request for appeal (RFA) form. If you request to appeal this determination you must submit a completed RFA form to the following address:

District Engineer, Wilmington Regulatory Division  
Attn: Steve Chapin, Project Manager,  
Asheville Regulatory Field Office  
151 Patton Avenue, Room 208  
Asheville, North Carolina 28801-5006

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 CFR part 331.5, and that it has been received by the District Office within 60 days of the date of the NAP. Should you decide to submit an RFA form, it must be received at the above address by 12/21/09.

\*\*It is not necessary to submit an RFA form to the District Office if you do not object to the determination in this correspondence.\*\*

Corps Regulatory Official: Steve Chapin

Date 10/21/2009

Expiration Date 10/21/2014

The Wilmington District is committed to providing the highest level of support to the public. To help us ensure we continue to do so, please complete the attached customer Satisfaction Survey or visit <http://www.saw.usace.army.mil/WETLANDS/index.html> to complete the survey online.

## NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: City of Charlotte - Charlotte Area Transit System	File Number: 2009-01062	Date: 10/21/09
Attached is:		See Section below
<input type="checkbox"/> INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)		A
<input type="checkbox"/> PROFFERED PERMIT (Standard Permit or Letter of permission)		B
<input type="checkbox"/> PERMIT DENIAL		C
<input checked="" type="checkbox"/> APPROVED JURISDICTIONAL DETERMINATION		D
<input type="checkbox"/> PRELIMINARY JURISDICTIONAL DETERMINATION		E

**SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at <http://www.usace.army.mil/inet/functions/cw/ccwo/reg> or Corps regulations at 33 CFR Part 331.**

**A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.**

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **OBJECT:** If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

**B: PROFFERED PERMIT: You may accept or appeal the permit**

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **APPEAL:** If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

**C: PERMIT DENIAL:** You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

**D: APPROVED JURISDICTIONAL DETERMINATION:** You may accept or appeal the approved JD or provide new information.

- **ACCEPT:** You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- **APPEAL:** If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the district engineer. This form must be received by the division engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

**SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT**

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

**POINT OF CONTACT FOR QUESTIONS OR INFORMATION:**

If you have questions regarding this decision and/or the appeal process you may contact:  
Steve Chapin  
USACE  
151 Patton Avenue, Room 208  
Asheville, NC 28801-5006

If you only have questions regarding the appeal process you may also contact:  
Mr. Mike Bell, Administrative Appeal Review Officer  
CESAD-ET-CO-R  
U.S. Army Corps of Engineers, South Atlantic Division  
60 Forsyth Street, Room 9M15  
Atlanta, Georgia 30303-8801

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.

Signature of appellant or agent.	Date:	Telephone number:
----------------------------------	-------	-------------------

**For appeals on Initial Proffered Permits and approved Jurisdictional Determinations send this form to:**

**District Engineer, Wilmington Regulatory Division, Attn: Steve Chapin, Project Manager, Asheville Regulatory Field Office, 151 Patton Avenue, Room 208, Asheville, North Carolina 28801-5006**

**For Permit denials and Proffered Permits send this form to:**

**Division Engineer, Commander, U.S. Army Engineer Division, South Atlantic, Attn: Mr. Mike Bell, Administrative Appeal Officer, CESAD-ET-CO-R, 60 Forsyth Street, Room 9M15, Atlanta, Georgia 30303-8801**

**U.S. ARMY CORPS OF ENGINEERS**  
**WILMINGTON DISTRICT**

Action Id. 200901062County: MecklenburgU.S.G.S. Quad: Charlotte East

**NOTIFICATION OF JURISDICTIONAL DETERMINATION**

Property Owner/Agent: City of Charlotte - Charlotte Area Transit SystemAddress: 600 East Fourth St.  
Charlotte, NC 28202

Telephone No.: \_\_\_\_\_



Property description:

Size (acres) 514 acres (study corridor)Nearest Town CharlotteNearest Waterway Little Sugar Cr./Toby Cr./Mallard Cr. River Basin Catawba/YadkinUSGS HUC \_\_\_\_\_ Coordinates N 35.2900 W -80.7570Location description CATS LYNX BLE Northeast Corridor Light Rail project located from the intersection of East 6<sup>th</sup> Street and the existing rail line and extending to the intersection of N. Tryon St. and University Blvd.

**Indicate Which of the Following Apply:**

**A. Preliminary Determination**

- Based on preliminary information, there may be wetlands on the above described property. We strongly suggest you have this property inspected to determine the extent of Department of the Army (DA) jurisdiction. To be considered final, a jurisdictional determination must be verified by the Corps. This preliminary determination is not an appealable action under the Regulatory Program Administrative Appeal Process ( Reference 33 CFR Part 331).

**B. Approved Determination**

- There are Navigable Waters of the United States within the above described property subject to the permit requirements of Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act. Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.

- There are waters of the U.S. including wetlands on the above described project area subject to the permit requirements of Section 404 of the Clean Water Act (CWA)(33 USC § 1344). Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.

We strongly suggest you have the wetlands on your property delineated. Due to the size of your property and/or our present workload, the Corps may not be able to accomplish this wetland delineation in a timely manner. For a more timely delineation, you may wish to obtain a consultant. To be considered final, any delineation must be verified by the Corps.

The waters of the U.S. including wetland on your project area have been delineated and the delineation has been verified by the Corps. We strongly suggest you have this delineation surveyed. Upon completion, this survey should be reviewed and verified by the Corps. Once verified, this survey will provide an accurate depiction of all areas subject to CWA jurisdiction on your property which, provided there is no change in the law or our published regulations, may be relied upon for a period not to exceed five years.

The wetlands have been delineated and surveyed and are accurately depicted on the plat signed by the Corps Regulatory Official identified below on \_\_\_\_\_. Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.

- There are no waters of the U.S., to include wetlands, present on the above described property which are subject to the permit requirements of Section 404 of the Clean Water Act (33 USC 1344). Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.

- The property is located in one of the 20 Coastal Counties subject to regulation under the Coastal Area Management Act (CAMA). You should contact the Division of Coastal Management in Washington, NC, at (252) 946-6481 to determine their requirements.

Placement of dredged or fill material within waters of the US and/or wetlands without a Department of the Army permit may constitute a violation of Section 301 of the Clean Water Act (33 USC § 1311). If you have any questions regarding this determination and/or the Corps regulatory program, please contact Steve Chapin at (828) 271-7980 x224.

### C. Basis For Determination

Mallard Creek>Rocky River>Yadkin River which is navigable-in-fact at Blewett Falls dam. Little Sugar Creek>Sugar Creek>Catawba River which is navigable-in-fact at Lake Wylie.

### D. Remarks

This is a modification of the previous JD verification issued under the same Action ID. on 10/21/09. Since this date, additional properties have been added to the study area.

### E. Appeals Information (This information applies only to approved jurisdictional determinations as indicated in B. above)

This correspondence constitutes an approved jurisdictional determination for the above described site. If you object to this determination, you may request an administrative appeal under Corps regulations at 33 CFR part 331. Enclosed you will find a Notification of Appeal Process (NAP) fact sheet and request for appeal (RFA) form. If you request to appeal this determination you must submit a completed RFA form to the following address:

District Engineer, Wilmington Regulatory Division  
Attn: Steve Chapin, Project Manager,  
Asheville Regulatory Field Office  
151 Patton Avenue, Room 208  
Asheville, North Carolina 28801-5006

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 CFR part 331.5, and that it has been received by the District Office within 60 days of the date of the NAP. Should you decide to submit an RFA form, it must be received at the above address by 1/24/09.

\*\*It is not necessary to submit an RFA form to the District Office if you do not object to the determination in this correspondence.\*\*

Corps Regulatory Official: \_\_\_\_\_

*Steve Chapin*

Date 11/24/2009

Expiration Date 11/24/2014

The Wilmington District is committed to providing the highest level of support to the public. To help us ensure we continue to do so, please complete the attached customer Satisfaction Survey or visit <http://www.saw.usace.army.mil/WETLANDS/index.html> to complete the survey online.

## NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: City of Charlotte - Charlotte Area Transit System	File Number: 2009-01062	Date: 11/24/09
Attached is:		See Section below
<input type="checkbox"/> INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)		A
<input type="checkbox"/> PROFFERED PERMIT (Standard Permit or Letter of permission)		B
<input type="checkbox"/> PERMIT DENIAL		C
<input checked="" type="checkbox"/> APPROVED JURISDICTIONAL DETERMINATION		D
<input type="checkbox"/> PRELIMINARY JURISDICTIONAL DETERMINATION		E

**SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at <http://www.usace.army.mil/inet/functions/cw/cecwo/reg> or Corps regulations at 33 CFR Part 331.**

**A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.**

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **OBJECT:** If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

**B: PROFFERED PERMIT: You may accept or appeal the permit**

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- **APPEAL:** If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

**C: PERMIT DENIAL:** You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

**D: APPROVED JURISDICTIONAL DETERMINATION:** You may accept or appeal the approved JD or provide new information.

- **ACCEPT:** You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- **APPEAL:** If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the district engineer. This form must be received by the division engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

**SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT**

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

**POINT OF CONTACT FOR QUESTIONS OR INFORMATION:**

If you have questions regarding this decision and/or the appeal process you may contact:

Steve Chapin  
USACE  
151 Patton Avenue, Room 208  
Asheville, NC 28801-5006

If you only have questions regarding the appeal process you may also contact:

Mr. Mike Bell, Administrative Appeal Review Officer  
CESAD-ET-CO-R  
U.S. Army Corps of Engineers, South Atlantic Division  
60 Forsyth Street, Room 9M15  
Atlanta, Georgia 30303-8801

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.

Date:

Telephone number:

\_\_\_\_\_  
Signature of appellant or agent.

**For appeals on Initial Proffered Permits and approved Jurisdictional Determinations send this form to:**

**District Engineer, Wilmington Regulatory Division, Attn: Steve Chapin, Project Manager, Asheville Regulatory Field Office, 151 Patton Avenue, Room 208, Asheville, North Carolina 28801-5006**

**For Permit denials and Proffered Permits send this form to:**

**Division Engineer, Commander, U.S. Army Engineer Division, South Atlantic, Attn: Mr. Mike Bell, Administrative Appeal Officer, CESAD-ET-CO-R, 60 Forsyth Street, Room 9M15, Atlanta, Georgia 30303-8801**

**APPENDIX B5 – Mecklenburg County Land Use and Environmental Services Agency  
Air Quality Division Documentation and MOVES 2010a Documentation**

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MECKLENBURG COUNTY  
Land Use and Environmental Services Agency  
- AIR QUALITY -  
February 8, 2010

Kelly Goforth  
LYNX BLE Project Development Manager  
CATS Department  
600 East 4<sup>th</sup> Street  
Charlotte, NC 28202



Dear Ms. Goforth,

Thank you for the opportunity to review and comment on the draft air quality chapter for the LYNX Blue Line Extension (BLE) Environmental Impact Statement (EIS). I am writing to inform you that the U.S. Environmental Protection Agency (USEPA) has developed a new on-road mobile source emission model, Motor Vehicle Emissions Simulator (MOVES). MOVES replaces the previous model for estimating on-road mobile source emissions, MOBILE6.2. This change may affect the modeling required for this EIS as well as the methodology you will be required to use when applying for a Transportation Facility Construction permit from Mecklenburg County Air Quality (MCAQ).

EPA will be publishing a Federal Register notice of availability in the near future to approve MOVES for official purposes. Upon publication of the Federal Register notice, MOVES will become EPA's approved motor vehicle emission factor model for estimating volatile organic compounds (VOCs), nitrogen oxides (NOx), carbon monoxide (CO), direct particulate matter (PM10 and PM2.5) and other pollutants and precursors from cars, trucks, motorcycles, and buses by state and local agencies outside of California. MOVES is currently available for free download on the USEPA website <http://www.epa.gov/otaq/models/moves/index.htm>.

Please be advised that MOVES may be the required emission factor model for the LYNX BLE EIS. MCAQ also advises CATS to consult with federal review agencies specifically about this matter. Before beginning air quality modeling for a transportation facility permit, please contact MCAQ directly for a determination on the use of MOVES.

Sincerely,

Megan Green  
Air Quality Specialist

MEG:isp



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

FEB 8 2011

OFFICE OF  
ENFORCEMENT AND  
COMPLIANCE ASSURANCE

MEMORANDUM

SUBJECT: Using the MOVES and EMFAC Emissions Models in NEPA Evaluations

FROM: Susan E. Bromm *Susan E Bromm*  
Director  
Office of Federal Activities

TO: NEPA/309 Division Directors  
Regions I-X

On December 20, 2010, EPA approved the use of the MOVES2010a and EMFAC2007 emissions models for certain quantitative hot-spot analyses in project-level transportation conformity determinations.<sup>1</sup> With this action, MOVES2010a became EPA's approved model for completing quantitative carbon monoxide (CO) and particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>) transportation conformity hot-spot analyses by state and local agencies outside of California; EMFAC2007 became EPA's approved model for completing PM<sub>10</sub> and PM<sub>2.5</sub> hot-spot analyses within California. EPA's approval establishes a two-year grace period before (1) MOVES2010a must be used for new CO, PM<sub>10</sub> and PM<sub>2.5</sub> hot-spot analyses required by the transportation conformity rule, and (2) EMFAC2007 must be used for PM<sub>10</sub> and PM<sub>2.5</sub> hot-spot analyses within California.<sup>2</sup> EPA's rationale for establishing the grace period can be found in the *Federal Register* notice.

In order to facilitate the maximum possible coordination between the transportation conformity and NEPA processes, and to minimize confusion, EPA recommends that federal agencies use the same model for assessing the criteria air pollutant impacts of a given project in their NEPA documents as is used for determining transportation conformity. Although not required during the two-year grace period, EPA recommends that agencies begin using MOVES2010a and EMFAC2007 at the earliest practicable time for transportation conformity, general conformity, and NEPA purposes.

<sup>1</sup> 75 FR 79370.

<sup>2</sup> The grace period applies for MOVES2010a and future versions of the MOVES model unless EPA notes otherwise, as EPA may provide minor, periodical updates to the MOVES model in order to improve its functionality and performance. The grace period also applies for future versions of the EMFAC model unless EPA notes otherwise. EPA previously approved EMFAC2007 for use in CO hot-spot analyses in California (73 FR 3464).

After the conclusion of the grace period, agencies will be required to use MOVES2010a and EMFAC2007 (in California) for new PM hot-spot analyses and MOVES2010a for new CO hot-spot analyses for transportation conformity purposes. At that time, those models should be used to complete the corresponding emissions and air quality analyses for NEPA and general conformity as well. However, the transportation conformity rule (40 CFR 93.111(c)) allows conformity determinations for projects based on the previous version of an emissions model to be completed after the end of the grace period, if the analysis was begun before the end of the grace period. More specifically, conformity determinations may continue to be based on the previous model if the analysis was begun prior to or during the grace period and if the final NEPA environmental document for the project is issued no more than three years after the issuance of the draft environmental document.<sup>3</sup>

There could be situations where a draft environmental impact statement (DEIS) for a project is released either before or within the two-year grace period, and the final environmental impact statement (FEIS) will not be released until after the grace period has ended. In light of both 40 CFR 93.111(c) and EPA's desire to facilitate coordination of the conformity and NEPA processes, when an agency includes the previous model's results in the DEIS, it may continue to rely on such an analysis in the FEIS, provided the FEIS is released no more than three years after the issuance of the DEIS. For those limited cases in which the DEIS and FEIS for a project may use results from different emissions models (e.g., the FEIS is issued more than three years after the DEIS), EPA recommends that agencies develop an explanation for use in their NEPA documents of why the air quality section of the FEIS uses a different model than the DEIS, and the inevitable differences in modeling results between the two. In these cases, EPA recommends that the proposing agency consider whether an appended technical evaluation or supplementation, of their NEPA document would be appropriate.

The transportation conformity requirement to conduct CO, PM<sub>10</sub>, and PM<sub>2.5</sub> hot-spot analyses applies only to certain projects within areas designated nonattainment and maintenance for these pollutants. In cases where project sponsors are conducting local emissions analyses for NEPA purposes and not transportation or general conformity, EPA recommends that MOVES2010a and EMFAC2007 (in California) be used at the earliest practicable time. However, EPA also acknowledges that project sponsors may not have the necessary expertise to use MOVES2010a immediately. As such, EPA would accept the use of the previous model for these analyses while the grace period established for conformity is in place.

For determining motor vehicle emissions in general conformity analysis, the general conformity regulations in 40 CFR 93.159(b)(1) require the most current version of the motor vehicle emissions model specified by EPA and available for use in the preparation or revision of SIPs in that State must be used for the general conformity analysis. Since EPA has announced the use of MOVES2010 for transportation conformity regional emissions analyses and all SIP development in its March 2, 2010 notice (75 FR 9411-9414), the two-year grace period from that notice which ends March 2012 also applies to general conformity analysis. When MOVES2010a

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<sup>3</sup> For CO hot-spot analyses, the previous model is MOBILE6.2 (outside of California). For PM<sub>10</sub> and PM<sub>2.5</sub> hot-spot analyses, the previous model is considered to be a qualitative analysis. The Federal Register notice contains details on using these models during the conformity grace period.

was released, EPA stated that this grace period applies to the use of MOVES2010a as well. As a result, agencies would use MOVES2010a for Federal actions requiring general conformity analysis consistent with the March 2010 grace period.

Additionally, MOVES2010a is currently the best tool EPA has for estimating motor vehicle emissions of multiple mobile source air toxics (MSATs, including benzene, 1,3-butadiene, formaldehyde, acetaldehyde, acrolein, naphthalene, ethanol, MTBE, and diesel PM). These emissions are not regulated under transportation conformity, but analysis of their impacts may be required to comply with NEPA. In these cases, EPA encourages agencies to use MOVES2010a for MSAT emissions at the earliest practicable time.

Finally, MOVES2010a is also currently the best tool EPA has for estimating greenhouse gas (GHG) emissions from the transportation sector. It is a significant improvement over MOBILE6.2 and previous versions of MOVES for GHG estimation. Agencies estimating GHG emissions for NEPA purposes should consider using MOVES2010a for these GHG emissions analyses at the earliest practicable time.

Should you have any questions regarding this issue, please feel free to contact Bob Hargrove, Director, NEPA Compliance Division, or James G. Gavin at (202) 564-7157 or (202) 564-7161, respectively.

cc: Regional 309 Environmental Review Coordinators

**APPENDIX B6 – Federal Highway Administration (FHWA) Documentation**



U.S. Department  
of Transportation  
**Federal Transit  
Administration**

REGION IV  
Alabama, Florida, Georgia,  
Kentucky, Mississippi,  
North Carolina, Puerto  
Rico, South Carolina,  
Tennessee, Virgin Islands

230 Peachtree St., N.W.,  
Suite 800  
Atlanta, GA 30303  
404-865-5600  
404-865-5605 (fax)

March 8, 2011

Mr. John F. Sullivan III, PE  
Division Administrator  
Federal Highway Administration (FHWA)  
North Carolina Division  
310 New Bern Avenue, Suite 410  
Raleigh, NC 27601-1418

Re: Invitation to Participate in the Environmental Review Process for Blue Line Extension Light Rail Project – Charlotte NC as a Cooperating Agency

Dear Mr. Sullivan:

The Federal Transit Administration (FTA), in cooperation with Charlotte Area Transit System (CATS) is preparing an Environmental Impact Statement for the proposed Blue Line Extension – Light Rail Project in Charlotte NC. The proposed project is a 9.6 mile approximate extension of the existing LYNX Blue Line in NE Charlotte along railroad corridors and also along, and at times within, the median of N. Tryon Street (US. Hwy 29). The BLE LRT extension will proceed in a Northeasterly direction from uptown Charlotte at approximately 7<sup>th</sup> Street – northeast to the University of North Carolina – Charlotte near I-485. The purpose of the project is to provide fixed guideway transit options, greater mobility, connectivity and travel time savings in the corridor. A CD of the DEIS was sent to your office on or about August 2010. Further, as a follow up FTA discussed the project with your staff in late February 2011. A DRAFT EIS is also available on the web site of CATS. Here is a link to the BLE project site.

<http://charmbeck.org/city/charlotte/cats/planning/BLE/Pages/deis.aspx>

Per the CEQ NEPA implementing regulations, any Federal agency which has jurisdiction by law may be a cooperating agency. In addition, Section 6002 of the Safe, Accountable, Flexible and Efficient Transportation Equity Act: A Legacy for Users establishes an enhanced environmental review process for certain FTA projects, increasing the transparency of the process, as well as opportunities for participation. The requirements of Section 6002 apply to the project that is the subject of this letter. As part of the environmental review process for this project, the lead agencies must identify, as early as practicable, any other Federal and non-Federal agencies that may have an interest in the project, and invite such agencies to become participating agencies in the environmental review process.<sup>1</sup> Your agency has been identified as one that may have an interest in this project, because a four mile length (approximate) of the BLE LRT extension will lie along US Hwy 29/N. Tryon St. Part of the BLE transit alignment and several of the stations will lie

<sup>1</sup> Designation as a "participation agency" does not imply that the participating agency supports the proposed project or has any jurisdiction over, or special expertise concerning the proposed project or its potential impacts. A "participating agency" differs from a "cooperating agency," which is defined in regulations implementing the National Environmental Policy Act as "any Federal agency other than a lead agency which has jurisdiction by law or special expertise with respect to any environmental impact involved in a proposal (or a reasonable alternative) for legislation or other major Federal action significantly affecting the quality of the human environment." 40 C.F.R. § 1508.5.

in the median of US. Hwy. 29/N. Tryon St. We understand NC 49 and US Hwy. 29 are the same route south of University City Boulevard. This segment of NC49/US29, from the I-85 connector ramp to University City Boulevard, looks like it is designated as part of the National Highway System (NHS). We understand this segment may be re-designated in the future after the City of Charlotte completes its project to add two intersections and eliminate the "weave" in this segment. The BLE project includes LRT running in the median of this segment of N. Tryon St. with a grade separation at the intersection of N. Tryon St. and the I-85 connector road and at the intersection of N. Tryon St. and University City Boulevard (NC49), and a station that includes a pedestrian bridge over the southbound lanes of N. Tryon St. is also located within this segment. Each transit station will have pedestrian access and we understand at least two pedestrian bridges are proposed to be built to access the transit stations over US Hwy. 29/N. Tryon Street. Several intersections will be reconstructed including the intersection of US Hwy 29 and NC 49.

Accordingly, you are being extended this invitation to become actively involved as a cooperating agency in the environmental review process if you so choose.

As a cooperating agency, you will be afforded the opportunity, together with the public, to be involved in further defining the purpose of and need for the project, as well as in determining the range of alternatives to be considered for the project. In addition, you will be asked to:

- Provide input on the impact assessment methodologies and level of detail in your agency's area of expertise;
- Participate in coordination meetings, conference calls, joint field reviews, as appropriate; and
- Review and comment on sections of the pre-draft/draft or pre-final environmental documents to communicate any concerns of your agency on the adequacy of the document, the alternatives considered, and the anticipated impacts and mitigation.

Please note your agency does not have to accept this invitation. If, however, you elect not to become a cooperating agency, you must decline this invitation in writing, indicating that your agency has no jurisdiction or authority with respect to the project, no expertise or information relevant to the project, and/or does not intend to submit comments on the project. The declination is attached and may be transmitted by FAX via the attached document or electronically to [keith.melton@dot.gov](mailto:keith.melton@dot.gov). Please include the title of the official responding. Please provide your written response to this invitation (attached) to participate as a cooperating agency by reply to this letter. Your agency is asked to respond to this office by not later than May 1, 2011.

Additional information will be forthcoming during the environmental process. If you have questions regarding this invitation, please contact Keith Melton at 404.865.5614 or Dale Youngkin at 404.865.5472.

Sincerely,



Jamie Pfister,  
Director, OPPD  
Federal Transit Administration (FTA)

Attachment: Acceptance or Declination Signature Page

**Cooperating Agency -- Charlotte Blue Line Extension Light Rail Project**

**Decline or Accept**

**I CONCUR in our agency's role as a Cooperating Agency on the Charlotte Blue Line Extension Light Rail Project under CEQ regulations and SAFETEA-LU 6002:**

\_\_\_\_\_  
Print or Type Name Here

\_\_\_\_\_  
Title

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

**I DECLINE FOR THE FOLLOWING REASONS:**

\_\_\_\_ Have no jurisdiction or authority with respect to the project

\_\_\_\_ Have no expertise or information relevant to the project

\_\_\_\_ Do not intend to submit comments on the project

\_\_\_\_\_  
Print or Type Name Here

\_\_\_\_\_  
Title

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

**Please mail or FAX response to:**

**Mail:**

Keith Melton  
Community Planner  
FTA Region IV  
230 Peachtree Street, NW  
Suite 800  
Atlanta, GA 30303-1512

**FAX: 404.865.5605**



U.S. Department  
of Transportation  
**Federal Highway  
Administration**

**North Carolina Division**

310 New Bern Avenue, Suite 410  
Raleigh, North Carolina 27601

April 11, 2011

Mr. Keith Melton  
Community Planner  
Federal Transit Administration - Region IV  
230 Peachtree Street, NW, Suite 800  
Atlanta, GA 30303-1512

In Reply Refer To:  
HDA-NC

Dear Mr. Melton:

This is in response to your March 8 letter to our office inviting the Federal Highway Administration (FHWA) to be a Cooperating Agency. After careful review of this project, FHWA declines your invitation to be a Cooperating Agency because we do not have any pending actions/authorizations for this project. However, since the project is proposed to traverse along US 29/N. Tryon St., a Federal-aid highway system route, FHWA does request to be a Participating Agency in accordance with Section 6002 of SAFETEA-LU.

We appreciate the opportunity to participate in this project. If you have any questions or comments regarding this response, please contact Clarence Coleman, Director of Preconstruction and Environment for the NC Division Office. Mr. Coleman can be reached at (919) 747-7014.

Sincerely,

For John F. Sullivan, III, P.E.  
Division Administrator

Enclosure

cc: Gregory J. Thorpe, Ph.D., NCDOT, w/enclosure

2011 APR 15 PM 11 09



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APPENDIX B7 – Comments on the Draft EIS

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From: Joshua Watkins [<mailto:jwatkins@harrisburgnc.org>]  
Sent: Tue 8/31/2010 8:52 AM  
To: Melton, Boyd (FTA); [jdellert-okeef@charlottenc.gov](mailto:jdellert-okeef@charlottenc.gov)  
Cc: 'Todd Taylor'  
Subject: Draft EIS Report Comments from the Town of Harrisburg

Mr. Melton and Ms. Dellert-O'Keef,

The Town of Harrisburg has reviewed the Draft Environmental Impact Statement for the LYNX Blue Line Extension Northeast Corridor Light Rail Project, and has no comments regarding the draft EIS document. However, the Town wishes to make it known that we would like to work with CATS on the extension of this Light Rail project into Cabarrus County. This project will have a significant impact to our area, and we would like the opportunity to explore options regarding the availability of access to this light rail line. Many of the commuters who will utilize this extension live in our jurisdiction, and we would like the opportunity to work with CATS on ensuring that the line is accessible and user-friendly to commuters from our area.

Our intent is to attend the public meetings being held on September 9th and 14th, to discuss our ideas further with your staff.

Thank you for the opportunity to comment on this document, and we look forward to working with you as this extension progresses.

Sincerely,

Joshua Watkins  
Planning Director  
Town of Harrisburg



# North Carolina Department of Administration

Beverly Eaves Perdue, Governor

Moses Carey, Jr., Secretary

October 21, 2010

Ms. Judy Dellert-O'Keef  
Charlotte Area Transit System  
600 E. Fourth Street  
Charlotte, NC 28202

Dear Ms. Dellert-O'Keef:

**Re: SCH File # 11-E-0000-0063; DEIS; Proposal of the LYNX Blue Line Extension Northeast Corridor Light Rail is a eleven mile extension of existing light rail to serve the Northeast Corridor from Center City Charlotte to I-485 at North Tryon Street. View document at [www.ridetransit.org](http://www.ridetransit.org)**

The above referenced environmental impact information has been submitted to the State Clearinghouse under the provisions of the National Environmental Policy Act. According to G.S. 113A-10, when a state agency is required to prepare an environmental document under the provisions of federal law, the environmental document meets the provisions of the State Environmental Policy Act. Attached to this letter for your consideration are the comments from Department of Environment and Natural Resources made in the course of this review.

If any further environmental review documents are prepared for this project, they should be forwarded to this office for intergovernmental review.

Should you have any questions, please do not hesitate to call.

Sincerely,

A handwritten signature in black ink, appearing to read "Sheila Green".

Sheila Green  
State Environmental Review Clearinghouse

## Attachments

cc: Region F  
Keith Melton, Federal Transit Administration

**Mailing Address:**  
1301 Mail Service Center  
Raleigh, NC 27699-1301

**Telephone:** (919)807-2425  
Fax (919)733-9571  
State Courier #51-01-00  
e-mail [chryl.c.baggett@doa.nc.gov](mailto:chryl.c.baggett@doa.nc.gov)

**Location Address:**  
116 West Jones Street  
Raleigh, North Carolina





## ☒ North Carolina Wildlife Resources Commission ☒

---

TO: Melba McGee, Environmental Coordinator  
Department of Environment and Natural Resources

FROM: Marla Chambers, Western NCDOT Permit Coordinator *Marla Chambers*  
Habitat Conservation Program, NCWRC

DATE: October 18, 2010

SUBJECT: Review of the Draft Environmental Impact Statement for Charlotte Area Transit System's proposed LYNX Blue Line Extension Northeast Corridor Light Rail project, Mecklenburg County. DENR Project No. 11-0063, due 10/18/2010 (original due date 10/7/2010).

The Charlotte Area Transit System (CATS), in cooperation with the Federal Transit Administration (FTA), is requesting comments from the North Carolina Wildlife Resources Commission (NCWRC) regarding impacts to fish and wildlife resources resulting from the subject project. Staff biologists with the North Carolina Wildlife Resources Commission (NCWRC) have reviewed the information provided. These comments are provided in accordance with the 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).

The CATS proposes to extend the LYNX Blue Line (South Corridor Light Rail Project) 10.7 miles from Center City Charlotte to I-485 near the Mecklenburg/Cabarrus County line. Two alternatives were presented, the Light Rail Alternative (LRA), which is CATS preferred alternative, and the Light Rail Alternative – Sugar Creek Design Option (LRA-SCDO). We note that comparisons of the impacts to water resources between the two alternatives used two different levels of design; 30% Preliminary Engineering Design Plans were used for LRA and 15% Preliminary Engineering Design Plans were used for LRA-SCDO. We question what differences there would be if the same level of design was used.

The LRA-SCDO has a number of advantages over the LRA, including 1,113 linear feet less impact to streams, 0.08 acre less impact to wetlands, 1.56 acres less impact to forest communities (mixed pine/hardwoods), and 5 fewer sites with hazardous and contaminated materials concerns. In addition, unlike the LRA, the LRA-SCDO avoids environmental justice

impacts and impacts to the Carolina birdsfoot trefoil, a Federal Species of Concern and state Significantly Rare plant. It appears that these additional benefits are sufficient to justify additional costs and recommend the LRA-SCDO be selected for construction.

NCWRC is also concerned about indirect and cumulative impacts to area waterways, wildlife habitat, and water quality. The project is in a highly developed area and a rapidly growing region of the state and many streams in the project area are already degraded and impaired. Little Sugar Creek, Doby Creek and Mallard Creek are Class C, 303(d) Listed Waters of the State. Numerous studies have shown that when 10–15% of a watershed is converted to impervious surfaces, there is a serious decline in the health of receiving waters (Schueler 1994) and the quality of fish habitat and wetlands are negatively impacted (Booth 1991, Taylor 1993). Parking lots, sidewalks and other facilities associated with this project will add considerable impervious coverage to an already highly urbanized setting. Automobile related pollutants in the runoff from parking lots may also have a negative impact on water quality. We recommend the CATS use pervious materials to construct the parking lots, sidewalks, and other facilities and to incorporate other Low Impact Development (LID) techniques to allow infiltration and treatment of storm water and to minimize the project's contribution to flooding and water quality degradation.

We encourage CATS and local officials to protect water quality and habitat through the use of LID techniques, growth and stormwater management, and other mitigation efforts. Information on LID practices and measures can be found at [www.lowimpactdevelopment.org](http://www.lowimpactdevelopment.org), <http://www.epa.gov/owow/nps/lid/lidnatl.pdf> and <http://www.stormwatercenter.net/>. Measures to mitigate secondary and cumulative impacts can be found in the Guidance Memorandum to Address and Mitigate Secondary and Cumulative Impacts to Aquatic and Terrestrial Wildlife Resources and Water Quality (NCWRC 2002). Stream mitigation for this project should target local impaired streams. By constructing project facilities in a manner that minimizes water quality and environmental impacts, the City of Charlotte would not only demonstrate their commitment to environmental protection, but may encourage others to use similar measures for Charlotte area construction projects.

Thank you for the opportunity to review and comment on this project. If you have any questions regarding these comments, please contact me at (704) 485-8291.

cc: Marella Buncick, USFWS  
Polly Lespinasse, NCDWQ

#### Literature Cited:

Booth, D. 1991. Urbanization and the natural drainage system-impacts, solutions, and prognoses. Northwest Environmental Journal. 7(1):93-118.

NCWRC (North Carolina Wildlife Resources Commission). 2002. Guidance Memorandum to Address and Mitigate Secondary and Cumulative Impacts to Aquatic and Terrestrial Wildlife Resources and Water Quality. NCWRC, Raleigh. Available:

[http://www.ncwildlife.org/Wildlife\\_Species\\_Con/documents/pg7c3\\_impacts.pdf](http://www.ncwildlife.org/Wildlife_Species_Con/documents/pg7c3_impacts.pdf). (March 2010).

Schueler, Tom. 1994. The Importance of Imperviousness. Watershed Protection Techniques. 1:3 (pp100-111).

Taylor, B.L. 1993. The influences of wetland and watershed morphological characteristics and relationships to wetland vegetation communities. Masters thesis. Dept. of Civil Engineering. University of Washington. Seattle, WA.



North Carolina Department of Environment and Natural Resources

Division of Water Quality

Beverly Eaves Perdue  
Governor

Coleen H. Sullins  
Director

Dee Freeman  
Secretary

October 14, 2010

MEMORANDUM

To: Melba McGee, Environmental Coordinator, Office of Legislative and Intergovernmental Affairs

From: Polly Lespinasse, Division of Water Quality, Mooresville Regional Office

Subject: **Comments on the Draft Environmental Impact Statement (EIS) Related to the Proposed LYNX Blue Line Extension Northeast Corridor Light Rail, from Center City Charlotte to I-485 at North Tryon Street, DENR Project No. 11-0063, Due Date 10/18/2010.**

This office has reviewed the referenced document dated August 2010. The NC Division of Water Quality (NCDWQ) is responsible for the issuance of the Section 401 Water Quality Certification for activities that impact Waters of the U.S., including wetlands. It is our understanding that the project as presented will result in impacts to jurisdictional wetlands, streams, and other surface waters. NCDWQ offers the following comments based on review of the aforementioned document:

**Project Specific Comments:**

1. Little Sugar Creek, Doby Creek and Mallard Creek are Class C, 303(d) Listed Waters of the State. Little Sugar Creek is on the 303(d) list for impaired uses for aquatic life for copper and mercury. Doby Creek is on the 303(d) list for impaired uses for aquatic life for impaired ecological integrity. Mallard Creek is on the 303(d) list for impaired uses for aquatic life for copper and turbidity. NCDWQ is very concerned with sediment and erosion impacts that could result from this project. NCDWQ recommends that the most protective sediment and erosion control BMPs be implemented in accordance with *Design Standards in Sensitive Watersheds* to reduce the risk of nutrient runoff to Little Sugar, Doby and Mallard Creeks. NCDWQ requests that project design plans provide treatment of the stormwater runoff through best management practices as detailed in the most recent version of *NCDWQ Stormwater Best Management Practices*.
2. The Draft EIS identifies a recommended Locally Preferred Alternative (LPA) for this project. The LPA for this project is identified as the "Light Rail Alternative". Two (2) other alternatives were evaluated for the project. They include the "No Build Alternative" and the "Light Rail Alternative-Sugar Creek Design Option". According to the Draft EIS, the "No Build Alternative" is being recommended for elimination because it does not meet the Purpose and Need of the project. The Draft EIS is also recommending the "Light Rail Alternative-Sugar Creek Design Option" for elimination because it "does not provide sufficient additional benefits to justify the increased costs". **NCDWQ staff does support the selection of the "Light Rail Alternative" at this time. Selection of this alternative will result in an additional 1,113 linear feet of stream impact and an additional 0.08 acres of wetland impact compared to the "Light Rail Alternative-Sugar Creek Design Option".** Chapter 2, Table 2-8, compares capital costs for both build alternatives. The "Sugar Creek Design Option" indicates increased costs for guideway and track elements, site work and special conditions, right of way, land and existing improvements, professional services and unallocated contingency. No clear explanation of these costs is provided in the Draft EIS. While additional guideway and track elements can be inferred if the "Sugar Creek Design Option" is greater in length than the "Light Rail Alternative", the other increased costs are not as easily inferred.

Mooresville Regional Office  
Location: 610 East Center Ave., Suite 301 Mooresville, NC 28115  
Phone: (704) 663-1699 \ Fax: (704) 663-6040 \ Customer Service: 1-877-623-6748  
Internet: <http://portal.ncdenr.org/web/wq>

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North Carolina  
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The EIS should include additional information to clarify these increased costs. Sufficient justification, including avoidance and minimization, for impacts associated with the recommended alternative, "Light Rail Alternative" will be required prior to receiving a 401 Water Quality Certification due to the existence of an alternative that would result in a reduction of 1,113 linear feet of stream impact.

3. The Draft EIS states that the LPA in 2002 was the "Light Rail Alternative-Sugar Creek Design Option". Please provide information explaining why this alternative is no longer the recommended LPA. As per the Draft EIS, the "Sugar Creek Design Option" would result in a reduction of 1.57 acres of forested area impacts and would avoid a population of Carolina Birdfoot Trefoil, which is a plant that is a listed "Federal Species of Concern". Table 1-3 lists the goals for the project. One of the goals is to "minimize negative effects on natural resources".
4. The Draft EIS references the Natural Resources Technical Report (NRTR) that was completed July 2010. This document was not included as an attachment in the Draft EIS. The NRTR should be provided to as an attachment in the FEIS and/or the with the 401 Water Quality Certification application.
5. Chapter 3.3 discusses mitigation needs for the project. References are made to "new turn lanes" at some intersections. These turn lanes may result in additional stream and or wetland impacts. Please determine if additional stream or wetland impacts would result from these activities and revise the impact amounts in the EIS as necessary.
6. Chapter 11, Table 11-2 provides a list of wetlands within the project boundaries. Thirteen (13) wetlands are included in the list. Additionally, three (3) of those wetlands are listed as "isolated". "Isolated" wetlands are regulated solely by the NCDWQ. However, a determination indicating that a wetland is isolated (or lacks a significant nexus) must be provided by the U.S. Army Corps of Engineers. The Draft EIS does not indicate if this determination has been provided by the U.S. Army Corps of Engineers.
7. Chapter 22.6.2 identifies the permits required for the project. This section does not indicate the need for a 401 Water Quality Certification. **Please be advised that a 401 Water Quality Certification will be required for this project and is necessary for the corresponding 404, issued by the U.S. Army Corps of Engineers, to be valid.** In addition, the Draft EIS references several agency meetings and scoping requests for this project during the planning and alternative development stages. NCDWQ does not have any documentation indicating NCDWQ's involvement in this process, with the exception of accompanying U.S. Army Corps of Engineers staff on jurisdictional determinations for the proposed park and ride stations.
8. **A qualitative analysis of cumulative and secondary impacts anticipated as a result of this project is required. The type and detail of analysis shall conform to the NC Division of Water Quality Policy on the assessment of secondary and cumulative impacts dated April 10, 2004.**
9. Chapter 11 of the Draft EIS provides the proposed impacts for streams and wetlands within the project boundaries. Some of the proposed stream impacts are a result of culvert installation/replacement/extension while others indicate that the impact is a result of "fill" [i.e., Stream "J" (perennial) will be impacted for 103 linear feet by "fill"]. NCDWQ does not typically authorize "fill" in jurisdictional streams, with the exception of culverts. Filling streams without providing a hydraulic connection to the downstream portions of the feature may result in stream impacts beyond those that may be authorized by the NCDWQ 401 Water Quality Certification. Additionally, the Draft EIS refers to Stream "N" as an "intermittent stormwater drainage feature". If this feature has been identified as a jurisdictional stream, it should not be identified in the document as a "stormwater drainage feature". The impact table also identifies impacts to jurisdictional streams as a result of riprap aprons. The necessity for these impacts will require documentation in the 401 Water Quality Certification application. NCDWQ would like to encourage the use of alternate energy dissipation methods at culvert outlets which would result in less stream impact (i.e., scour holes, proper culvert burial, floodplain benches, riprap on streambanks only).

**General Comments:**

10. The environmental document should provide a detailed and itemized presentation of the proposed 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.

11. Environmental impact statement alternatives shall consider design criteria that reduce the impacts 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 NCDWQ's *Stormwater Best Management Practices Manual*, July 2007, such as grassed swales, buffer areas, preformed scour holes, retention basins, etc.
12. After the selection of the preferred alternative and prior to an issuance of the 401 Water Quality Certification, the applicant is respectfully reminded that they will need to demonstrate the avoidance and minimization of 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. The NC Ecosystem Enhancement Program may be available for use as wetland mitigation.
13. In accordance with the Environmental Management Commission's Rules {15A 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 lost functions and values. The NC Ecosystem Enhancement Program may be available for use as stream mitigation.
14. Future documentation, including the 401 Water Quality Certification Application, shall include an itemized listing of the proposed wetland and stream impacts with corresponding mapping.
15. NCDWQ is very concerned with sediment and erosion impacts that could result from this project. The applicant 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.
16. The applicant 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.
17. Where streams must be crossed, NCDWQ 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 applicant should not install the bridge bents in the creek, to the maximum extent practicable.
18. Whenever possible, NCDWQ prefers spanning structures. Spanning structures usually do not require work within the stream or grubbing of the streambanks 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.
19. 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 NCDWQ's *Stormwater Best Management Practices*.
20. Sediment and erosion control measures should not be placed in wetlands or streams.
21. 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.

22. 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.
23. 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 NCTA and written concurrence from NCDWQ. 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.
24. 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.
25. 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 chain saws, mowers, bush-hogs, or other mechanized equipment and leaving the stumps and root mat intact allows the area to re-vegetate naturally and minimizes soil disturbance.
26. Placement of culverts and other structures in waters, streams, and wetlands 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 down stream of the above structures. The applicant is required to provide evidence that the equilibrium is being maintained if requested in writing by NCDWQ. If this condition is unable to be met due to bedrock or other limiting features encountered during construction, please contact NCDWQ for guidance on how to proceed and to determine whether or not a permit modification will be required.
27. 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, floodplain 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.
28. If foundation test borings are necessary; it shall be noted in the document. Geotechnical work is approved under General 401 Certification Number 3687/Nationwide Permit No. 6 for Survey Activities.
29. 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 NCS000523.
30. All work in or adjacent to stream waters shall be conducted in a dry work area. Approved BMP measures from the most current version of 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.

31. While the use of National Wetland Inventory (NWI) maps and soil survey maps are useful tools, their inherent inaccuracies require that qualified personnel perform onsite wetland delineations prior to permit approval.
32. 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.
33. 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.
34. 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.

NCDWQ appreciates the opportunity to provide comments on your project. Should you have any questions or require any additional information, please contact Polly Lespinasse at (704) 663-1699.

cc: Steve Chapin, US Army Corps of Engineers, Asheville Field Office (electronic copy)  
Liz Hair, US Army Corps of Engineers, Asheville Field Office (electronic copy)  
Marla Chambers, NC Wildlife Resources Commission (electronic copy)  
Marella Buncick, US Fish and Wildlife Service (electronic copy)  
Sonia Gregory, NCDWQ Central Office (electronic copy)  
Rob Krebs, NCDWQ MRO (electronic copy)  
Marcia Allocco, NCDWQ MRO (electronic copy)  
Alan Johnson, NCDWQ MRO (electronic copy)  
File Copy

**INTERGOVERNMENTAL REVIEW - PROJECT COMMENTS**

Project Number: 11-0063 Due Date: 10/7/10

After review of this project it has been determined that the ENR permit(s) and/or approvals indicated may need to be obtained in order for this project to comply with North Carolina Law. Questions regarding these permits should be addressed to the Regional Office indicated on the reverse of the form. All applications, information and guidelines relative to these plans and permits are available from the same Regional Office.

	PERMITS	SPECIAL APPLICATION PROCEDURES or REQUIREMENTS	Normal Process Time (statutory time limit)
<input type="checkbox"/>	Permit to construct & operate wastewater treatment facilities, sewer system extensions & sewer systems not discharging into state surface waters.	Application 90 days before begin construction or award of construction contracts. On-site inspection. Post-application technical conference usual.	30 days (90 days)
<input type="checkbox"/>	NPDES - permit to discharge into surface water and/or permit to operate and construct wastewater facilities discharging into state surface waters.	Application 180 days before begin activity. On-site inspection. Pre-application conference usual. Additionally, obtain permit to construct wastewater treatment facility-granted after NPDES. Reply time, 30 days after receipt of plans or issue of NPDES permit-whichever is later.	90-120 days (N/A)
<input type="checkbox"/>	Water Use Permit	Pre-application technical conference usually necessary	30 days (N/A)
<input type="checkbox"/>	Well Construction Permit	Complete application must be received and permit issued prior to the installation of a well.	7 days (15 days)
<input type="checkbox"/>	Dredge and Fill Permit	Application copy must be served on each adjacent riparian property owner. On-site inspection. Pre-application conference usual. Filling may require Easement to Fill from N.C. Department of Administration and Federal Dredge and Fill Permit.	55 days (90 days)
<input type="checkbox"/>	Permit to construct & operate Air Pollution Abatement facilities and/or Emission Sources as per 15 A NCAC (2Q.0100 thru 2Q.0300)	Application must be submitted and permit received prior to construction and operation of the source. If a permit is required in an area without local zoning, then there are additional requirements and timelines (2Q.0113).	90 days
<input type="checkbox"/>	Permit to construct & operate Transportation Facility as per 15 A NCAC (2D.0800, 2Q.0601)	Application must be submitted at least 90 days prior to construction or modification of the source.	90 days
<input type="checkbox"/>	Any open burning associated with subject proposal must be in compliance with 15 A NCAC 2D.1900	N/A	60 days (90 days)
<input type="checkbox"/>	Demolition or renovations of structures containing asbestos material must be in compliance with 15 A NCAC 20.1110 (a) (1) which requires notification and removal prior to demolition. Contact Asbestos Control Group 919-707-5950.		
<input type="checkbox"/>	Complex Source Permit required under 15 A NCAC 2D.0800		
<input checked="" type="checkbox"/>	The Sedimentation Pollution Control Act of 1973 must be properly addressed for any land disturbing activity. An erosion & sedimentation control plan will be required if one or more acres to be disturbed. Plan filed with proper Regional Office (Land Quality Section) At least 30 days before beginning activity. A fee of \$65 for the first acre or any part of an acre. An express review option is available with additional fees.		20 days (30 days)
<input type="checkbox"/>	Sedimentation and erosion control must be addressed in accordance with NCDOT's approved program. Particular attention should be given to design and installation of appropriate perimeter sediment trapping devices as well as stable stormwater conveyances and outlets.		(30 days)
<input type="checkbox"/>	Mining Permit	On-site inspection usual. Surety bond filed with ENR Bond amount varies with type mine and number of acres of affected land. Any acre mined greater than one acre must be permitted. The appropriate bond must be received before the permit can be issued.	30 days (60 days)
<input type="checkbox"/>	North Carolina Burning permit	On-site inspection by N.C. Division Forest Resources if permit exceeds 4 days	1 day (N/A)
<input type="checkbox"/>	Special Ground Clearance Burning Permit - 22 counties in coastal N.C. with organic soils	On-site inspection by N.C. Division Forest Resources required "if more than five acres of ground clearing activities are involved. Inspections should be requested at least ten days before actual burn is planned."	1 day (N/A)
<input type="checkbox"/>	Oil Refining Facilities	N/A	90-120 days (N/A)
<input type="checkbox"/>	Dam Safety Permit	If permit required, application 60 days before begin construction. Applicant must hire N.C. qualified engineer to: prepare plans, inspect construction, certify construction is according to ENR approved plans. May also require permit under mosquito control program. And a 404 permit from Corps of Engineers. An inspection of site is necessary to verify Hazard Classification. A minimum fee of \$200.00 must accompany the application. An additional processing fee based on a percentage of the total project cost will be required upon completion.	30 days (60 days)

PERMITS		SPECIAL APPLICATION PROCEDURES or REQUIREMENTS	Normal Process Time (statutory time limit)
<input type="checkbox"/>	Permit to drill exploratory oil or gas well	File surety bond of \$5,000 with ENR running to State of NC conditional that any well opened by drill operator shall, upon abandonment, be plugged according to ENR rules and regulations.	10 days N/A
<input type="checkbox"/>	Geophysical Exploration Permit	Application filed with ENR at least 10 days prior to issue of permit. Application by letter. No standard application form.	10 days N/A
<input type="checkbox"/>	State Lakes Construction Permit	Application fees based on structure size is charged. Must include descriptions & drawings of structure & proof of ownership of riparian property.	15-20 days N/A
<input checked="" type="checkbox"/>	401 Water Quality Certification	N/A	60 days (130 days)
<input type="checkbox"/>	CAMA Permit for MAJOR development	\$250.00 fee must accompany application	55 days (150 days)
<input type="checkbox"/>	CAMA Permit for MINOR development	\$50.00 fee must accompany application	22 days (25 days)
<input type="checkbox"/>	Several geodetic monuments are located in or near the project area. If any monument needs to be moved or destroyed, please notify: N.C. Geodetic Survey, Box 27687 Raleigh, NC 27611		
<input checked="" type="checkbox"/>	Abandonment of any wells, if required must be in accordance with Title 15A. Subchapter 2C.0100.		
<input type="checkbox"/>	Notification of the proper regional office is requested if "orphan" underground storage tanks (USTS) are discovered during any excavation operation.		
<input type="checkbox"/>	Compliance with 15A NCAC 2H 1000 (Coastal Stormwater Rules) is required.		45 days (N/A)
<input type="checkbox"/>	Tar Pamlico or Neuse Riparian Buffer Rules required.		
* Other comments (attach additional pages as necessary, being certain to cite comment authority)			
<p>DAZ Ron Abel no comments 8/13/2010</p> <p>LA EES Cole Point request for details of law a then July 5. A 8/23/10</p> <p>APC - no comments. 8/24/10</p> <p>SWP - comply with all Phase I or II stormwater rules/comply with applicable watershed or Buffer Rules/comply with all local water quality ordinances comply with requirement of any construction stormwater permit requirements and conditions. Obtain needed permit where collection system line relocations are required 8/27/10 DB + 401 use certification + USCOE 404 as applicable</p>			

### REGIONAL OFFICES

Questions regarding these permits should be addressed to the Regional Office marked below.

**Asheville Regional Office**

2090 US Highway 70  
Swannanoa, NC 28778  
(828) 296-4500

**Mooreville Regional Office**

610 East Center Avenue, Suite 301  
Mooreville, NC 28115  
(704) 663-1699

**Wilmington Regional Office**

127 Cardinal Drive Extension  
Wilmington, NC 28405  
(910) 796-7215

**Fayetteville Regional Office**

225 North Green Street, Suite 714  
Fayetteville, NC 28301-5043  
(910) 433-3300

**Raleigh Regional Office**

3800 Barrett Drive, Suite 101  
Raleigh, NC 27609  
(919) 791-4200

**Winston-Salem Regional Office**

585 Woughtown Street  
Winston-Salem, NC 27107  
(336) 771-5000

**Washington Regional Office**

943 Washington Square Mall  
Washington, NC 27889  
(252) 946-6481

DEPARTMENT OF ENVIRONMENT AND  
NATURAL RESOURCES  
DIVISION OF ENVIRONMENTAL HEALTH

Project Number <b>11-0063</b>
County <b>Mecklenburg</b>

Inter-Agency Project Review Response

Project Name Charlotte Area Transit System Type of Project

**Draft Environmental Impact Statement - Proposal of LYNX Blue Line Extension Northeast Corridor Light Rail: 11 mile extension of existing light rail to serve NE Corridor. View doc [www.ridetransit.org](http://www.ridetransit.org)**

- The applicant should be advised that plans and specifications for all water system improvements must be approved by the Division of Environmental Health prior to the award of a contract or the initiation of construction (as required by 15A NCAC 18C .0300et. seq.). For information, contact the Public Water Supply Section, (919) 733-2321.
- This project will be classified as a non-community public water supply and must comply with state and federal drinking water monitoring requirements. For more information the applicant should contact the Public Water Supply Section, (919) 733-2321.
- If this project is constructed as proposed, we will recommend closure of \_\_\_\_\_ feet of adjacent waters to the harvest of shellfish. For information regarding the shellfish sanitation program, the applicant should contact the Shellfish Sanitation Section at (252) 726-6827.
- The soil disposal area(s) proposed for this project may produce a mosquito breeding problem. For information concerning appropriate mosquito control measures, the applicant should contact the Public Health Pest Management Section at (919) 733-6407.
- The applicant should be advised that prior to the removal or demolition of dilapidated structures, an extensive rodent control program may be necessary in order to prevent the migration of the rodents to adjacent areas. For information concerning rodent control, contact the local health department or the Public Health Pest Management Section at (919) 733-6407.
- The applicant should be advised to contact the local health department regarding their requirements for septic tank installations (as required under 15A NCAC 18A. 1900 et. sep.). For information concerning septic tank and other on-site waste disposal methods, contact the On-Site Wastewater Section at (919) 733-2895.
- The applicant should be advised to contact the local health department regarding the sanitary facilities required for this project.
- If existing water lines will be relocated during the construction, plans for the water line relocation must be submitted to the Division of Environmental Health, Public Water Supply Section, Technical Services Branch, 1634 Mail Service Center, Raleigh, North Carolina 27699-1634, (919) 733-2321.
- For Regional and Central Office comments, see the reverse side of this form.

<u>Jim McRight</u>	<u>PWSS</u>	<u>08/26/2010</u>
Reviewer	Section/Branch	Date

DEPARTMENT OF ENVIRONMENT AND  
NATURAL RESOURCES  
DIVISION OF ENVIRONMENTAL HEALTH

Project Number  
11-0063

County  
Mecklenburg

Inter-Agency Project Review Response

Project Name Charlotte Area Transit System Type of Project

Draft Environmental Impact  
Statement - Proposal of  
LYNX Blue Line Extension  
Northeast Corridor Light  
Rail: 11 mile extension of  
existing light rail to serve NE  
Corridor. View doc  
[www.ridetransit.org](http://www.ridetransit.org)

Comments provided by:

- Regional Program Person  
 Regional Supervisor for Public Water Supply Section  
 Central Office program person

Name Britt Setzer-Mooresville RO Date 08/26/2010

Telephone number: 704-235-2127

Program within Division of Environmental Health:

- Public Water Supply  
 Other, Name of Program: \_\_\_\_\_

Response (check all applicable):

- No objection to project as proposed  
 No comment  
 Insufficient information to complete review  
 Comments attached  
 See comments below

AUG 30 2010

NC DENR  
Public Water Supply

Plans and specifications for any water line relocations or new water mains must be reviewed and approved prior to construction by Charlotte Mecklenburg Utilities Department (CMUD). The NC DENR - PWS Section recently delegated all approvals for both public + private water mains to CMUD.

Return to:  
Public Water Supply Section  
Environmental Review Coordinator  
for the  
Division of Environmental Health



M E C K L E N B U R G - U N I O N  
METROPOLITAN PLANNING ORGANIZATION

600 East Fourth Street  
Charlotte, North Carolina 28202-2853  
704-336-2205  
www.mumpo.org

CHARLOTTE

CORNELIUS

DAVIDSON

HUNTERSVILLE

INDIAN TRAIL

MATTHEWS

MECKLENBURG  
COUNTY

MINT HILL

MONROE

NCDOT

PINEVILLE

STALLINGS

UNION

COUNTY

WAXHAW

WEDDINGTON

WESLEY CHAPEL

WINGATE

October 11, 2010

Mr. Keith Melton, Community Planner  
Federal Transit Administration, Region IV  
230 Peachtree, NW, Suite 800  
Atlanta, Georgia 30302

Judy Dellert-O'Keef, Communications Officer  
Charlotte Area Transit System  
600 E. Fourth Street  
Charlotte, North Carolina 28202

SUBJECT: Blue Line Extension Draft Environmental Impact Statement

Dear Mr. Melton and Ms. O'Keef:

Section 3.1.3.2, and more specifically Table 3-8, of the Draft Environmental Impact Statement for the Blue Line Extension correctly notes that improvements to N. Tryon St. from University City Boulevard to I-485 were funded in the Mecklenburg-Union Metropolitan Planning Organization's (MUMPO) 2030 Long Range Transportation Plan (LRTP), but were not funded in MUMPO's 2035 Plan adopted earlier this year. However, the DEIS does not provide the full context of the matter.

The preparation of the 2035 LRTP was governed by stricter financial planning standards imposed by updated metropolitan transportation planning regulations adopted after the enactment of SAFETEA-LU in 2005. In addition, MUMPO's policy board was reluctant to assume any new revenue streams as part of the LRTP's financial plan. This resulted in a significant reduction in the number of projects deemed to be financially feasible in the 2035 LRTP, as compared to the 2030 LRTP. In fact, approximately two-thirds of the projects found in the 2030 LRTP had to be dropped from the 2035 plan. Because funding was the only reason this project was not included in the LRTP, it is expected that it will be considered for funding during the next update of the LRTP. The update process will begin in 2011.

Please contact me if you have any questions.

Sincerely:

Robert W. Cook, AICP  
Secretary, Mecklenburg-Union Metropolitan Planning Organization



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

REGION 4  
ATLANTA FEDERAL CENTER  
61 FORSYTH STREET  
ATLANTA, GEORGIA 30303-8960

2010 OCT 13 AM 9 23

October 8, 2010

Mr. Keith Melton  
Community Planner  
Federal Transit Administration, Region IV  
230 Peachtree Street, N.W., Suite 800  
Atlanta, Georgia 30303-1512

SUBJECT: Federal Draft Environmental Impact Statement for the LYNX Blue Line Extension Northeast Corridor Light Rail Project, Center City, Charlotte to Interstate 85, Mecklenburg County, North Carolina; FTA-E40834-NC; CEQ No.: 20100336

Dear Mr. Melton:

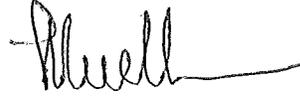
The U.S. Environmental Protection Agency (EPA) Region 4 Office has reviewed the subject document and is commenting in accordance with Section 309 of the Clean Air Act (CAA) and Section 102(2)(C) of the National Environmental Policy Act (NEPA). The Federal Transit Authority (FTA) and Charlotte Area Transit System (CATS) are proposing to construct an approximate 9-mile extension of the light rail system from Center City Charlotte to south of Interstate 485. The proposed light rail improvement would primarily utilize existing railroad right of way for the first 4 miles and then be located in the median of North Tryon Street/US-29 for a substantial portion of the remaining distance. There would be a new location segment as it enters the University of North Carolina at Charlotte (UNC-Charlotte) campus. Thirteen (13) stations are proposed with 7 of them being with park-and-ride facilities.

FTA and CATS evaluated several preliminary alternatives and have identified a locally preferred alternative (LPA), including the Light Rail Alternative – Sugar Creek Design Option that provides for an alignment shift with two different station locations. EPA has attached detailed technical review comments on the potential environmental impacts from the proposed project to this letter (See Attachment A).

EPA has rated the Draft Environmental Impact Statement (DEIS), Lack of Objections (LO-1), and has not identified any potential environmental impacts requiring substantive changes to the preferred alternative. Additionally, the DEIS adequately sets forth the environmental impacts of the preferred alternative and no further analysis or data collection is believed to be necessary. Overall, EPA supports the proposed project's purpose and need and the recommended avoidance and minimization measures and mitigation. EPA is requesting further details regarding potential noise mitigation

measures for an Environmental Justice community in the FEIS. If there are any questions concerning these comments, please contact Mr. Christopher A. Militscher of my staff at (919) 856-4206 or by e-mail at [militscher.chris@epa.gov](mailto:militscher.chris@epa.gov). Thank you for the opportunity to comment.

Sincerely,

A handwritten signature in black ink, appearing to read "Mueller", with a long horizontal flourish extending to the right.

Heinz J. Mueller, Chief  
NEPA Program Office

Cc: E. Hair, USACE-Asheville  
M. Hamel, NCDOT-Rail  
B. Wrenn, NCDWQ  
J. Dellert-O'Keef, CATS

**Attachment A**  
**DEIS for the LYNX Blue Line Extension Northeast Corridor Light Rail Project**  
**Center City, Charlotte to Interstate 85, Mecklenburg County, North Carolina;**  
**FTA-E40834-NC**  
**Technical Review Comments**

Wetland and Stream Impacts

The Light Rail Alternative (and Sugar Creek Option) impact approximately 1.52 acres of jurisdictional wetlands. The Light Rail Alternative (LRA) impacts approximately 3,260 linear feet of streams. The LRA-Sugar Creek Option impacts potentially 1,110 linear feet less than the LPA (2,150 linear feet). From a natural resource perspective, EPA prefers the LRA-Sugar Creek Option.

Other Natural Resource Impacts

The LRA-Sugar Creek Option potentially impacts approximately 18.4 acres of mixed pine/hardwood forests. Chapter 10 of the DEIS also identifies farmlands as a natural resource. There are no farmlands within the proposed corridor. As a point of clarification, farmlands are not natural resources and should have been discussed in the human resource section of the DEIS. EPA requests that this been clarified in the Final Environmental Impact Statement (FEIS).

Floodplains impacts are identified in Chapter 11 of the DEIS, and include 0.2 acres in the FEMA floodway, 0.87 acres in the Community Encroachment Area and 8.47 acres in Community Floodplains.

There are no anticipated impacts to protected species.

Air Quality Impacts

The proposed project is considered consistent with local and State plans. There is an anticipated long-term benefit to air quality in the metropolitan Charlotte area with a significant reduction forecasted for vehicle miles traveled (vmt) of approximately 55 million miles per year. Considering the non-attainment status (8-hour Ozone standard) for the Charlotte-Gastonia-Rock Hill area, the reduction of vehicle emissions from implementing the proposed light rail project is a potentially significant. The regional annual emissions reductions forecasted for the project are presented in Table 12-4 of the DEIS and include Carbon monoxide (CO), Nitrogen oxides (NOx), and Volatile Organic Compounds (VOCs).

Human Resource Impacts

Property acquisitions are described in Chapter 17 of the DEIS. The LRA-Sugar Creek Option includes 32 business and 1 residential relocations. There would also be additional partial property acquisition for roadway widening along North Tryon Street/US 29 and along other areas of the proposed rail corridor.

Noise and vibration impacts are identified in Chapter 13 of the DEIS. There are numerous entities, including 27 single family residence receptors that will receive moderate noise impacts from the proposed project (i.e., LPA-Sugar Creek Option). Additionally, 2 multi-family buildings at Mallard Creek Apartments will be severely impacts. Vibration impacts to one single family residence are avoided with the LPA-Sugar Creek Option. Also, no adverse or disproportionate impacts are expected to minority and low-income populations based upon the assessment described in Chapter 6.0 of the DEIS. However, Table 6-4, Summary of Potential Impacts on Neighborhoods identified the Hidden Valley neighborhood as having a potential noise impact. Under Table ES-2, Summary of Mitigation, Environmental Justice, it identifies that "*Noise mitigation for residential properties located within EJ communities of concern will be required*". Mitigation for noise impacts to this neighborhood is being deferred to the final project design. The DEIS does not specifically identify or quantify the type or scope of the noise mitigation. This issues needs to be further detailed and discussed in the FEIS.

Minimal impacts are expected from the LPA-Sugar Creek Option to 3 existing or planned parks or greenways. Noise and visual impacts are expected to Kirk Farm Fields, and visual impacts to 2 proposed greenways (Toby Creek and Mallard Creek). There are no anticipated adverse impacts to historic or archaeological resources. There are a total of potentially 14 properties for hazardous material concerns on the proposed alignment and for the proposed park-and-ride facilities.



## North Carolina Department of Administration

Beverly Eaves Perdue, Governor

Moses Carey, Jr., Secretary

October 13, 2010

Ms. Judy Dellert-O'Keef  
Charlotte Area Transit System  
600 E. Fourth Street  
Charlotte, NC 28202

Dear Ms. Dellert-O'Keef:

**Re: SCH File # 11-E-0000-0063; DEIS; Proposal of the LYNX Blue Line Extension Northeast Corridor Light Rail is a eleven mile extension of existing light rail to serve the Northeast Corridor from Center City Charlotte to I-485 at North Tryon Street. View document at [www.ridetransit.org](http://www.ridetransit.org)**

The above referenced environmental impact information has been submitted to the State Clearinghouse under the provisions of the National Environmental Policy Act. According to G.S. 113A-10, when a state agency is required to prepare an environmental document under the provisions of federal law, the environmental document meets the provisions of the State Environmental Policy Act. Attached to this letter for your consideration are the comments made by agencies in the course of this review. **To reiterate our previous conversation, I will forward Department of Environment and Natural Resources' (DENR) comments on October 26, 2010. This was the extension date asked by DENR and was granted by you to complete their review.**

If any further environmental review documents are prepared for this project, they should be forwarded to this office for intergovernmental review.

Should you have any questions, please do not hesitate to call.

Sincerely,

A stylized signature in red ink, consisting of several overlapping, curved lines that suggest the name "Sheila Green".

Sheila Green

State Environmental Review Clearinghouse

### Attachments

cc: Region F  
Keigh Melton, Federal Transit Administration

**Mailing Address:**  
1301 Mail Service Center  
Raleigh, NC 27699-1301

**Telephone: (919)807-2425**  
Fax (919)733-9571  
State Courier #51-01-00  
*e-mail [chrys.c.baggett@doa.nc.gov](mailto:chrys.c.baggett@doa.nc.gov)*

**Location Address:**  
116 West Jones Street  
Raleigh, North Carolina

NORTH CAROLINA STATE CLEARINGHOUSE  
DEPARTMENT OF ADMINISTRATION  
INTERGOVERNMENTAL REVIEW

*Am-1*

COUNTY: MECKLENBURG

F05: RAILROADS

STATE NUMBER: 11-E-0000-0063  
DATE RECEIVED: 08/19/2010  
AGENCY RESPONSE: 08/07/2010  
REVIEW CLOSED: 10/12/2010

MS SHIRLEY FOYE  
CLEARINGHOUSE COORDINATOR  
DEPT OF TRANSPORTATION  
STATEWIDE PLANNING - MSC #1554  
RALEIGH NC

REVIEW DISTRIBUTION

- CC&PS - DIV OF EMERGENCY MANAGEMENT
- CENTRALINA COG
- DENR LEGISLATIVE AFFAIRS
- DEPT OF AGRICULTURE
- DEPT OF CULTURAL RESOURCES
- DEPT OF TRANSPORTATION

PROJECT INFORMATION

APPLICANT: Charlotte Area Transit System  
TYPE: National Environmental Policy Act  
Draft Environmental Impact Statement

DESC: Proposal of the LYNX Blue Line Extension Northeast Corridor Light Rail is a eleven mile extension of existing light rail to serve the Northeast Corridor from Center City Charlotte to I-485 at North Tryon Street. View document at [www.ridetransit.org](http://www.ridetransit.org)

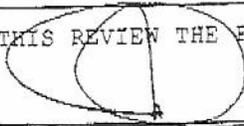
CROSS-REFERENCE NUMBER: 05-E-0000-0104 01-E-0000-0176

The attached project has been submitted to the N. C. State Clearinghouse for intergovernmental review. Please review and submit your response by the above indicated date to 1301 Mail Service Center, Raleigh NC 27699-1301.

If additional review time is needed, please contact this office at (919)807-2425.

AS A RESULT OF THIS REVIEW THE FOLLOWING IS SUBMITTED:  NO COMMENT  COMMENTS ATTACHED

SIGNED BY:

 ANIL PANICKER

DATE:

09/07/2010





STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

BEVERLY EAVES PERDUE  
GOVERNOR

EUGENE A. CONTI, JR.  
SECRETARY

September 07, 2010

**MEMORANDUM**

**Subject:** Clearinghouse Number 11-E-0000-0063  
Proposal of the LYNX Blue Line Extension – Northeast Corridor  
Light Rail

**From:** Anil Panicker, Transportation Engineer III  
Transportation Planning Branch *AP*

The adopted 2035 Long Range Transportation plan and the Draft 2012 -2018 Statewide Transportation Improvement Program for the Mecklenburg – Union Metropolitan Planning Organization (MUMPO) identifies the following projects in the vicinity of the project described above.

1. R-2420 – City Boulevard Extension, Relocated Mallard Creek Road (U-2507 to US 29-NC 49. Four lanes divided, part on new location.
2. U-5008 – Sugar Creek Road grade separation of North Carolina railroad crossing.
3. U-2507 – Mallard Creek Road from Sugar Creek Road to Mallard Creek Church Road. Widen to multi-lanes, part on new location.

The planning, design, and construction of this project should be coordinated with the NCDOT Division 10, District Engineer, Louis Mitchell, PE, (704)596-6900, to ensure that all setback and other requirements for the ROW of the roadway projects are met and there are no potential conflicts with any other NCDOT projects in the general area of the subject project.

I can be reached at (704) 336-5738 and would be happy to discuss any related concerns you may have about the project.

cc: Louis Mitchell, PE, Division 10 District Engineer

MAILING ADDRESS:  
NC DEPARTMENT OF TRANSPORTATION  
STATEWIDE PLANNING  
1554 MAIL SERVICE CENTER  
RALEIGH NC 27669-1554

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1 SOUTH WILMINGTON STREET  
RALEIGH NC

NORTH CAROLINA STATE CLEARINGHOUSE  
DEPARTMENT OF ADMINISTRATION  
INTERGOVERNMENTAL REVIEW

COUNTY: MECKLENBURG

F05: RAILROADS

STATE NUMBER: 11-E-0000-0063  
DATE RECEIVED: 08/19/2010  
AGENCY RESPONSE: 10/07/2010  
REVIEW CLOSED: 10/12/2010



MS RENEE GLEDHILL-EARLEY  
CLEARINGHOUSE COORDINATOR  
DEPT OF CULTURAL RESOURCES  
STATE HISTORIC PRESERVATION OFFICE  
MSC 4617 - ARCHIVES BUILDING  
RALEIGH NC

ER 06-1957

REVIEW DISTRIBUTION

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DEPT OF AGRICULTURE  
DEPT OF CULTURAL RESOURCES  
DEPT OF TRANSPORTATION

H. *lye* 9/30/10

*Aue* 9/14/10



PROJECT INFORMATION

APPLICANT: Charlotte Area Transit System  
TYPE: National Environmental Policy Act  
Draft Environmental Impact Statement

DESC: Proposal of the LYNX Blue Line Extension Northeast Corridor Light Rail is a eleven mile extension of existing light rail to serve the Northeast Corridor from Center City Charlotte to I-485 at North Tryon Street. View document at [www.ridetransit.org](http://www.ridetransit.org)

CROSS-REFERENCE NUMBER: 05-E-0000-0104 01-E-0000-0176

The attached project has been submitted to the N. C. State Clearinghouse for intergovernmental review. Please review and submit your response by the above indicated date to 1301 Mail Service Center, Raleigh NC 27699-1301.

If additional review time is needed, please contact this office at (919)807-2425.

AS A RESULT OF THIS REVIEW THE FOLLOWING IS SUBMITTED:  NO COMMENT  COMMENTS ATTACHED

SIGNED BY: *Renee Gledhill-Earley*  
*all properties & effects correctly noted*

DATE: *9/30/10*



# United States Department of the Interior

OFFICE OF THE SECRETARY  
Washington, DC 20240



9043.1  
PEP/NRM

ER 10/726

DEC 2 2010

2010 DEC 6 PM 12 34

Mr. Keith Melton  
Community Planner  
Federal Transit Administration, Region IV  
230 Peachtree, NW, Suite 800  
Atlanta, Georgia 30303

Dear Mr. Melton:

The Department of the Interior (Department) has reviewed the Draft Environmental Impact Statement (DEIS) and Section 4(f) Evaluation for the **LYNX Blue Line Extension Northeast Corridor Light Rail (LYNX BLE) Project, Northeast of Charlotte, Mecklenburg County, North Carolina**. The Department offers the following comments for your consideration.

## General Comments

The project consists of constructing an 11-mile extension of the LYNX Blue Line with 13 proposed stations. The Blue Line Extension will extend from Ninth Street in Center City through the North Davidson (NoDa) and University areas to I-485 north of UNC Charlotte. The service will operate generally within the existing railroad right of way from Center City to NoDa, then remain within the North Tryon Street (US 29) right-of-way from Old Concord Road north to I-485. A design option, called the Light Rail Alternative – Sugar Creek Design Option, is also presented and provides an alignment option with two different station locations. A majority of the LYNX BLE will be constructed in previously impacted/urbanized areas; however, impacts to aquatic resources will occur. The Light Rail Alternative will result in 3,262 linear feet (lf) of stream impacts (about 23,256 square feet) and about 1.522 acres of wetland impact. The Light Rail Alternative – Sugar Creek Design Option will result in impacts to about 2,149 lf of stream channel (18,599 square feet) and about 1.442 acres of wetlands. Both alternatives will impact about 8,902 square feet of the FEMA floodway. Though it has less aquatic impacts than the Light Rail Alternative, the construction of the Sugar Creek Design Option would result in an additional expenditure of about \$59 million.

## **Specific Comments**

### **Ground water**

#### **Sections 11.1.1, 11.2.2.1, and 11.3.1.1**

The DEIS does not contain sufficient information on the area groundwater to support the finding of no impact. The document does not contain information on the depth to groundwater, flow direction, aquifers currently used, nor the quantity of water withdrawn for domestic and public water supply in the vicinity of the project. The document indicates that in some places the water table may be very shallow (a few feet below land surface); this increases the potential for contamination from spills during construction or operation. The location of domestic and public water supply wells as far as 2,000 feet from the rail corridor does not preclude contaminants from migrating through the groundwater to these pumped wells. The Department suggests that the Final EIS address the groundwater issue more completely.

#### **Section 11.3.1.1, Pg. 11-12**

The statement that "efforts will be implemented to reduce the effects . . . on groundwater resources" implies that effects will occur, yet none of these effects are described in the DEIS. The Department suggests that possible impacts and mitigation actions be documented in the Final EIS. One possible source for information that might be included in the report is the USGS, North Carolina Water Science Center ([waterdata.usgs.gov/nc/nwis/](http://waterdata.usgs.gov/nc/nwis/)).

### **Endangered Species**

The Department concurs with the DEIS conclusion that no listed species occur within the project area. We do not believe any endangered or threatened species will be affected by the proposed project; therefore, the requirements under Section 7 of the Act are fulfilled. However, obligations under Section 7 of the Act must be reconsidered if: (1) new information reveals impacts of this identified action that may affect listed species or critical habitat in a manner not previously considered, (2) this action is subsequently modified in a manner that was not considered in this review, or (3) a new species is listed or critical habitat is identified that may be affected by the proposed action.

### **Migratory Birds**

The Migratory Bird Treaty Act (16 U.S.C. 703-712) prohibits the taking, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests, except when specifically authorized by the Department. Implementing regulations define "take" under the Migratory Bird Treaty Act as to "pursue, hunt, shoot, wound, kill, trap, capture, possess, or collect." Unlike the Endangered Species Act, neither the Migratory Bird Treaty Act nor its implementing regulations at 50 CFR Part 21, provides for the permitting of "incidental take" of migratory birds. To avoid

impacts to migratory birds, the Department recommends conducting a visual inspection of migratory bird nesting habitat within the project area during the nesting season of March through September. If migratory birds are discovered nesting in the project impact area, avoid impacting the nests during the migratory bird nesting season (March through September). Bald and golden eagles are afforded additional legal protection under the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668d).

## **Fish and Wildlife Resources**

The Department offers the following recommendations to help address the direct, indirect, and cumulative impacts that may be associated with this project and to help minimize impacts to fish and wildlife resources:

1. Use spanning structures for all permanent roadway crossings of streams and associated wetlands to minimize impacts to aquatic resources, allow for the movement of aquatic organisms, and eliminate the need to fill and install culverts. If culverts are the only option, we suggest using bottomless culverts. Bottomless culverts need not be buried, thereby minimizing adverse impacts to streams. The use of a common round culvert should be a last resort, and it should be buried at least a foot below the natural streambed to allow for proper water depth and the movement of aquatic organisms. Under no circumstances should stream-channel widening for culverts occur nor should riprap be placed in the stream channel. We also recommend that all wetland/stream crossings be made perpendicular to the stream.
2. Maintain and/or restore wetland/stream buffers throughout the project area. Forested riparian buffers, a minimum of 100 feet wide along perennial streams and 50 feet wide along intermittent streams, should be created and/or maintained along all aquatic areas. We are concerned about impacts to any aquatic habitat, including the removal of the riparian zone, which may occur in the project area. Vegetated areas along stream and river banks allow for a variety of extremely valuable functions that include providing fish and wildlife habitat, moderating water temperature, stabilizing banks, limiting erosion, improving water quality by filtering pollutants and excess nutrients from the water, and minimizing the impacts of flood events. Construction activities near streams, rivers, and lakes have the potential to cause water pollution and stream degradation if measures to control erosion and sediment are not properly installed and maintained. To effectively reduce erosion and sedimentation impacts, Best Management Practices should be designed, installed, and maintained during land-disturbing activities. A complete design manual, which provides extensive details and procedures for developing

site-specific plans to control erosion and sediment and is consistent with the requirements of the North Carolina Sedimentation and Pollution Control Act and Administrative Rules, is available at: <http://www.dlr.enr.state.nc.us/pages/publications.html>. For maximum benefits to water quality and bank stabilization, riparian areas should not be mowed. We recommend planting disturbed areas with native riparian species. Suggested species include black locust (on dry rocky banks), silky willow and/or black willow (*Salix* spp.), alder (*Alnus* spp.), dog hobble (*Leucothoe* spp.), cane (*Arundinaria gigantea*), and/or rhododendron (*Rhododendron catawbiense*) (note reference below for additional species). We can provide information on potential sources of plant material upon request.

3. Implement stringent measures to control sediment and erosion prior to any ground disturbance and maintain them throughout project construction. Temporary (e.g., rye grain, wheat, millet) or permanent herbaceous vegetation should be planted on all bare soil within 5 days of ground-disturbing activities to provide long-term erosion control. Native annual small grains and herbs appropriate for the season are recommended. Biodegradable erosion-control matting should be used in conjunction with appropriate seeding on disturbed soils in steep slope and riparian areas. Matting should be secured in place with staples, stakes, or live stakes of native trees (whenever possible).
4. Maintain a dry work area for all work in or adjacent to the stream. Sandbags, cofferdams, or other diversion structures should be used, where possible, to prevent excavation in flowing water. These diversion structures should be removed immediately after the in-stream work is finished.
5. Divert ditch water into a constructed sump or, where possible, onto stable forested vegetation that can filter sediment before the water reaches the stream. Side ditches should not be allowed to drain directly into the stream. Ensure that adequate cross drainage is in place before the culvert approach to minimize the water volume directed into approach ditches at culvert sites. Consider the use of rolling grades to divert surface runoff from roads. Where cross ditches are used, ensure that they are properly armored at the outlet and along the base.
6. Keep equipment out of streams by operating from the banks in a fashion that minimizes disturbance to woody vegetation. It should be inspected daily and maintained to prevent the contamination of surface waters from

leaking fuels, lubricants, hydraulic fluids, or other toxic materials. All fuels, lubricants, and other toxic materials should be stored outside the riparian management area of the stream in a location where the material can be contained. Equipment should be checked for leaks of hydraulic fluids, cooling system liquids, and fuel and should be cleaned before fording any stream. Also, all fueling operations should be accomplished outside the riparian management area.

7. Keep wet concrete from contacting the stream or any other water that has the potential to enter the stream. Uncured concrete or grout can kill aquatic organisms, including fish, by altering the pH of the water. Precast concrete should be used to eliminate the risk to fish. However, when cast-in-place concrete is required, all work should be conducted "in the dry," and the site should be effectively isolated from any water that may enter the stream for a minimum of 48 hours.
8. Minimize the amount of impervious surface area that will result from this project. We recommend that all parking areas be constructed of a pervious material (i.e., pervious concrete, interlocking/open paving blocks, etc.). Pervious materials are less likely to absorb and store heat and are less likely to allow the cooler temperatures of the earth below to cool the pavement. Pervious concrete also requires less maintenance and is less susceptible to freeze/thaw cracking due to large void spaces within the concrete. Pervious parking areas minimize changes to the hydrology of the watershed, can be used to facilitate groundwater recharge, and often eliminate the need for curb and gutter for drainage.
9. Implement low-impact-development designs into the project plans. Where feasible, we recommend that a rooftop garden, or a "green" rooftop, design be incorporated into any "station/building" construction plans. Green rooftops have many benefits, including (a) keeping buildings warmer by adding a layer of insulation to the roof and keeping buildings cooler by allowing plants to take in water that evaporates into the atmosphere, resulting in lower heating and cooling bills; (b) reducing the amount and improving the quality of storm-water runoff because water is absorbed and filtered through plants and soil; and (c) improving overall air quality by removing particulate matter from the air. This, along with the proposed storm-water runoff collection devices that will be constructed, will dramatically decrease the amount and increase the quality of storm-water runoff.

## **Mitigation**

The DEIS indicates that a Clean Water Act 404/401 permit application (from the U.S. Army Corps of Engineers) will be submitted because streams or wetlands will be impacted. Any Clean Water Act 404/401 permit applications should clearly show why

impacts are unavoidable and how impacts that are unavoidable have been minimized. Unavoidable impacts will require mitigation. The DEIS also indicates that mitigation will be provided by Charlotte's Umbrella Stream and Wetland Mitigation Bank. Our normal practice is to recommend that all direct impacts to both wetlands and streams be mitigated with the restoration of comparable on-site streams and wetlands at a minimum ratio of 2:1. However, we are aware that many of the streams that will be impacted by the proposed project are in "poor" condition with little or no aquatic resource value; therefore, we believe a 1:1 mitigation ratio for stream impacts would be sufficient. From our recent experiences working with the City of Charlotte, we do not believe that the Umbrella Stream and Mitigation Bank has enough credits to off-set the impacts of this project. If the Mitigation Bank does not have enough credits, and if an on-site/in-kind mitigation plan cannot be established, then we recommend a payment to the North Carolina Ecosystem Enhancement Program to compensate for the unavoidable impacts. The same recommended ratio of 2:1 for wetlands and 1:1 for streams should be used to calculate the payment amount.

### **Section 4(f) Resources**

There are three Section 4(f) resources in the area of potential effect: The Kirk Farm Fields, Toby Creek Greenway (planned), and the Mallard Creek Greenway Extension (planned).

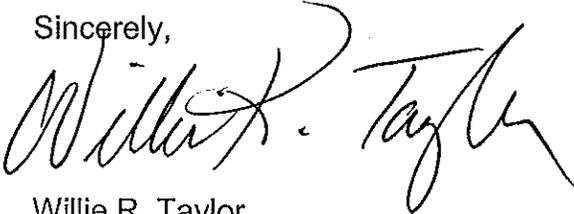
The Federal Transit Authority and the Charlotte Area Transit system have coordinated with the Mecklenburg County Parks and Recreation Department. The Director of the Mecklenburg County Parks and Recreation Department has concurred that the project will not adversely affect the activities, features, and attributes of the Kirk Farm Fields, the planned Toby Creek Greenway, and the planned Mallard Creek Greenway Extension. The Federal Transit Administration intends to make a de minimis finding.

The Department concurs that there is *no* feasible and prudent alternative to the proposed use and that all possible planning has been done to minimize harm to the Section 4(f) resources.

The Department has a continuing interest in working with the Federal Transit Administration and the Charlotte Area Transit System to ensure that impacts to resources of concern to the Department are adequately addressed. If you have any questions concerning groundwater comments, please contact Mr. Gary LeCain, U.S. Geological Survey at 303-236-5050, ext.229 or at [gdleca@usgs.gov](mailto:gdleca@usgs.gov). All other questions concerning comments should be directed to Mr. Bryan Tompkins, Fish and Wildlife Service at 828-258-3939, ext. 240. Please reference Log Number 4-2-06-051.

We appreciate the opportunity to review and comment on this project.

Sincerely,

A handwritten signature in black ink, appearing to read "Willie R. Taylor". The signature is fluid and cursive, with the first name "Willie" being the most prominent.

Willie R. Taylor  
Director, Office of Environmental  
Policy and Compliance

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**APPENDIX B8 – Responses to Comments on the Draft EIS**

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April 20, 2011

Mr. Joshua Watkins  
Town of Harrisburg  
5125 Hwy 49 South, P.O. Box 100  
Harrisburg, NC 28075

RE: LYNX Blue Line Extension Northeast Corridor Light Rail Project  
Draft Environmental Impact Statement Comments

Dear Mr. Watkins:

Thank you for your input regarding the proposed LYNX Blue Line Extension Northeast Corridor Light Rail Project (LYNX BLE). This letter is in response to your comments made at the Public Hearing on the LYNX BLE Draft Environmental Impact Statement (EIS), published in August 2010. We appreciate your comments and want to ensure that all suggestions, objections and concerns are carefully considered before final project decisions are made. With regard to your request for the light rail line to extend into Cabarrus County, we offer the following:

The proposed project does not preclude future expansion of light rail into Cabarrus County. However, any future extension would be considered a separate project from the proposed LYNX Blue Line Extension Northeast Corridor Light Rail Project (LYNX BLE), and further evaluation of design and environmental impacts would take place if and when an extension is pursued. Future expansion would be largely dependent upon the local jurisdiction (i.e., Cabarrus County) financing the local share of the capital improvement and an appropriate share of the operating expenses. As implementation of the project progresses, Charlotte Area Transit System (CATS) will work with surrounding jurisdictions to coordinate bus routes with the proposed light rail line and ensure good access for commuters from Cabarrus County.

The Final EIS is currently under development and will include responses to agency and public comments that were received on the Draft EIS. As such, your comments, as well as the responses stated in this letter, will be included in the Final EIS. It is anticipated that the Final EIS will be published in Fall 2011. You will be notified and sent a copy of the Final EIS when it is published. Following publication of the Final EIS, the Federal Transit Administration (FTA) will issue a Record of Decision (ROD). If the proposed project is approved, the next steps will be property acquisition and final design, followed by construction. It is currently anticipated that the LYNX BLE would open for revenue service in late 2016 / early 2017.

Again, thank you for your comments on the LYNX BLE and for your interest in this project. If you have any questions, please contact me at [kgoforth@charlottenc.gov](mailto:kgoforth@charlottenc.gov) or 704-336-3513.

Sincerely,

Kelly Goforth  
Project Development Manager

C: Danny Rogers, Senior Project Manager, CATS  
Keith Melton, Community Planner, FTA Region IV



[www.ridetransit.org](http://www.ridetransit.org)

600 East Fourth Street  
Charlotte, NC 28202  
PH: 704-336-6917  
FAX: 704-353-0797



April 28, 2011

Ms. Marla Chambers  
NC Wildlife Resources Commission  
1721 Mail Service Center  
Raleigh, NC 27699-1721

RE: LYNX Blue Line Extension Northeast Corridor Light Rail Project  
Draft Environmental Impact Statement Comments

Dear Ms. Chambers:

Thank you for your input regarding the proposed LYNX Blue Line Extension Northeast Corridor Light Rail Project (LYNX BLE). This letter is in response to your comments on the LYNX BLE Draft Environmental Impact Statement (EIS), published in August 2010. We appreciate your comments and want to ensure that all suggestions, objections and concerns are carefully considered before final project decisions are made. Your comments along with CATS' responses are included in the attached table.

The Final EIS is currently under development and will include responses to agency and public comments that were received on the Draft EIS. As such, your comments, as well as the responses stated in this letter, will be included in the Final EIS. It is anticipated that the Final EIS will be published in Fall 2011. You will be notified and sent a copy of the Final EIS when it is published. Following publication of the Final EIS, the Federal Transit Administration (FTA) will issue a Record of Decision (ROD). If the proposed project is approved, the next steps will be property acquisition and final design, followed by construction. It is currently anticipated that the LYNX BLE would open for revenue service in late 2016 / early 2017.

Again, thank you for your comments on the LYNX BLE and for your interest in this project. If you have any questions, please contact me at [kgoforth@charlottenc.gov](mailto:kgoforth@charlottenc.gov) or 704-336-3513.

Sincerely,

Kelly Goforth  
Project Development Manager

C: Danny Rogers, Senior Project Manager, CATS  
Keith Melton, Community Planner, FTA Region IV



[www.ridetransit.org](http://www.ridetransit.org)

600 East Fourth Street  
Charlotte, NC 28202  
PH: 704-336-6917  
FAX: 704-353-0797

Topic	Comment	Response
<p>Water Resources</p>	<p>We note that comparisons of the impacts to water resources between the two alternatives used two different levels of design; 30% Preliminary Engineering Design Plans were used for LRA and 15% Preliminary Engineering Design Plans were used for LRA-SCDO. We question what differences there would be if the same level of design was used.</p>	<p>In 2006, the Metropolitan Transit Commission (MTC) determined that a design option for the Sugar Creek area should be studied further. Charlotte Area Transit System (CATS), in partnership with the Charlotte-Mecklenburg Planning Department and the City of Charlotte's Economic Development Office, conducted an Alternatives Analysis of the design option. In late 2008, CATS presented the findings, which included potential environmental impacts and costs to the public and the MTC. Based on public response and the recommendation of the MTC, the Locally Preferred Alternative was determined to be the Light Rail Alternative. As such, design of the Light Rail Alternative – Sugar Creek Design Option did not progress past 15% Preliminary Engineering Design.</p>
<p>Alternatives Considered</p>	<p>Unlike the LRA, the LRA-SCDO avoids environmental justice impacts and impacts to the Carolina birdsfoot trefoil, a Federal Species of Concern and state Significantly Rare plant. It appears that these additional benefits are sufficient to justify additional costs and recommend the LRA-SCDO be selected for construction.</p>	<p>The Light Rail Alternative would impact the Carolina birdsfoot trefoil as noted (Note: efforts are underway to reconfirm the presence of this plant in the project corridor during this current growing season). In a meeting on 12/16/10 to discuss the proposed project and anticipated impacts, Mr. Allen Ratzlaff of the U.S. Fish and Wildlife Service indicated no concern for this population of Carolina birdsfoot trefoil per the interests of his agency. However, after a follow-up discussion with you, the project team evaluated options for addressing the Carolina birdsfoot trefoil population that is located within the railroad corridor prior to construction. Mr. Dale Suiter (U.S. Fish and Wildlife Service) was consulted for input and per the recommendations of Ms. Laura Gadd and Ms. Suzanne Mason (both of the North Carolina Natural Heritage Program), the LYNX BLE project team contacted Dr. Jim Matthews, a regional expert of Carolina birdsfoot trefoil. Discussions with Dr. Matthews revealed that this species would not be a candidate for relocation as it is an annual and does not have an established root system that would allow successful transplant. Both Mr. Suiter and Dr. Matthews did however suggest that seeds from the plant could be collected in the fall and subsequently sown/scattered in newly disturbed areas, such as along road/rail embankments associated with project construction. In effect, they were both of the opinion that the new disturbances associated with construction would create new habitat and likely result in a short-term proliferation of this opportunistic, low growing, weedy plant. As such, prior to construction, the contractor will be required to first confirm the presence of the plant in the corridor, then have seeds collected by an experienced environmental professional in order to have them later scattered on newly disturbed areas within the proposed project corridor. Additionally, seeds will be donated to the North Carolina Botanical Garden for deep freeze purposes; and CATS will coordinate with the NCNHP to update their records. <i>(response continued on next page)</i></p>

Topic	Comment	Response
Alternatives Considered (continued)		Regarding environmental justice communities, the impact on environmental justice communities is the same for both alternatives. In addition, the Light Rail Alternative/LPA avoids impacts to an historic resource, has significantly fewer acquisitions and displacements of businesses, fewer visual impacts, will include mitigation to eliminate noise/vibration impacts, and is significantly less costly. Therefore, the Light Rail Alternative is identified as the environmentally preferred alternative in the forthcoming Final Environmental Impact Statement [EIS]).
Secondary and Cumulative Effects	<p>NCWRC is also concerned about indirect and cumulative impacts to area waterways, wildlife habitat, and water quality. The project is in a highly developed area and a rapidly growing region of the state and many streams in the project area are already degraded and impaired. Little Sugar Creek, Doby Creek and Mallard Creek are Class C, 303(d) Listed Waters of the State.</p> <p>Numerous studies have shown that when 10-15% of a watershed is converted to impervious surfaces, there is a serious decline in the health of receiving waters and the quality of fish habitat and wetlands are negatively impacted.</p>	An assessment of secondary and cumulative effects of the proposed project was completed and documented in the <i>Secondary and Cumulative Effects Technical Memorandum</i> (July 2010). Included in this assessment were the potential effects on notable resources, including water resources. A more detailed qualitative analysis of the cumulative and secondary impacts to water quality will be prepared as part of the Section 401 Water Quality Certification application. It should also be noted that various landscape management techniques have been incorporated throughout the project corridor that will reduce the amount of impervious surface created by the proposed project. For example, grassed areas and trees are included in each of the proposed station site plans and eight-foot planting strips would be constructed along either side of North Tryon Street/US-29.
Water Resources	Parking lots, sidewalks and other facilities associated with this project will add considerable impervious coverage to an already highly urbanized setting. Automobile related pollutants in the runoff from parking lots may also have a negative impact on water quality.	Stormwater basins will be designed and built at each of the proposed stations that encompass surface parking lots. These basins will capture surface water run-off, thereby reducing the amount of runoff into nearby waterways. Additionally, Chapter 18.0: Construction in the forthcoming Final EIS, explains that Best Management Practice (BMP) measures will be incorporated as well. BMP measures will comply with federal, state and local guidelines on sediment discharge thresholds, particularly the City of Charlotte Post-Construction Controls Ordinance (PCCO). A detailed analysis of the sediment load anticipated to be generated by the proposed project, in addition to BMP measures that would be employed, will be outlined in the Erosion and Sediment Control Plans developed during final design. Coordination with the appropriate local, state and federal agencies will continue throughout design.

Topic	Comment	Response
<p>Water Resources</p>	<p>We recommend that CATS use pervious materials to construct the parking lots, sidewalks and other facilities and to incorporate other Low Impact Development (LID) techniques to allow infiltration and treatment of stormwater and to minimize the project's contribution to flooding and water quality degradation.</p>	<p>The proposed project currently includes Low Impact Development (LID) techniques, such as landscape islands in park-and-ride lots and planting strips along sidewalks; and a rain garden is currently proposed at Old Concord Road Station park-and-ride. CATS will also be evaluating the feasibility of pervious materials in other locations (e.g. grass-crete for fire &amp; maintenance access areas). CATS is not proposing to use pervious materials for park-and-ride lots, due to durability and long-term maintenance concerns. However, through the use of parking garages instead of surface lots at University City Blvd. Station and JW Clay Blvd. Station, the amount of impervious surface has been minimized. In addition, various BMP measures will be implemented for the project, such as the stormwater basins described previously.</p>



April 28, 2011

Ms. Polly Lespinasse  
NC DENR, Division of Water Quality  
610 E. Center Ave., Suite 301  
Mooresville, NC 28115

RE: LYNX Blue Line Extension Northeast Corridor Light Rail Project  
Draft Environmental Impact Statement Comments

Dear Ms. Lespinasse:

Thank you for your input regarding the proposed LYNX Blue Line Extension Northeast Corridor Light Rail Project (LYNX BLE). This letter is in response to your comments on the LYNX BLE Draft Environmental Impact Statement (EIS), published in August 2010. We appreciate your comments and want to ensure that all suggestions, objections and concerns are carefully considered before final project decisions are made. Your comments along with CATS' responses are included in the attached table. I have also attached the meeting minutes from the coordination meetings that have occurred over the last few months regarding this project. We appreciate your participation in these efforts.

The Final EIS is currently under development and will include responses to agency and public comments that were received on the Draft EIS. As such, your comments, as well as the responses stated in this letter, will be included in the Final EIS. It is anticipated that the Final EIS will be published in Fall 2011. You will be notified and sent a copy of the Final EIS when it is published. Following publication of the Final EIS, the Federal Transit Administration (FTA) will issue a Record of Decision (ROD). If the proposed project is approved, the next steps will be property acquisition and final design, followed by construction. It is currently anticipated that the LYNX BLE would open for revenue service in late 2016 / early 2017.

Again, thank you for your comments on the LYNX BLE and for your interest in this project. If you have any questions, please contact me at [kgoforth@charlottenc.gov](mailto:kgoforth@charlottenc.gov) or 704-336-3513.

Sincerely,

Kelly Goforth  
Project Development Manager

C: Danny Rogers, Senior Project Manager, CATS  
Keith Melton, Community Planner, FTA Region IV



[www.ridetransit.org](http://www.ridetransit.org)  
600 East Fourth Street  
Charlotte, NC 28202  
PH: 704-336-6917  
FAX: 704-353-0797

Topic	Comment	Response
Water Resources	<p>NCDWQ is very concerned with sediment and erosion impacts that could result from this project. NCDWQ recommends that the most protective sediment and erosion control BMPs be implemented in accordance with <i>Design Standards in Sensitive Watersheds</i> to reduce the risk of nutrient runoff to Little Sugar, Doby and Mallard Creeks. NCDWQ requests that project design plans provide treatment of the stormwater runoff through best management practices as detailed in the most recent version of <i>NCDWQ Stormwater Best Management Practices</i>.</p>	<p>Best Management Practice (BMP) measures will be incorporated into the proposed project, during construction and as part of the built condition of the proposed project. For example, each station location and park-and-ride facility would implement BMP measures for the collection and treatment of stormwater. BMP measures that comply with federal, state and local guidelines on sediment discharge thresholds, particularly the City of Charlotte Post-Construction Controls Ordinance (PCCO) will be implemented. In the forthcoming Final Environmental Impact Statement (EIS), Chapter 18.0: Construction explains that a detailed analysis of the sediment load anticipated to be generated by the proposed project, in addition to the BMP measures that would be employed, will be outlined in the Erosion and Sediment Control Plans developed during final design.</p>
Alternatives Considered	<p>NCDWQ staff does [not] support the selection of the 'Light Rail Alternative' at this time. Selection of this alternative will result in an additional 1,113 linear feet of stream impact and an additional 0.08 acres of wetland impact compared to the 'Light Rail Alternative – Sugar Creek Design Option.' The 'Sugar Creek Design Option' indicates increased costs for guideway and track elements, site work and special conditions, right of way, land and existing improvements, professional services and unallocated contingency. No clear explanation of these costs is provided in the Draft EIS. While additional guideway and track elements can be inferred if the 'Sugar Creek Design Option' is greater in length than the 'Light Rail Alternative', the other increased costs are not as easily inferred. The EIS should include additional information to clarify these increased costs. Sufficient justification, including avoidance and minimization, for impacts associated with the recommendation alternative, 'Light Rail Alternative' will be required prior to receiving a 401 Water Quality Certification due to the existence of an alternative that would result in a reduction of 1,113 <i>(comment continued on next page)</i></p>	<p>Comment noted. As noted in the Draft EIS, the Light Rail Alternative and the Light Rail Alternative – Sugar Creek Design Option perform similarly in ridership, have comparable travel time impacts on major roadways and yield similar economic development impacts. The Light Rail Alternative – Sugar Creek Design Option has less impact on water resources than the Light Rail Alternative (Locally Preferred Alternative), and avoids potential noise/vibration impacts at Leafmore Drive and St. Anne's Place. However, the Light Rail Alternative (LPA) avoids impacts to an historic resource, has significantly fewer acquisitions and displacements, fewer visual impacts, will include mitigation to eliminate noise/vibration impacts, maintains access to more businesses along North Tryon Street/US-29, and is significantly less costly. Additionally, a follow-up field review of Stream P (the stream that would be impacted, resulting in the additional stream impacts over the Light Rail Alternative – Sugar Creek Design Option) was conducted with you on April 4, 2011. Consensus regarding Stream P is that the feature is of low value (see attached meeting notes). While potential for effects on the natural environmental was among the prime considerations, the Light Rail Alternative better supports existing land use and results in lower capital costs. Therefore, the Light Rail Alternative is identified as the environmentally preferred alternative. The higher costs for Light Rail Alternative – Sugar Creek Design Option are primarily related to a grade separation required over Eastway Drive and additional right-of-way acquisition and relocations. A detailed explanation of increased costs of the Light Rail Alternative – Sugar Creek Design Option is provided in Chapter 2.0: Alternatives Considered <i>(response continued on next page)</i></p>

Topic	Comment	Response
Alternatives Considered (continued)	<p>linear feet of stream impact.</p> <p>Please provide information explaining why [the Light Rail Alternative-Sugar Creek Design Option] is no longer the recommended LPA.</p>	<p>in the forthcoming Final EIS, and in the supporting technical report, <i>Sugar Creek/NCRR Alignment Alternatives Analysis (July 2009)</i>, provided to you on 12/6/10. Chapter 2.0: Alternatives Considered, in the forthcoming Final EIS, will be updated to include additional detail about the selection of the Preferred Alternative, and why the Sugar Creek Design option was not selected as the preferred alternative. This additional information and justification for selection of the preferred alternative will also be included in the Section 401 Water Quality Certification application.</p> <p>In addition, selection of the Light Rail Alternative has also been done in conjunction with the State Historic Preservation Office per the requirements of Section 4(f) of the Department of Transportation Act of 1966. Section 4(f) stipulates that entities such as the Federal Transit Administration (FTA) cannot approve the use of public or private historic sites unless there is no feasible and prudent alternative to the proposed use and that all planning has been done to minimize harm to the Section 4(f) resource.</p>
Natural Resources	<p>The NRTR should be provided to as an attachment in the FEIS and/or with the 401 Water Quality Certification application.</p>	<p>A hard copy of the supporting technical report entitled <i>Natural Resources Technical Report (NRTR)</i> was provided to you in response to this comment on December 6, 2010 and will be included with the Section 401 Water Quality Certification application, if necessary. Due to its length, the <i>NRTR</i> is not included as an attachment to the Final EIS but is available on the Charlotte Area Transit System (CATS) website and by request.</p>
Water Resources	<p>References are made to 'new turn lanes' at some intersections. These turn lanes may result in additional stream and or wetland impacts. Please determine if additional stream or wetland impacts would result from these activities and revise the impact amounts in the EIS as necessary.</p>	<p>Potential impacts associated with new turn lanes at the 30% level of design have been included in the current impact totals for streams and wetlands and documented in both the Draft EIS and the forthcoming Final EIS. As the design progresses and is refined, any additional (or fewer) impacts associated with new turn lanes will be accounted for in the Section 404 Individual Permit application and the Section 401 Water Quality Certification application.</p>
Water Resources	<p>Thirteen (13) wetlands are included within the project boundaries. Additionally, three of those wetlands are listed as 'isolated.' Isolated wetlands are regulated solely by the NCDWQ. However, a determination indicating that a wetland is isolated must be provided by the U.S. Army Corps of Engineers. The Draft EIS does not indicate if this determination has been provided by the U.S. Army Corps of Engineers.</p>	<p>Isolated wetlands were field-verified by the U.S. Army Corps of Engineers (USCOE) and North Carolina Division of Water Quality (NCDWQ) on July 21, 2009. Subsequent to the field verification, the USCOE issued a notification of jurisdictional determination. Since isolated wetlands are not regulated by the USCOE, it was requested that they be removed from the jurisdictional determination request. Therefore, a specific determination for isolated wetlands is not included in the notification of jurisdictional determination issued by the USCOE.</p>

Topic	Comment	Response
Water Resources	<p>Please be advised that a 401 Water Quality Certification will be required for this project and is necessary for the corresponding 404, issued by the U.S. Army Corps of Engineers, to be valid. In addition, the Draft EIS references several agency meetings and scoping requests for this project during the planning and alternative development states. NCDWQ does not have any documentation indicating NCDWQ's involvement in this process, with the exception of accompanying U.S. Army Corps of Engineers staff on jurisdictional determinations for the proposed park and ride stations.</p>	<p>Comment noted. NCDWQ was included on the distribution scoping notices in 2000 and 2004. CATS and the FTA will continue working with regulatory resource and environmental agencies, including the NCDWQ. Meetings to discuss the proposed project and anticipated impacts in further detail were held on December 6, 2010 and December 16, 2010. NCDWQ personnel (P. Lespinasse and A. Johnson, respectively) were in attendance. A field review of Stream P was also conducted on April 4, 2011 and attended by you. NCDWQ personnel will be invited to any future relevant meetings. Meeting minutes from both of the aforementioned meetings, as well as meeting notes from the field meeting are attached.</p>
Secondary and Cumulative Effects	<p>A qualitative analysis of cumulative and secondary impacts anticipated as a result of this project is required. The type and detail of analysis shall conform to the NC Division of Water Quality Policy on the assessment of secondary and cumulative impacts dated April 10, 2004.</p>	<p>Comment noted. An assessment of secondary and cumulative effects of the proposed project was completed and documented in the <i>Secondary and Cumulative Effects Technical Memorandum</i> (July 2010). Included in this assessment are the potential effects on notable resources, including water resources. As discussed at the December 6, 2010 coordination meeting, a more detailed analysis of the secondary and cumulative effect to water quality will be prepared as part of the Section 401 Water Quality Certification application per the requirements of the North Carolina Department of Environment and Natural Resources' (NCDENR's) Indirect and Cumulative Impact Assessment Procedures. The direct focus of the analysis will be the indirect and cumulative impacts from a water quality perspective specifically. It will conform to the policy noted as required by the NCDENR DWQ to implement Section 401 of the Clean Water Act and will be done concurrently to preparation of the Section 401 Water Quality Certification application.</p>
Water Resources	<p>Some of the proposed stream impacts are a result of culvert installation/replacement/ extension while others indicate that the impact is a result of "fill". NCDWQ does not typically authorize "fill" in jurisdictional streams, with the exception of culverts. Filling streams without providing a hydraulic connection to the downstream portions of the feature may result in stream impacts beyond those that may be authorized by the NCDWQ 401 Water Quality Certification. <i>(comment continued on next page)</i></p>	<p>In most circumstances, fill impacts would be limited to the placement of riprap or creation of embankments in areas where deemed necessary. Other areas of fill that were noted in the Draft EIS largely relate to piping. This language has been clarified in the forthcoming Final EIS in order to more appropriately describe the impact. In instances where streams would be filled (e.g., Stream D) hydraulic connections will be re-established. Additional details will be included in the Section 404 Individual Permit application and the Section 401 Water Quality Certification application.</p>

Topic	Comment	Response
<p>Water Resources (continued)</p>	<p>Additionally, the Draft EIS refers to Stream "N" as an "intermittent stormwater drainage feature." If this feature has been identified as a jurisdictional stream, it should not be identified in the document as a "stormwater drainage feature." The impact table also identifies impacts to jurisdictional streams as a result of riprap aprons. The necessity for these impacts will require documentation in the 401 Water Quality Certification application.</p> <p>NCDWQ would like to encourage the use of alternate energy dissipation methods at culvert outlets which would result in less stream impact.</p>	<p>(see previous page for response)</p>
<p>Water Resources</p>	<p>The environmental document should provide a detailed and itemized presentation of the proposed 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.</p>	<p>The forthcoming Final EIS will include a summary of the estimated impacts to streams and wetlands. The Section 404 Individual Permit application and Section 401 Water Quality Certification application will include additional detail on the proposed impacts along with corresponding mapping and drawings. It is anticipated that required mitigation will be provided through the Charlotte Umbrella Stream and Wetland Mitigation Bank and the NCDENR Ecosystem Enhancement Program. The project team discussed these mitigation options with representatives of Charlotte Stormwater Services, the USCOE and the NCDWQ on December 16, 2010 (meeting minutes attached). All parties are in agreement with the proposed preliminary mitigation strategy; more details will be developed with the Section 404 Individual Permit and Section 401 Water Quality Certification progress. The aforementioned meeting and mitigation measures discussed will be summarized in Chapter 11.0: Water Resources in the forthcoming Final EIS. The meeting minutes are also included in Appendix B of the Final EIS.</p>

Topic	Comment	Response
Water Resources	EIS alternatives shall consider design criteria that reduce the impacts 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... such as grassed swales, buffer areas, preformed scour holes, retention basins, etc.	As will be illustrated in the forthcoming Final EIS in Figures 2-6 through 2-17 in Chapter 2.0: Alternatives Considered and detailed in Chapter 18.0: Construction of the Final EIS, as well as the <i>LYNX Blue Line Extension Northeast Corridor Light Rail Project Design Criteria</i> document (available upon request), catch basins, curbing, culverts, gutters, retention areas and storm drainage systems will be designed and constructed, as necessary, for the permanent control of water runoff during the operation phase of the proposed project. Erosion and Sediment Control plans will be prepared as part of the design. The plans will be submitted to meet the requirements set forth by the North Carolina Division of Land Resources. A soil and erosion control permit will be required prior to the start of construction. The City of Charlotte PCCO will apply.
Water Resources	After the selection of the preferred alternative and prior to an issuance of the 401 Water Quality Certification, the applicant is respectfully reminded that they will need to demonstrate the avoidance and minimization of impacts to wetlands (and streams) to the maximum extent practical.	CATS has taken a proactive approach to avoiding and minimizing impacts to streams and wetlands to the extent practicable. For example, the originally proposed Old Concord Road Station park-and-ride lot would have impacted approximately 577 linear feet of Stream E. The park-and-ride lot layout was revised to avoid impacts to this stream. It is CATS' continued goal to identify ways to further avoid and/or minimize impacts to wetlands and streams. Demonstration of other avoidance and minimization was summarized and discussed at the December 6, 2010 coordination meeting and is included in the attached table. Additional avoidance and minimization detail will also be included with the Section 401 Water Quality Certification application.
Water Resources	In accordance with the Environmental Management Commission's Rules, 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 lost functions and values. The NC Ecosystem Enhancement Program may be available for use as stream mitigation.	Mitigation measures will be included as part of the Section 404 Individual Permit and the Section 401 Water Quality Certification applications and will be detailed in Chapter 11.0: Water Resources and Chapter 18.0: Construction of the forthcoming Final EIS. It is anticipated that the required mitigation necessary to satisfy compensatory mitigation requirements will be provided through the Charlotte Umbrella Stream and Wetland Mitigation Bank and the NCDENR Ecosystem Enhancement Program. The project team discussed these mitigation options with representatives of Charlotte Stormwater Services, the USCOE and the NCDWQ on December 16, 2010 (meeting minutes attached). All parties are in agreement with the proposed preliminary mitigation strategy; more details will be developed with the Section 404 Individual Permit and Section 401 Water Quality Certification progress.

Ms. Polly Lespinasse

Topic	Comment	Response
Water Resources	Future documentation, including the 401 Water Quality Certification Application, shall include an itemized listing of the proposed wetland and stream impacts with corresponding mapping.	The Section 401 Water Quality Certification application will include an itemized listing of the proposed wetland and stream impacts with corresponding mapping, as requested.
Water Resources	NCDWQ is very concerned with sediment and erosion impacts that could result from the project. The applicant 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.	A Section 404 Individual Permit and Section 401 Water Quality Certification will be applied for and obtained prior to construction. The requirements of the permits, including implementation of sediment and erosion control BMP measures will be met.
Water Resources	The applicant is respectfully reminded that all impacts, including but not limited to, bridging, fill, excavation and clearing, and riprap 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.	Comment noted. All impacts will be included in the final impact numbers that will be submitted with the Section 404 Individual Permit application and the Section 401 Water Quality Certification application.
Water Resources	Where streams must be crossed, NCDWQ 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 applicant should not install the bridge bents in the creek, to the maximum extent practicable.	Culvert design will adhere to federal, state and local requirements, including <i>Hydraulic Design of Highway Culverts, HDS 05, Federal Highway Administration (FHWA) (2005); Guidelines for Drainage Studies and Hydraulic Design by NCDOT</i> ; and the requirements of the <i>Charlotte-Mecklenburg Storm Water Design Manual</i> . Information regarding the location of bridges and culverts will be included in Chapter 11.0: Water Resources and within Table 11-3 of the Final EIS. Detail was also included in a handout provided to you on December 6, 2010 and subsequently provided in this response letter (updated to include the project changes associated with terminating the proposed project at the UNC Charlotte Station). The response letter and table will be included in Appendix B of the Final EIS as well.
Water Resources	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.	Comment noted. As design progresses, this request will be taken into account to the extent practicable.

Ms. Polly Lespinasse

Topic	Comment	Response
Water Resources	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.	Per the <i>LYNX Blue Line Extension Northeast Corridor Light Rail Project Design Criteria</i> document (available upon request), bridge deck drainage will be tied into the local drainage system and designed in accordance with North Carolina Department of Transportation (NCDOT) criteria. Structure designers are coordinating with stormwater designers for deck drainage design.
Water Resources	Sediment and erosion control measures should not be placed in wetlands or streams.	CATS will implement sediment and erosion control BMP measures in accordance with local and state guidelines. Sediment and erosion control measures will not be placed in wetlands and streams per the requirements of local and state guidelines.
Construction	Borrow/waste areas should avoid wetlands to the maximum extent practical.	Comment noted. The construction contractors will be required to acquire applicable permits relative to borrow pits, and to comply with the requirements for dewatering and other work conducted in jurisdictional areas; avoiding wetlands to the extent practical.
Water Resources	The 401 Water Quality Certification application will need to specifically address the proposed methods for stormwater management.	Comment noted. The 401 Water Quality Certification application will address the proposed methods for stormwater management.
Water Resources	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.	Comment noted. Based on the magnitude of impacts, a Section 404 Individual Permit application will be submitted. This permit approach was discussed with and approved by the USCOE (A. Jones) and the NCDWQ (A. Johnson) in a Section 404/401 Permit Strategy Meeting held on December 16, 2010 (minutes attached).
Construction	If concrete is used during construction, a dry work area shall be maintained to prevent direct contact between curing concrete and stream water.	BMP measures for the protection of surface waters will be implemented during project construction. Accordingly, sandbags, cofferdams, or other diversion structures would be used, where possible, to prevent excavation in flowing water. If a dry work area is not necessary to place/cure concrete, special measures will be taken to ensure that water in contact with the concrete operations is contained and treated prior to releasing back into stream. Techniques such as cofferdams and/or pumping to special containment areas will be evaluated on a case-by-case basis during construction, if necessary.
Construction	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.	Temporary access and haul roads constructed or used in connection with the project, other than public roads, will be considered a part of the project and addressed in the Erosion and Sedimentation Control Plans.

Topic	Comment	Response
Water Resources	Placement of culverts and other structures in waters, streams and wetlands 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 disequilibrium of wetlands or streambeds or banks, adjacent to or upstream and downstream of the above structures.	Culverts and other structures will be placed below the elevation of the streambed by one foot, except in cases where existing at-grade culverts are to be extended. Existing low flow passages and the equilibrium of wetlands, streams and/or stream banks adjacent to the aforementioned structures will be maintained.
Water Resources	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, floodplain benches, and/or sills may be required where appropriate. Widening the stream channel should be avoided.	Comment noted. In cases where multiple pipes or barrels are required, they will mimic the stream cross section to the extent practical. Widening of stream channels is not anticipated.
Water Resources	If foundation test borings are necessary, it shall be noted in the document.	If geotechnical investigations are needed within wetlands or streams, subsurface investigations, including borings, will be conducted in accord with current state and local guidelines and within the parameters of the anticipated Section 404 Individual Permit and the Section 401 Water Quality Certification.
Water Resources	Sediment and erosion control measures sufficient to protect water resources must be implemented and maintained in accordance with the most recent version of NC Sediment and Erosion Control Planning and Design Manual and the most recent version of NCS000523.	Development of an erosion control plan will be included as part of the final design approvals. The Erosion and Sediment Control and Stormwater Pollution Prevention Plan will be implemented and maintained during project construction.

Topic	Comment	Response
Construction	All work in or adjacent to stream waters shall be conducted in a dry work area.	BMP measures for the protection of surface waters will be implemented during project construction. Accordingly, sandbags, cofferdams, or other diversion structures would be used, where possible, to prevent excavation in flowing water. If a dry work area is not necessary to place concrete, special measures will be taken to ensure that water in contact with the concrete is contained and treated prior to release into the stream. Techniques such as cofferdams or pumping to containment areas will be evaluated on a case-by-case basis.
Water Resources	While the use of National Wetland Inventory (NWI) maps and soil survey maps are useful tools, their inherent inaccuracies require that qualified personnel perform onsite wetland delineations prior to permit approval.	Field surveys and delineations were performed by qualified wetland scientists on multiple dates between September 2008 and November 2009. Jurisdictional waters of the U.S. were delineated and flagged, and boundaries were surveyed with a hand-held GPS until capable of sub-meter accuracy. All jurisdictional boundaries were verified by the USCOE (Action I.D. 200901062), and a Jurisdictional Determination was obtained.
Construction	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.	Approved BMP measures will be implemented, which will prohibit heavy equipment from operating within stream channels without appropriate measures.
Water Resources	Riprap shall not be placed in the active thalweg channel or placed in the streambed in a manner that precludes aquatic life passage.	Measures to protect streams and aquatic life, including no placement of riprap in the active thalweg of the channel, will be implemented where practicable. Stream velocities may dictate the use and placement of riprap. Additional detail regarding riprap placement will be included in the Section 404 Individual Permit application and the Section 401 Water Quality Certification application.
Water Resources	Riparian vegetation shall be preserved to the maximum extent possible.	Measures will be taken to preserve riparian vegetation to the extent practicable, and to reestablish riparian vegetation to the extent possible. This is a standard measure for construction projects. Information on this mitigation measure will be included as part of the mitigation plan for construction impacts and will be included in Chapter 18.0: Construction of the forthcoming Final EIS. Impact minimization measures taken to date include confining the proposed construction limits within engineering plans to the extent practicable. This effort will continue as design progresses.

Ms. Polly Lespinasse

Topic	Comment	Response
Utilities	Plans and specifications for any water line relocations or new water mains must be reviewed and approved prior to construction by Charlotte Mecklenburg Utilities Department (CMUD). The NCDENR – PWS section recently delegated all approvals for both public and private water mains to CMUD.	There are a number of utilities, both public and private located throughout the proposed project corridor, including water mains. As will be noted in Chapter 18.0: Construction of the Draft EIS and the forthcoming Final EIS, there are existing utilities in conflict with the proposed Light Rail Alternative. Utility relocations are currently being coordinated with utility providers, including Charlotte-Mecklenburg Utilities Department (CMU).

**Jurisdictional Stream and Wetland Impacts**

**LYNX Blue Line Extension Northeast Corridor Light Rail Project**

**Jurisdictional Stream and Wetland Impacts**  
**Light Rail Alternative**  
**Based on NRTR and 30% PE Plans**

Jurisdictional Feature	Location	NRTR Figure No.	Highest Length of Impact	Highest Area of Impact	Final Length of Impact	Final Area of Impact	Design Elements	Comments
Stream C	Near CSX R.R., East Side of LRT	6	90 LF	--	90 LF	--	Existing culvert will be extended; rip rap will be added; (if existing culvert is replaced, only new portion will be considered for impacts). Two 72" pipes will be added above stream flow level (no additional impact).	Alignment is placed between existing townhomes and existing freight railroad tracks – no other feasible alternatives exist.
Linear Wetland C	Near 16 <sup>th</sup> Street, West Side of LRT	6	--	0	--	0	Wetland C is located on the west side of the freight tracks.	No impacts are anticipated at this time.
Stream D	Near CSX R.R., East Side of LRT	6	433 LF	--	396 LF	--	Stream may be put back with a channel at the toe of slope.	Upper part of stream is unimportant (short length); putting stream back may provide some mitigation credit.  Alignment is placed between existing townhomes and existing freight railroad tracks – no other feasible alternatives exist.
Stream F	Little Sugar Creek	7	60 LF	--	0	--	3 span concrete bridge; with piers placed 10' outside the top of banks.	No impacts are anticipated at this time.



**LYNX  
Blue Line  
Extension**

**Jurisdictional Stream and Wetland Impacts**

Jurisdictional Feature	Location	NRTR Figure No.	Highest Length of Impact	Highest Area of Impact	Final Length of Impact	Final Area of Impact	Design Elements	Comments
Stream J	Near 30 <sup>th</sup> Street Bridge, West Side of LRT	7	103 LF	--	103 LF	--	This impact is due to the access road for the Duke Power Substation which had to be relocated.	To relocate the Duke access road to avoid this impact would require another at-grade crossing with the LRT; this would create major safety concerns as well as increased costs.
Stream K	Near 30 <sup>th</sup> Street Bridge, West Side of LRT	7	54 LF	--	54 LF	--	This impact is due to the access road for the Duke Power Substation which had to be relocated.	To relocate the Duke access road to avoid this impact would require another at-grade crossing with the LRT; this would create major safety concerns as well as increased costs.
Stream N	NCRR Area, South of 36 <sup>th</sup> Street	8	77 LF	--	77 LF	--	Existing pipes under the railroad will be extended.	--
Linear Wetland Y	NCRR Area, South of 36 <sup>th</sup> Street, West of Freight Reloc.	8	--	0.14 AC	--	0.14 AC	Fill slopes or walls impact this small wetland.	Feature is an unimportant linear wetland. Any changes to the alignment would have major impacts to historic buildings. Also, the LRT and Freight tracks (along with future passenger tracks must fit within the existing railroad right of way.--
Stream A Perennial	NCRR Area, Near N. Davidson St.	9	111 LF	--	111 LF	--	Dual 72" pipes will be extended on both sides to extend beyond the limits of the LRT and Freight tracks.	Any changes to the alignment would have major impacts to historic buildings. Also, the LRT and Freight tracks (along with future passenger tracks must fit within the existing railroad (RR) right of way (r/w).--
Stream A Intermittent	NCRR Area, Near N. Davidson St.	9	791 LF	--	791 LF	--	This stream will be enclosed with a box culvert between an MSE wall and N. Davidson Street.	The LRT tracks, freight tracks and future passenger tracks must fit within the existing RR r/w. If the LRT tracks are moved outside the existing RR r/w, N. Davidson street would have to be relocated which would be a significant cost increase.--



**Jurisdictional Stream and Wetland Impacts**

Jurisdictional Feature	Location	NRTR Figure No.	Highest Length of Impact	Highest Area of Impact	Final Length of Impact	Final Area of Impact	Design Elements	Comments
Linear Wetland A	NCRRArea, Near Craighead Rd.	9	--	0.012 AC	--	0.012 AC	The relocated railroad spur will impact this wetland.	The LRT tracks, freight tracks and future passenger tracks must fit within the existing RR r/w. If the LRT tracks are moved outside the existing RR r/w, N. Davidson street would have to be relocated which would be a significant cost increase. Also, a MSE has been provided to provide enough area to put the stream back near its current location. The spur track must be relocated to accommodate the realigned freight tracks near Craighead Rd.
Wetland A	NCRRArea, Near N. Davidson St	9	--	0.22 AC	--	0.22 AC	Stream A will be enclosed with a box culvert and there will be impacts to this wetland.	The LRT tracks, freight tracks and future passenger tracks must fit within the existing RR r/w. If the LRT tracks are moved outside the existing RR r/w, N. Davidson street would have to be relocated which would be a significant cost increase. Also, a MSE has been provided to provide enough area to put the stream back near its current location.
Stream B	NCRRArea, North of Sugar Creek Rd.	10	0	--	0	--	Stream B is located on eastern side of existing freight tracks.	No impacts are anticipated at this time.
Stream P	NCRRArea, North of Sugar Creek Rd	10	1,666 LF	--	1,280 LF	--	Portions of this stream may be able to be put back as an open channel.	Stream could be classified as unimportant. The LRT alignment avoids the freight tracks and historic buildings. Changes to the LRT alignment in this area would have major cost implications.



**LYNX  
Blue Line  
Extension**

**Jurisdictional Stream and Wetland Impacts**

Jurisdictional Feature	Location	NRTR Figure No.	Highest Length of Impact	Highest Area of Impact	Final Length of Impact	Final Area of Impact	Design Elements	Comments
Isolated Wetland P	NCCR Area, North of Sugar Creek Rd	10	--	0.02 AC	--	0.02 AC	LRT alignment will impact this wetland.	The LRT alignment avoids the freight tracks and historic buildings. Changes to the LRT alignment in this area would have major cost implications.
Stream Z	NCCR Area, South of Old Concord Station	11	530 LF	--	44 LF	--	Stream Z will be impacted by proposed riprap from new pipe crossing under the freight and LRT tracks.	Analysis will be done to look to shorten the length of impact.
Isolated Wetland O	NCCR Area, South of Old Concord Station	11	--	0	--	0	Wetland O is located outside of the NCCR ROW area.	No impacts are anticipated at this time.
Stream E	East of Old Concord Station	12	577 LF	--	0	--	The entrance road and parking lot at this location has been revised to avoid impacts to this stream.	The original Old Concord Park-and-Ride impacted 205 LF of this stream. This park-and-ride layout has been revised to avoid impacts to this stream.
Wetland E	East of Old Concord Station	12	--	0.06 AC	--	0.06 AC	This small wetland area will be impacted by the entrance road.	To avoid this wetland, the number of parking spaces would be greatly reduced and/or the walking distance would be much greater which would have major impacts on ridership and long term revenue for the project.
Stream X	Northwest of University City Blvd. Park and Ride	13	622 LF	--	0	--	Stream X is outside the proposed park-and-ride limits.	No impacts are anticipated at this time.



Jurisdictional Stream and Wetland Impacts

Jurisdictional Feature	Location	NRTR Figure No.	Highest Length of Impact	Highest Area of Impact	Final Length of Impact	Final Area of Impact	Design Elements	Comments
Wetland X	Northwest of University City Blvd. Park and Ride	13	--	0.36 AC	--	0	Wetland X is outside the proposed park-and-ride limits.	No impacts are anticipated at this time.
Stream U	Toby Creek	14	60 LF	--	0	--	The interior foundation elements will be placed approximately 10' beyond the top of existing banks.	No impacts are anticipated at this time.
Isolated Wetland R	West of UNC Charlotte Station	14	--	0.06 AC	--	0.04 AC	Wetland R will be impacted by the proposed LRT embankment.	To avoid this wetland, the LRT alignment would need to be shifted to the north, which would affect the UNC Charlotte station location with respect to Cameron Blvd.
<b>Total Impacts</b>	--	--	<b>5,174 LF</b>	<b>0.872 AC</b>	<b>2,946 LF</b>	<b>0.492 AC</b>	--	--

Stream Avoidance Totals = 2,228 LF  
Wetland Avoidance Totals = 0.38 AC



selection of the Light Rail Alternative at this time." P. Lespinasse to review the alternatives report and NRTR. M. Makoid to provide on-line links to other technical reports.

- Discussed Secondary & Cumulative impacts. Document specific to water resources/water quality will be needed as part of the 401 WQC, particularly relative to 303(d) waters. P. Lespinasse would prefer to review it ahead of the permit application.
- Discussed comments relative to culverts. B. Wilson confirmed that culverts will be buried except in cases where existing at-grade culverts are to be extended. P. Lespinasse indicated a preference to avoid/limit use of riprap to extent possible. B. Wilson indicated that riprap is being kept to a minimum, located in places where sheer stress requires it.
- Discussed SWMP. P. Lespinasse indicated that corridor likely to be considered impervious and treated much like a roadway project where elements such as grassed-swales are utilized for stormwater treatment.
- J. Schwaller briefly reviewed the IP permit strategy and mitigation options. Also highlighted schedule milestones. P. Lespinasse recommended a standard pre-application meeting.
- P. Lespinasse inquired about NC Wildlife Resource Commission (NCWRC) comment relative to Birdsfoot-trefoil. J. Schwaller relayed that team is meeting with USFWS on 12/16 and seeking input from NCWRC as well. May review potential for relocating the plants if necessary.



# STV/Ralph Whitehead Associates

## LYNX Blue Line Extension Northeast Corridor Light Rail Project

### Meeting Notes

Date: 12/22/10

Contract #: 08-477

Job No.: 2513745

Project: LYNX Blue Line Extension NECLRP

Meeting Name: Section 404/401 Permitting Strategy

Meeting Location: CMGC - Conference Room 286

Starting Time: 10:30AM

Meeting Date: 12/16/10

Ending Time: 12:00PM

Attendees:	<u>Name</u>	<u>Representing</u>
------------	-------------	---------------------

Listed below

#### NOTES:

##### Attendees:

Kelly Goforth, CATS

Issac Hinson, Charlotte-Mecklenburg SWS

Amanda Jones, U.S. Army Corps of Engineers

Allen Johnson, NC Division of Water Quality

Jennifer Schwaller, STV/RWA

Mike Iagnocco, STV/RWA

Bob Wilson, USI

Meghan Makoid, CATS

Jarrold Karl, Charlotte-Mecklenburg SWS

Allen Ratzlaff, U.S. Fish & Wildlife Service

Dale Yougkin, Federal Transit Agency (via phone)

Greg Sigmon, STV/RWA

Brandon Phillips, STV/RWA

- Utilizing an alignment map, K. Goforth provided an overview of the project. Included a status update of project changes since the Draft EIS, namely decision to terminate at UNC Charlotte, to include surface lots at Sugar Creek, to add a deck at University City Blvd. Station and JW Clay Blvd. Station, and to adjust what is included at the Norfolk Southern intermodal yard and existing South Corridor Maintenance Facility.

- K. Goforth described the Sugar Creek Design Option, including constraints and impacts.

- M. Iagnocco provided a history of the field review efforts, including delineations, agency field reviews, and protected species reviews.

- M. Iagnocco gave an overview of the project impacts detailed in a handout provided to all attendees. General discussion was had regarding the constraints of the corridor and reason for unavoidable impacts. It was noted that several of the impacted features are "ditches" along the railroad that have converted to jurisdictional channels over time. Many features are to be reconstructed.

- M. Iagnocco explained that an Individual Permit will be pursued and the present agencies agreed with the decision.

- General discussion followed and included:

- Clarification that current impacts are based on 30% plans; permit applications will be based on 65% plans. A. Jones and A. Johnson agreed that 65% plans is a good milestone.

- A. Jones confirmed that the longevity of the IP is typically 5 years, but have discretion to make it longer depending on how much time is needed to construct the project. May have to re-validate the Jurisdictional Determination, however.

-A. Jones confirmed that mitigation can be phased, if necessary, so that mitigation is done concurrent to the impacts. Do not need to go through permit process again if impact/mitigation numbers are refined.

-Discussed that mitigation is anticipated from the Charlotte Umbrella Bank and the Ecosystem Enhancement Program. Briefly discussed whether credits can come from other watersheds. J. Karl proposed potential use of mitigation credits from the Stony Creek project and whether credits from the

Catawba watershed would be needed. Also discussed use of Newell mitigation project. IRT has discretion to make decision on where the credits come from and whether they come from other watersheds. IRT will discuss further in another meeting as impacts are finalized and permit application process is further along.

- G. Sigmon clarified that the project would not be phased. It will likely be built in 3 main sections, but all sections will probably let at about the same and all work will likely occur concurrently.
- A. Jones requested additional information about the Alternatives Analysis performed over the years. K. Goforth provided a summary of the planning process, beginning in 2000, through the MIS, through conceptual engineering, to selection of the preferred alternatives to today. K. Goforth said we could provide a copy of the NCRR Sugar Creek Alternatives Analysis, as well as other planning documents that were developed. A. Jones indicated that the USACE will need to see an estimation of the impacts for the other alternatives, as well as the preferred alternative.
- A. Ratzlaff confirmed no additional concern with regards to protected species. All requirements under Section 7 of the ESA are complete. Recommended that the Birds-foot Trefoil be avoided if at all possible, but clarified that the USFWS has no requirements to do so. Recommended that relocation of the population be considered.
- A. Jones indicated that they typically prefer the ROD on the EIS before the IP application is submitted, but agreed that they could start the process if the ROD is forthcoming.
- A. Jones discussed the USACE's public notice process. Will need a list of all adjacent property owners with mailing labels to send notices to all along the corridor.
- A. Johnson provided input on the Stormwater Management Plan (SWMP) – it is required as part of the 401 Permit Application. Prefers that the SWMP be approved before impacts occur if possible. A. Jones noted that the USACE does not require SWMP, but the DWQ does and the USACE cannot issued the 404 IP until the 401 IP is issued.
- G. Sigmon provided an overview of the schedule. Two 65% plan submittals – one in mid to late March, one in June/July. Construction expected to begin in 2013, with advanced utility relocation possibly starting in 2012. A. Jones and A. Johnson would prefer that utility relocations be part of the BLE permit application since they are a result of the BLE project.
- Confirmed intent to have a formal Pre-Application Meeting prior to submittal of the permit applications.





April 20, 2011

Mr. Britt Setzer  
NC DENR – Public Water Supply  
610 East Center Ave., Suite 301  
Mooresville, NC 28115

RE: LYNX Blue Line Extension Northeast Corridor Light Rail Project  
Draft Environmental Impact Statement Comments

Dear Mr. Setzer:

Thank you for your input regarding the proposed LYNX Blue Line Extension Northeast Corridor Light Rail Project (LYNX BLE). This letter is in response to your comments made at the Public Hearing on the LYNX BLE Draft Environmental Impact Statement (EIS), published in August 2010. We appreciate your comments and want to ensure that all suggestions, objections and concerns are carefully considered before final project decisions are made. With regard to your request that plans and specifications for waterline relocation be reviewed, we offer the following:

There are a number of utilities, both public and private located throughout the proposed project corridor, including water mains. In the Draft EIS and forthcoming Final EIS, Chapter 18.0: Construction explains that there are existing utilities in conflict with the proposed Light Rail Alternative. Utility relocations are currently being coordinated with utility providers, including Charlotte-Mecklenburg Utilities Department (CMU).

The Final EIS is currently under development and will include responses to agency and public comments that were received on the Draft EIS. As such, your comments, as well as the responses stated in this letter, will be included in the Final EIS. It is anticipated that the Final EIS will be published in Fall 2011. You will be notified and sent a copy of the Final EIS when it is published. Following publication of the Final EIS, the Federal Transit Administration (FTA) will issue a Record of Decision (ROD). If the proposed project is approved, the next steps will be property acquisition and final design, followed by construction. It is currently anticipated that the LYNX BLE would open for revenue service in late 2016 / early 2017.

Again, thank you for your comments on the LYNX BLE and for your interest in this project. If you have any questions, please contact me at [kgoforth@charlottenc.gov](mailto:kgoforth@charlottenc.gov) or 704-336-3513.

Sincerely,

Kelly Goforth  
Project Development Manager

C: Danny Rogers, Senior Project Manager, CATS  
Keith Melton, Community Planner, FTA Region IV



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Charlotte, NC 28202  
PH: 704-336-6917  
FAX: 704-353-0797



April 20, 2011

Mr. Robert Cook  
Mecklenburg-Union Metropolitan Planning Organization  
600 E. 4th Street  
Charlotte, NC 28202-2853

RE: LYNX Blue Line Extension Northeast Corridor Light Rail Project  
Draft Environmental Impact Statement Comments

Dear Mr. Cook:

Thank you for your input regarding the proposed LYNX Blue Line Extension Northeast Corridor Light Rail Project (LYNX BLE). This letter is in response to your comments made on the LYNX BLE Draft Environmental Impact Statement (EIS), published in August 2010. We appreciate your comments and want to ensure that all suggestions, objections and concerns are carefully considered before final project decisions are made. With regard to your concern for and clarification of the Mecklenburg-Union MPO funding of the improvements to North Tryon Street, we offer the following:

The Mecklenburg-Union MPO funding matter is clarified in Section 3.1.3.2 of the forthcoming Final EIS to indicate that while the North Tryon Street/US-29 improvements were not funded in the 2035 Long Range Transportation Plan (LRTP), it was identified as needed transportation improvement. It is anticipated that the Record of Decision on this Final EIS will occur in late 2011, before the 2040 LRTP is adopted. Therefore, the Final EIS will include the 2035 LRTP as currently adopted.

The Final EIS is currently under development and will include responses to agency and public comments that were received on the Draft EIS. As such, your comments, as well as the responses stated in this letter, will be included in the Final EIS. It is anticipated that the Final EIS will be published in Fall 2011. You will be notified and sent a copy of the Final EIS when it is published. Following publication of the Final EIS, the Federal Transit Administration (FTA) will issue a Record of Decision (ROD). If the proposed project is approved, the next steps will be property acquisition and final design, followed by construction. It is currently anticipated that the LYNX BLE would open for revenue service in late 2016 / early 2017.

Again, thank you for your comments on the LYNX BLE and for your interest in this project. If you have any questions, please contact me at [kgoforth@charlottenc.gov](mailto:kgoforth@charlottenc.gov) or 704-336-3513.

Sincerely,

Kelly Goforth  
Project Development Manager

C: Danny Rogers, Senior Project Manager, CATS  
Keith Melton, Community Planner, FTA Region IV



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April 20, 2011

Mr. Heinz J. Mueller  
U.S. Environmental Protection Agency, Region IV  
Atlanta Federal Center  
61 Forsyth St.  
Atlanta, GA 30303-8960

RE: LYNX Blue Line Extension Northeast Corridor Light Rail Project  
Draft Environmental Impact Statement Comments

Dear Mr. Mueller:

Thank you for your input regarding the proposed LYNX Blue Line Extension Northeast Corridor Light Rail Project (LYNX BLE). This letter is in response to your comments on the LYNX BLE Draft Environmental Impact Statement (EIS), published in August 2010. We appreciate your comments and want to ensure that all suggestions, objections and concerns are carefully considered before final project decisions are made. Your comments along with CATS' responses are included in the attached table.

The Final EIS is currently under development and will include responses to agency and public comments that were received on the Draft EIS. As such, your comments, as well as the responses stated in this letter, will be included in the Final EIS. It is anticipated that the Final EIS will be published in Fall 2011. You will be notified and sent a copy of the Final EIS when it is published. Following publication of the Final EIS, the Federal Transit Administration (FTA) will issue a Record of Decision (ROD). If the proposed project is approved, the next steps will be property acquisition and final design, followed by construction. It is currently anticipated that the LYNX BLE would open for revenue service in late 2016 / early 2017.

Again, thank you for your comments on the LYNX BLE and for your interest in this project. If you have any questions, please contact me at [kgoforth@charlottenc.gov](mailto:kgoforth@charlottenc.gov) or 704-336-3513.

Sincerely,

Kelly Goforth  
Project Development Manager

C: Danny Rogers, Senior Project Manager, CATS  
Keith Melton, Community Planner, FTA Region IV



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Topic	Comment	Response
Purpose and Need	<p>EPA has rated the DEIS Lack of Objections (LO-1), and has not identified any potential environmental impacts requiring substantial changes to the preferred alternative. Additionally, the DEIS adequately sets forth the environmental impacts of the preferred alternative and no further analysis or data collection is believed to be necessary. Overall, EPA supports the proposed project's purpose and need and the recommended avoidance and minimization measures and mitigation.</p>	<p>Thank you for your comment. Comment noted.</p>
Alternatives Considered	<p>From a natural resource perspective, EPA prefers the LRA-Sugar Creek Option.</p>	<p>Comment noted. Although the Light Rail Alternative – Sugar Creek Design Option has less impact on water resources than the Light Rail Alternative/Locally Preferred Alternative (LPA) and avoids impacts to the Carolina birdsfoot trefoil, the Light Rail Alternative/LPA avoids impacts to an historic resource, has significantly fewer acquisitions and displacements of businesses, fewer visual impacts, will include mitigation to eliminate noise/vibration impacts, and is significantly less costly. Therefore, the Light Rail Alternative will be identified as the environmentally preferred alternative in the forthcoming Final Environmental Impact Statement (EIS).</p>
Natural Resources	<p>Chapter 10 of the DEIS also identifies farmlands as a natural resource. There are no farmlands within the proposed corridor. As a point of clarification, farmlands are not natural resources and should have been discussed in the human resource section of the DEIS. EPA requests that this be clarified in the Final Environmental Impact Statement.</p>	<p>Since farmlands are often defined by the presence of farmland soils (a natural resource), as per the requirements of the Farmland Protection Policy Act, it is common practice to include farmlands in natural resource discussions of environmental documents. However, the comment is noted and the discussion on farmlands will be moved to Chapter 4.0: Land Use in the forthcoming Final EIS.</p>
Air Quality	<p>The proposed project is considered consistent with local and State plans.</p>	<p>Thank you for your comment. Comment noted; consistent with Draft EIS and Final EIS.</p>

Topic	Comment	Response
Neighborhoods/ Noise	Table 6-4, Summary of Potential Impacts on Neighborhoods identified the Hidden Valley neighborhoods as having a potential noise impact. Under Table ES-2, Summary of Mitigation, Environmental Justice, it identifies that "noise mitigation for residential properties located within EJ communities of concern will be required." Mitigation for noise impacts to this neighborhood is being deferred to the final project design. The DEIS does not specifically identify or quantify the type or scope of the noise mitigation. This issue needs to be further detailed and discussed in the FEIS.	For purposes of the Draft EIS, a general noise assessment was conducted. A detailed assessment has been completed for the Final EIS and identifies specific noise conditions and mitigation methods for each impacted receiver. Additional detail will be provided in Chapter 13.0: Noise and Vibration in the forthcoming Final EIS.
Parklands	Minimal impacts are expected from the LRA-Sugar Creek Option to existing or planned parks or greenways.	Thank you for your comment. Comment noted; consistent with Draft EIS and Final EIS.
Cultural Resources	There are no anticipated adverse impacts to historic or archaeological resources.	Thank you for your comment. Comment noted; consistent with Draft EIS and Final EIS.
Hazardous Materials	There are a total of potentially 14 properties for hazardous material concerns on the proposed alignment and for the proposed park-and-ride facilities.	Thank you for your comment. Comment noted; consistent with Draft EIS and Final EIS.



April 20, 2011

Mr. Anil Panicker  
North Carolina Department of Transportation  
Statewide Planning  
1554 Mail Service Center  
Raleigh, NC 27699-1554

RE: LYNX Blue Line Extension Northeast Corridor Light Rail Project  
Draft Environmental Impact Statement Comments

Dear Mr. Panicker:

Thank you for your input regarding the proposed LYNX Blue Line Extension Northeast Corridor Light Rail Project (LYNX BLE). This letter is in response to your comments on the LYNX BLE Draft Environmental Impact Statement (EIS), published in August 2010. We appreciate your comments and want to ensure that all suggestions, objections and concerns are carefully considered before final project decisions are made. With regard to your concern with other projects planned for the project area, we offer the following:

Each of the listed projects planned for the project area is included in Chapter 3.0: Transportation of the forthcoming Final EIS. The planning, design and construction of the proposed project will be coordinated with the district engineer to ensure requirements are met and no conflicts exist with other North Carolina Department of Transportation (NCDOT) projects in the project area. CATS has been coordinating with both the NCDOT Division 10 staff as well as District staff.

The Final EIS is currently under development and will include responses to agency and public comments that were received on the Draft EIS. As such, your comments, as well as the responses stated in this letter, will be included in the Final EIS. It is anticipated that the Final EIS will be published in Fall 2011. You will be notified and sent a copy of the Final EIS when it is published. Following publication of the Final EIS, the Federal Transit Administration (FTA) will issue a Record of Decision (ROD). If the proposed project is approved, the next steps will be property acquisition and final design, followed by construction. It is currently anticipated that the LYNX BLE would open for revenue service in late 2016 / early 2017.

Again, thank you for your comments on the LYNX BLE and for your interest in this project. If you have any questions, please contact me at [kqoforth@charlottenc.gov](mailto:kqoforth@charlottenc.gov) or 704-336-3513.

Sincerely,

Kelly Goforth  
Project Development Manager

C: Danny Rogers, Senior Project Manager, CATS  
Keith Melton, Community Planner, FTA Region IV



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April 20, 2011

Mr. Willie R. Taylor  
U.S. Department of the Interior  
Office of Environmental Policy and Compliance  
U.S. Department of the Interior  
1849 C Street, NW MS 2462  
Washington, DC 20240

RE: LYNX Blue Line Extension Northeast Corridor Light Rail Project  
Draft Environmental Impact Statement Comments

Dear Mr. Taylor:

Thank you for your input regarding the proposed LYNX Blue Line Extension Northeast Corridor Light Rail Project (LYNX BLE). This letter is in response to your comments on the LYNX BLE Draft Environmental Impact Statement (EIS), published in August 2010. We appreciate your comments and want to ensure that all suggestions, objections and concerns are carefully considered before final project decisions are made. Your comments along with CATS' responses are included in the attached table.

The Final EIS is currently under development and will include responses to agency and public comments that were received on the Draft EIS. As such, your comments, as well as the responses stated in this letter, will be included in the Final EIS. It is anticipated that the Final EIS will be published in Fall 2011. You will be notified and sent a copy of the Final EIS when it is published. Following publication of the Final EIS, the Federal Transit Administration (FTA) will issue a Record of Decision (ROD). If the proposed project is approved, the next steps will be property acquisition and final design, followed by construction. It is currently anticipated that the LYNX BLE would open for revenue service in late 2016 / early 2017.

Again, thank you for your comments on the LYNX BLE and for your interest in this project. If you have any questions, please contact me at [kgoforth@charlottenc.gov](mailto:kgoforth@charlottenc.gov) or 704-336-3513.

Sincerely,

Kelly Goforth  
Project Development Manager

C: Danny Rogers, Senior Project Manager, CATS  
Keith Melton, Community Planner, FTA Region IV



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Topic	Comment	Response
<p>Water Resources</p>	<p>The DEIS does not contain sufficient information on the area of groundwater to support the finding of no impact. The document does not contain information on the depth to groundwater, flow direction, aquifers currently used, nor the quantity of water withdrawn for domestic and public water supply in the vicinity of the project. The document indicates that in some places the water table may be very shallow (a few feet below land surface); this increases the potential for contamination from spills during construction or operation. The location of domestic and public water supply wells as far as 2,000 feet from the rail corridor does not preclude contaminants from migrating through the groundwater to these pumped wells. The Department suggests that the Final EIS address the groundwater issue more completely.</p> <p>The statement that "efforts will be implemented to reduce the effects ... on groundwater resources" implies that effects will occur, yet none of these effects are described in the DEIS. The Department suggests that possible impacts and mitigation actions be documented in the Final EIS. One possible source for information that might be included in the report is the USGS, North Carolina Water Science Center <a href="http://waterdata.usgs.gov/nc/nwis/">waterdata.usgs.gov/nc/nwis/</a>.</p>	<p>The supporting technical report entitled <i>Natural Resources Technical Report (NRTR)</i> prepared for the LYNX Blue Line Extension Northeast Corridor Light Rail Project (LYNX BLE) states that the majority of the LYNX BLE study area has a depth to groundwater greater than six feet. Discussions with Peggy Finley of the North Carolina Division of Water Quality (NCDWQ) Mooresville Field Office and Shana Caldwell of the Mecklenburg County Land Use and Environmental Services Agency (LUESA) Ground Water/Waste Water unit have indicated that the depth to groundwater in the crystalline aquifer that is present in the project study area, averages approximately 30 feet. The areas that have been mapped as Helena soils have a perched water table of one to two-and-one-half feet in depth, and areas mapped as Monacan soils have an apparent high water table of one-half to two feet in depth. The highest water tables within the study area are anticipated to be in the areas mapped as Monacan soils in the Little Sugar Creek drainage corridor and the railroad crossing of an unnamed tributary to Little Sugar Creek east of the 36th Street Station. Perched water tables associated within the areas mapped as Helena soils may be found in the area of the Sugar Creek Station proposed park-and-ride lot, the Old Concord Road Station proposed park-and-ride lot and along the railroad right-of-way between the Sugar Creek Station proposed park-and-ride lot and the Old Concord Road Station proposed park-and-ride lot.</p> <p>Geotechnical soil borings were done for the study area locations that will require a decrease in surface elevations (i.e., cuts), and the depth to groundwater at these boring locations was noted. The depth to groundwater in these proposed cut areas, and the proposed surface elevations were reviewed to determine where the groundwater would be closest to the proposed surface elevation. This review indicated that the proposed 36th Street underpass area would come nearest to intercepting the groundwater table in the development areas to be cut. The shallowest depth to groundwater at the proposed 36th Street underpass would be approximately five feet from the surface. Therefore, it has been determined that groundwater will not be encountered during the proposed development activities. This decreases the potential for contaminating the groundwater from spills during construction or operation. <i>(response continued on next page)</i></p>

Topic	Comment	Response
Water Resources (cont.)		<p>No information is available on the direction of flow, although discussions with the NCDWQ and the Mecklenburg County LUESA personnel have indicated that the ground water flow typically follows the surface topography.</p> <p>No information is available on the quantity of water withdrawn for domestic water supply. The one public well that was identified in the Draft Environmental Impact Statement (EIS) has been reported to be inactive and no information is available on the Well Information System 2.0 provided by Mecklenburg County.</p> <p>This additional information relative to the potential for impacts to groundwater will be included in Chapter 11.0: Water Resources in the forthcoming Final EIS.</p>
Natural Resources	<p>1) The Department concurs with the DEIS conclusion that no listed species occur within the project area. We do not believe any endangered or threatened species will be affected by the proposed project; therefore, the requirements under Section 7 of the Act are fulfilled. However, obligations under Section 7 of the Act must be reconsidered if: (1) new information reveals impacts of this identified action that may affect listed species or critical habitat in a manner not previously considered, (2) this action is subsequently modified in a manner that was not considered in this review, or (3) a new species is listed or critical habitat is identified that may be affected by the proposed action.</p> <p>2) The Migratory Bird Treaty Act (16 U.S.C. 703-712) prohibits the taking, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests, except when specifically authorized by the Department. Implementing regulations define "take" under the Migratory Bird Treaty Act as to "pursue, hunt, shoot, wound, kill, trap, capture, possess, or collect." Unlike the Endangered Species Act, neither</p> <p><i>(comment continued on next pg.)</i></p>	<p>1) Comment noted regarding the obligations under Section 7 of the Act.</p> <p>2) Natural resource surveys were conducted at various times from 2006 to 2010, including during the March to September timeframe. The project study area was not found to contain nesting sites for migratory birds. If it becomes evident that migratory birds are utilizing the project area, additional surveys will be conducted as warranted. Additional information on the natural resource surveys can be found in the Natural Resources Technical Report (July 2010). In addition, the findings related to nesting sites for migratory birds has been added to Chapter 10.0 Natural Resources of the forthcoming Final EIS.</p>

Topic	Comment	Response
<p>Natural Resources (cont.)</p>	<p>the Migratory Bird Treaty Act nor its implementing regulations at 50 CFR Part 21, provides for the permitting of "incidental take" of migratory birds. To avoid impacts to migratory birds, the Department recommends conducting a visual inspection of migratory bird nesting habitat within the project area during the nesting season of March through September. If migratory birds are discovered nesting in the project impact area, avoid impacting the nests during the migratory bird nesting season (March through September). Bald and golden eagles are afforded additional legal protection under the Bald and Golden Eagle Protection Act (16 U.S. C. 668-688d).</p>	
<p>Water Resources</p>	<p>1) Use spanning structures for all permanent roadway crossings of streams and associated wetland to minimize impacts to aquatic resources, allow for the movement of aquatic organisms, and eliminate the need to fill and install culverts. If culverts are the only option, we suggest using bottomless culverts. Bottomless culverts need not be buried, thereby minimizing adverse impacts to streams. The use of a common round culvert should be a last resort, and it should be buried at least a foot below the natural streambed to allow for proper water depth and the movement of aquatic organisms. Under no circumstances should stream-channel widening for culverts occur nor should riprap be placed in the stream channel. We also recommend that all wetland/stream crossings be made perpendicular to the stream.</p> <p>(comment continued on next pg.)</p>	<p>1) Structure and culvert design will adhere to federal, state and local requirements, including <i>Hydraulic Design of Highway Culverts, HDS 05, Federal Highway Administration (FHWA) (2005); Guidelines for Drainage Studies and Hydraulic Design by NCDOT</i>; and the requirements of the <i>Charlotte-Mecklenburg Storm Water Design Manual</i>. Culverts and other structures will be placed below the elevation of the streambed by one foot, except in cases where existing at-grade culverts will be extended. Existing low flow passages and the equilibrium of wetlands, streams and/or stream banks adjacent to the aforementioned structures will be maintained. The use of riprap will be kept to a minimum and will be located only in places where sheer stress requires it.</p> <p>(response continued on next pg.)</p>

Topic	Comment	Response
<p>Water Resources (cont.)</p>	<p>2) Maintain and/or restore wetland/stream buffers throughout the project area. Forested riparian buffers, a minimum of 100 feet wide along perennial streams and 50 feet wide along intermittent streams, should be created and/or maintained along all aquatic areas. We are concerned about impacts to any aquatic habitat, including the removal of the riparian zone, which may occur in the project area.</p> <p>3) To effectively reduce erosion and sedimentation impacts, Best Management Practices should be designed, installed, and maintained during land-disturbing activities.</p> <p>4) For maximum benefits to water quality and bank stabilization, riparian areas should not be mowed. We recommend planting disturbed areas with native riparian species.</p>	<p>2) Measures will be taken to preserve riparian vegetation to the extent practicable and to re-establish riparian vegetation to the extent possible. As noted previously and in the following responses, Best Management Practice (BMP) measures that avoid degradation of aquatic habitat and water quality will be implemented</p> <p>3) Best Management Practice (BMP) measures are being incorporated into the proposed project, both during construction and as part of the build condition of the proposed light rail and associated facilities. For example, each station location and park-and-ride facility would implement best management practices for the collection and treatment of stormwater. BMP measures will comply with federal, state and local guidelines on sediment discharge thresholds, particularly the City of Charlotte Post-Construction Controls Ordinance (PCCO). A detailed analysis of the sediment load from the proposed project will be generated, in addition to the BMP measures that would be employed. These analyses will be outlined in the Erosion and Sediment Control Plans developed during final design</p> <p>4) Comment noted. These measures are standard for all construction projects of this magnitude and will be implemented accordingly.</p>
<p>Water Resources</p>	<p>Implement stringent measures to control sediment and erosion prior to any ground disturbance and maintain them throughout project construction. Temporary (e.g., rye grain, wheat, millet) or permanent herbaceous vegetation should be planted on all bare soil within 5 days of ground-disturbing activities to provide long-term erosion control. Native annual small grains appropriate for the season are recommended. Biodegradable erosion-control matting should be used in conjunction with appropriate seeding on disturbed soils in steep slope and riparian areas. Matting should be secured in place with staples, stakes, or live stakes of native trees (whenever possible).</p>	<p>Stormwater basins will be designed and built at each of the proposed stations that encompass surface parking lots. These basins will capture surface water run-off, thereby reducing the amount of runoff into nearby waterways. Additionally, as described in the Draft EIS and in Chapter 18.0: Construction of the forthcoming Final EIS, BMP measures will be incorporated as well. BMP measures will comply with federal, state and local guidelines on sediment discharge thresholds, particularly the City of Charlotte PCCO. A detailed analysis of the sediment load from the proposed project will be generated, in addition to BMP measures that would be employed. These analyses will be outlined in the Erosion and Sediment Control Plans developed during final design. Coordination with the appropriate local, state and federal agencies will continue throughout design.</p>

Topic	Comment	Response
<p>Water Resources</p>	<p>1) Maintain a dry work area for all work in or adjacent to the stream. Sandbags, cofferdams, or other diversion structures should be used, where possible, to prevent excavation in flowing water. These diversion structures should be removed immediately after the in-stream work is finished.</p> <p>2) Divert ditch water into a constructed sump or, where possible, onto stable forested vegetation that can filter sediment before the water reaches the stream. Side ditches should not be allowed to drain directly into the stream. Ensure that adequate cross drainage is in place before the culvert approach to minimize the water volume directed into approach ditches at culvert sites. Consider the use of rolling grades to divert surface runoff from roads. Where cross ditches are used, ensure that they are properly armored at the outlet and along the base.</p> <p>3) Keep equipment out of streams by operating from the banks in a fashion that minimizes disturbance to woody vegetation. It should be inspected daily and maintained to prevent the contamination of surface waters from leaking fuels, lubricants, hydraulic fluids, or other toxic materials. All fuels, lubricants, and other toxic materials should be stored outside the riparian management area of the stream in a location where the material can be contained.</p> <p><i>(comment continued on next pg.)</i></p>	<p>1) BMP measures for the Protection of Surface Waters will be implemented during project construction. Accordingly, sandbags, cofferdams, or other diversion structures will be used, where possible, to prevent excavation in flowing water. If a dry work area is not necessary to place/cure concrete, special measures will be taken to ensure that water in contact with the concrete operations is contained and treated prior to releasing back into stream. Techniques such as cofferdams and/or pumping to special containment areas will be evaluated on a case-by-case basis during construction, if necessary</p> <p>2) BMP measures for the Protection of Surface Waters will be implemented during project construction. Accordingly, side ditches will not drain directly to adjacent/nearby stream channels. Ditch water will be diverted into a sump or stable forested vegetation where sediment can be filtered appropriately before entering nearby/adjacent stream channels. Likewise, measures such as sandbags, cofferdams, or other diversion structures will be used, where possible, to minimize flow of water into approach ditches at culvert sites and from surface runoff from roads. Where cross ditches are used, appropriate armoring of the base will be utilized to prevent the release of disturbed sediment into the stream channel.</p> <p>3) Approved BMP measures will be implemented. These measures will prohibit heavy equipment from operating within stream channels, without appropriate measures.</p> <p><i>(response continued on next pg.)</i></p>

Topic	Comment	Response
<p>Water Resources (cont.)</p>	<p>4) Keep wet concrete from contacting the stream or any other water that has the potential to enter the stream. Uncured concrete or grout can kill aquatic organisms, including fish, by altering the pH of the water. Precast concrete should be sued to eliminate the risk to fish. However, when cast-in-place concrete is required, all work should be conducted "in the dry," and the site should be effectively isolated from any water that may enter the stream for a minimum of 48 hours.</p> <p>5) Minimize the amount of impervious surface area that will result from this project. We recommend that all parking areas be constructed of a pervious material (i.e., pervious concrete, interlocking/open paving blocks, etc.). Pervious materials are less likely to absorb and store head and are less likely to allow the cooler temperatures of the earth below to cool the pavement. Pervious concrete also requires less maintenance and is less susceptible to freeze/thaw cracking due to large void spaces within the concrete. Pervious parking areas minimize changes to the hydrology of the watershed, can be used to facilitate groundwater recharge, and often eliminate the need for curb and gutter for drainage.</p>	<p>4) BMP measures for the Protection of Surface Waters will be implemented during project construction. Accordingly, sandbags, cofferdams, or other diversion structures would be used, where possible, to prevent excavation in flowing water. If a dry work area is not necessary to place/cure concrete, special measures will be taken to ensure that water in contact with the concrete operations is contained and treated prior to releasing back into stream. Techniques such as cofferdams and/or pumping to special containment areas will be evaluated on a case-by-case basis during construction, if necessary.</p> <p>5) Stormwater basins will be designed and built at each of the proposed stations that encompass surface parking lots. These basins will capture surface water run-off, thereby reducing the amount of runoff into nearby waterways. Additionally, as described in the Draft EIS and in Chapter 18.0: Construction of the forthcoming Final EIS, BMP measures will be incorporated as well. BMP measures will comply with federal, state and local guidelines on sediment discharge thresholds, particularly the City of Charlotte PCCO. A detailed analysis of the sediment load from the proposed project will be generated, in addition to BMP measures that would be employed. These analyses will be outlined in the Erosion and Sediment Control Plans developed during final design. Coordination with the appropriate local, state and federal agencies will continue throughout design.</p>
<p>Water Resources</p>	<p>Implement low-impact-development designs into the project plans. Where feasible, we recommend that a rooftop garden, or a "green" rooftop, design be incorporated into any "station/building" construction plans.</p>	<p>The proposed project currently includes Low Impact Development (LID) techniques, such as landscape islands in park-and-ride lots and planting strips along sidewalks; and a rain garden is currently proposed at Old Concord Road Station park-and-ride. CATS will also be evaluating the feasibility of pervious materials in other locations (e.g. grass-crete for fire &amp; maintenance access areas). The proposed project does not include any building appropriate for a rooftop garden, or a "green" rooftop. For stations, the project is utilizing station canopy design that is consistent with existing LYNX Blue Line light rail canopies. This information about LID design has been added to the description of the light rail stations in Chapter 2.0 Alternatives Considered.</p> <p><i>(response continued on next pg.)</i></p>

Mr. Willie Taylor

Topic	Comment	Response
Water Resources (cont.)		In addition, as discussed in Chapter 4.0: Land Use, CATS will evaluate sustainable design features for the proposed project in compliance with the City of Charlotte's Policy for Sustainable Facilities.
Water Resources	<p>Any Clean Water Act 404/401 permit applications should clearly show why impacts are unavoidable and how impacts that are unavoidable have been minimized. Unavoidable impacts will require mitigation. The DEIS also indicates that mitigation will be provided by Charlotte's Umbrella Stream and Wetland Mitigation Bank. Our normal practice is to recommend that all direct impacts to both wetlands and streams be mitigation with the restoration comparable on-site streams and wetlands at a minimum ratio of 2:1. However, we are aware that many of the streams that will be impacted by the proposed project are in "poor" condition with little or no aquatic resource value; therefore, we believe a 1:1 mitigation ratio for stream impacts would be sufficient. From our recent experiences working with the City of Charlotte, we do not believe that the Umbrella Stream and Mitigation Bank has enough credits to off-set the impacts of this project. If the Mitigation Bank does not have enough credits, and if an on-site/in-kind mitigation plan cannot be established, then we recommend a payment to the North Carolina Ecosystem Enhancement Program to compensate for the unavoidable impacts. The same recommended ratio of 2:1 for wetlands and 1:1 for streams should be studied to calculate the payment amount.</p>	<p>The Final EIS will include a summary of the estimated impacts to streams and wetlands. The Section 404 Individual Permit application and Section 401 Water Quality Certification application will include additional detail on the proposed impacts along with corresponding mapping and drawings. A detailed review of avoidance and minimization measures will be included to show why impacts are unavoidable and how impacts have been minimized.</p> <p>As noted, it is anticipated that required mitigation to satisfy compensatory mitigation requirements will be provided through the Charlotte Umbrella Stream and Wetland Mitigation Bank and the North Carolina Department of Environment and Natural Resources (NCDENR) Ecosystem Enhancement Program. The project team discussed these mitigation options with representatives of Charlotte Stormwater Services, the U.S. Army Corps of Engineers and the North Carolina Division of Water Quality. All parties are in agreement with the proposed preliminary mitigation strategy; more details will be developed with the Section 404 Individual Permit and Section 401 Water Quality Certification progress.</p>
Section 4(f)	The Department concurs that there is no feasible and prudent alternative to the proposed use and that all possible planning has been done to minimize harm to Section 4(f) resources.	Thank you for your comment. Comment noted.