



**Interim Update on SB-402**

# **Infrastructure Improvement Assessment**

**March 1, 2014**



North Carolina Department of Transportation

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*As part of Senate Bill 402, Section 34.23 (Sessions Law 2013-301) ratified July 25, 2013 and signed by Governor Pat McCrory on July 26, 2013, the General Assembly of North Carolina directed the North Carolina Department of Transportation, in collaboration with the North Carolina Department of Commerce and the North Carolina Department of Agriculture and Consumer Services, to study the feasibility of infrastructure improvements for the Global TransPark (GTP) and the North Carolina State Port Authority.*

NCDOT is assessing road, rail and facility infrastructure improvements meant to support the Global TransPark and its economic long-term viability. Infrastructure improvements and service scenarios are being evaluated to support the Port of Morehead City terminal and Radio Island. The Wallace to Castle Hayne (W2CH) project will study restoring rail service along a preserved rail right-of-way in Pender County. This work will include analysis of the associated CSXT railroad track network in eastern North Carolina, and infrastructure access to the Port of Wilmington terminal (including rail and highway access).





## Study Organizational Structure and Meetings to Date

The following section details the organizational structure for the study team, as well as relevant meetings held to date. The study is being led and managed by Paul Worley, Director, NCDOT Rail Division and Marc Hamel, Project Development Engineer, NCDOT Rail Division of the Planning and Development Branch.

### Research Team/Steering Committee

Stakeholder coordination includes regular updates through the Eastern Infrastructure Improvement Studies (working title for SB-402 studies) meetings, as well as meetings and calls with North Carolina State Ports Authority (NCSPA), North Carolina Railroad (NCRR), GTP, North Carolina Department of Commerce (Commerce) and North Carolina Department of Agriculture and Consumer Services (Agriculture) as the project advances. The Norfolk Southern (NS) and CSXT railroads have already been engaged in working with NCDOT and this task is part of that larger conversation.

The team organizational structure assigned to this study is as follows:

### Steering Committee Members

#### NCDOT – Rail Division

Shirley Williams – Strategic Rail Planning  
James Bridges – Environmental Support  
John Dees – Short Line Railroad and Planning Support  
Cheryl Hannah – Planning Support

#### NCDOT – Logistics

Rudy Lupton – Logistics Oversight  
Lori Fuller – Legal Support  
Allen Pope – Engineering Support

#### NC Global TransPark

Rudy Lupton – Global TransPark Oversight  
Lori Fuller – Global TransPark Input  
Allen Pope – Global TransPark Facilities/  
Engineering Input  
Rick Barkes – Global TransPark/Airport Input

#### North Carolina Ports Authority

Jeff Miles – Ports Oversight  
Tom Guthrie – Ports Support  
Stephanie Ayers – Ports Support

#### NCDOT– Strategic Planning

Susan Pullium – Director  
Sebastian Montagne – NCDOT Integration

#### NCDOT – DOH Division 2

John Rouse – NCDOT Highways Support  
Dwayne Alligood – NCDOT Highways Support

#### NCDOT – Transportation Planning

Travis Marshall – Statewide Long-Range  
Highways Planning

#### NC Department of Agriculture and Consumer Services

Joy Hicks – Agriculture and Commodities Input  
Robert Hosford – Agriculture and Commodities Input

#### NC Department of Commerce

Zachary Oliver –Economics

#### AECOM (Consultant – GTP and MHC)

Eddie McFalls/Toni Horst – Consultant Project Managers,  
AECOM Research Team

#### Parsons Brinkerhoff (PB)

#### (Consultant – Wallace to Castle Wayne)

Jeff Mann – Consultant Project Manager

### Railroad Points of Coordination

#### CSX Transportation

#### (W2CH and GTP)

Marco Turra – Director, Alliances – Technical Input  
John Dillard – Resident Vice President – State Gov't Affairs

#### North Carolina Railroad Company

#### (GTP and MHC)

Scott Saylor - President  
Jim Kessler – Vice President, Engineering

#### Norfolk Southern Corporation

#### (GTP and MHC)

Marc Hoecker – Director Strategic Planning  
Ed Elkins – Group Vice President International Intermodal  
Durwood Laughinghouse – Resident Vice President  
Government Relations  
Steve Evans – Assistant. Vice President Ports and  
International  
Megan Achimasi – Director Marketing, Planning, &  
Analysis  
James Davis – Marketing & Sales Manager – Business Units

#### Wilmington Terminal Railroad, Inc. (W2CH)

Billy Tucker – General Manager

#### Carolina Coastal Railway (MHC)

Douglas Golden – President

## Meetings to Date Regarding the SB-402 Study

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- Eastern Infrastructure Improvement Studies (EIS) kickoff meeting..... September 16, 2013
- NCDOT Rail Division – Internal Coordination meeting on Capacity Modeling Efforts..... October 2, 2013
- NS/NCDOT Rail Division Meeting on NCGA Studies, ..... October 23, 2013 (GTP and MHC)  
Ports, GTP and Intermodal (Norfolk)
- CSXT/NCDOT Rail Division Progress Meeting ..... October 24, 2013 (W2CH and GTP)
- Eastern Infrastructure Improvement Studies (EIS) Meeting ..... October 29, 2013
- NCDOT Rail Forum ..... November 12, 2013
- Eastern Infrastructure Improvement Studies (EIS) Meeting ..... November 14, 2013
- NCRR/NCDOT Rail Division Coordination meeting ..... November 18, 2013 (GTP and MHC)
- Eastern Infrastructure Improvement Studies (EIS) meeting ..... December 10, 2013
- NS/NCDOT Rail Division, NC Ports Track Coordination ..... December 13th, 2013 (MHC)
- CSXT/NCDOT Rail Division Progress Meeting ..... December 17, 2013 (W2CH and MHC)
- NCRR/NCDOT Coordination Meeting ..... December 18, 2013 (GTP and MHC)
- NCDOT Logistics/AECOM – Global TransPark Conceptual ..... January 3, 2014 (GTP)  
Infrastructure Improvements Meeting
- NCDOT Logistics/NCDOT Rail Division – Global TransPark Conceptual ..... January 8, 2014 (GTP)  
Improvements Meeting
- CSXT/NCDOT Task Coordination Meeting ..... January 17, 2014 (W2CH and GTP)
- NCRR-Chief Engineer/ NCDOT, Information Exchange Meeting..... January 20, 2014 (GTP and MHC)
- Eastern Infrastructure Improvement Studies (EIS) meeting..... January 21, 2014
- CSXT/NCDOT Task Coordination Meeting (Conference Call)..... January 21, 2014 (W2CH and GTP)
- NCRR/NCDOT Coordination Meeting ..... January 22, 2014 (GTP and MHC)
- NCDOT/Surface Transportation Board conference Call ..... February 6, 2014 (W2CH)

## Study Team Progress to Date

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The NCDOT Rail Division staff is coordinating within the division, the department and with stakeholders in numerous project and research areas. These include coordination with the *NC Comprehensive State Rail Plan* now underway to ensure statewide integration of Eastern NC projects. Research is being conducted to ensure integration with project submission and prioritization processes for future funding applicability.

Direct coordination with NS (in Norfolk), CSXT (in Jacksonville, FL), and RailEx (Albany) has been made to collect information and coordinate on issues related to these studies, as well as ongoing monthly meetings on a broader scale with NCRR, NS and CSXT.

A Rail Forum was held by the NCDOT Rail Division, which allowed, among other activities, networking with numerous high-level corporate officials and individuals from many related disciplines.

Research was initiated into the NCDOT Transportation Improvement Program and Feasibility Studies to determine compatibility with funded projects or projected projects, as well as the applicable Comprehensive Transportation Plans. Request was made to the MPO's and RPO's for data they may have locally that could inform this process.

The NCRR Track Relocation Feasibility Study was reviewed with regards to Morehead City and Radio Island access on new location. Likewise, the U.S.



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Surface Transportation Board was contacted to investigate laws governing restoration of service on rail lines, or introduction of new rail lines as it applies to the study components.

A statute search was done to investigate any legislation regarding single-access to the ports.

A high-level review of the component sites is underway for environmental issues that may influence potential improvements, and a field inspection of the W2CH project was completed by NCDOT Rail staff.

As noted earlier, to accomplish the SB-402 tasks, the project team is working towards the analysis of financial viability and return on infrastructure improvements.

The three components impacted by this legislation are: the Global TransPark Infrastructure Improvements (GTP), Port of Morehead City Infrastructure Improvements (MHC), and Wallace to Castle Hayne Rail Line Restoration (W2CH). Information regarding the study methodology, data collection and progress made to date regarding GTP, MHC and W2CH will be covered in the next sections of this report.

In addition, a portion of the studies will investigate and summarize the feasibility of rail service provided by two Class I railroads to the Ports at Morehead City and Wilmington as well as the GTP. It will address the contractual and market implications of access to these facilities, which currently are served by a single carrier each.

# Global TransPark Component

## Introduction

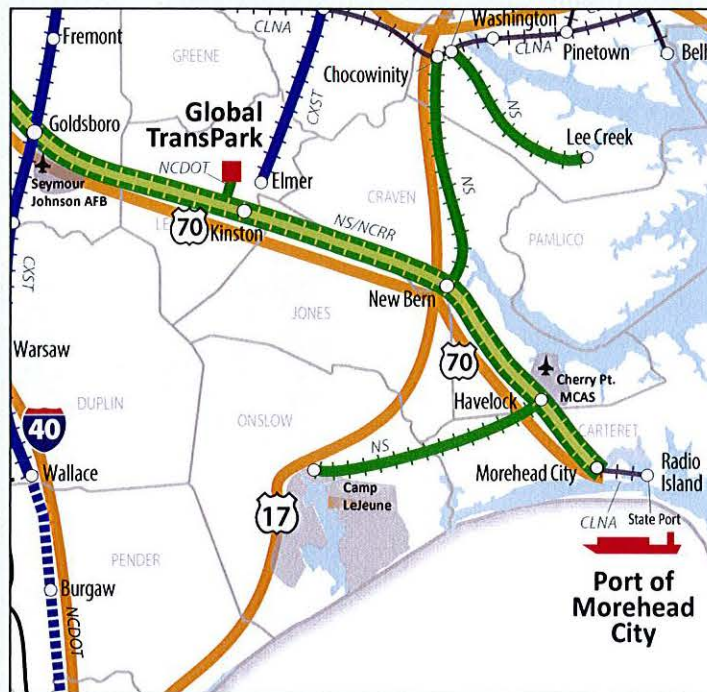
*The North Carolina Global TransPark Authority Act (S.L. 1991-749) was ratified on July 16, 1991. Established pursuant to the Finance article of the NC Constitution (Art. V, Sec. 13), the Act creates a public body to operate an airport and “to develop or further . . . commerce and cargo and passenger traffic.”*

*The North Carolina Global TransPark (GTP) Authority was established in 1991 to develop an innovative industrial park built around a multi-modal transportation network that includes an international cargo airport. The 1994 Master Plan envisioned GTP having, in addition to the airport, direct connections to rail lines, speedy access to major seaports, and multiple connections to interstate highways. GTP did not have access to the ports via rail until late 2012, and its access to multilane and interstate highways will be fully completed in 2014. It has taken 20 years to complete these elements of the GTP’s transportation network.*

*The Global TransPark study component is assessing the economic feasibility of infrastructure, facility and access improvements for the Global TransPark and is also assessing linkages to the Port of Morehead City. The study will evaluate the financial viability of improvements, develop marketing strategies, and assess the return-on-investment and the overall benefit of the project.*

### GTP at a Glance

- 2,500-acre industrial/airport site situated in Eastern North Carolina
- Offers locations for a variety of business types, including companies involved in the aerospace sector and logistics.
- Buildings and sites readily available
- Airport (ISO) with an 11,500 x 150 foot runway with CAT I instrument landing systems (ILS)
- Foreign-Trade Zone #214
- 33,000 SF Composite Center on-site
- Rail spur on site
- Short distance to I-95 and I-40
- Proximity to deep water port
- Telecommunications infrastructure, fiber optic network and full utilities on-site





## Legislative Requirements regarding GTP

The following items were specifically directed by the legislature to be included in the study:

- Evaluate infrastructure improvements which will promote job creation and commerce and advance development of the Global TransPark as an inland terminal, including, at a minimum, specialized transloading equipment, refrigerated and dry storage facilities, and site improvements in support of co-located manufacturing facilities on property owned by the Global TransPark Authority.
- Perform financial feasibility analyses for each infrastructure improvement evaluated under the bullet above, including the following components:
  - Project scope and development timeline
  - Assessment of technical feasibility
  - Estimates of preconstruction, construction, maintenance, and operating costs
  - Market scenarios, including identification of target industries and commodities and assessments of market demand, impacts on cargo throughput, utilization of Authority facilities, and other associated outputs
  - Return on investment, including direct financial return to the Authority or State as well as local and regional economic impact attributable to each project
  - Alternatives for project financing
  - Assess highway and rail infrastructure improvements or service scenarios that improve access and throughput to the Global TransPark and North Carolina State Port Authority Morehead City Terminal, addressing at a minimum, the relative benefits and costs of each highway or rail project, as well as the impacts on freight movements for the highway system and connecting rail corridors. As part

of this assessment, the department shall, in collaboration with the North Carolina Railroad Company, evaluate alternate routes to improve rail capacity and access to the Morehead City Terminal and Radio Island site.

## Action Plan

To meet these requirements, the NCDOT Rail Division will manage the completion of the study and has contracted the private engineering firm of AECOM to provide the technical assistance to complete the analysis.

## Study Methodology

Thus, this study investigates the GTP, but also will consider major pieces of connecting infrastructure such as highways, ports and rail lines. This leads to the following core research to be addressed by this study.

## Overall Study Process

- Validate and incorporate information from prior studies
- Preliminary assessment of infrastructure (on-site and facility access) and service deficiencies or opportunities.
- Data collection from workshops, industry outreach, stakeholder engagement and forecast model inputs
- Market data collection and analysis
- Potential demand revealed by initial data collection and analysis
- Market scenario(s) development – The type of market opportunity, timing, location, projected





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changes in freight or other economic activity associated with each market scenario will be analyzed.

- Identify infrastructure improvements and estimate cost—This task describes what it would take to realize the market opportunities identified in the market scenarios. Conceptual projects/alignments chosen for evaluation.
- Economic Impact and Benefit Cost Assessment—this task evaluates the investments for their economic impact return and BCA ratio to ensure that the recommendations are built on solid analysis and to inform the programming of candidate recommendations. Alternatives for project financing will be evaluated.
- Draft and Final Report

Private engineering firm assistance will be utilized throughout this process.

## Study Progress

The following items have been completed to date:

### Data Collection

The steering committee has researched previous planning studies and reports for inclusion in the study. *(See list of Prior Studies below)* The goal of this step is to enhance the understanding of the interaction between this project and other planning work, and to maximize the efficiency of the work being performed.

NCDOT Logistics and GTP staff have developed a number of potential industry and project scenarios for the Global TransPark to identify potential infrastructure requirements that will generate economic growth and job creation. They include the following industry categories:

- Agriculture and Forestry
- Aerospace and Aviation
- Defense Support
- Emergency Management
- Energy
- Information Technology
- Maintenance and Manufacturing
- Testing
- Commercial Services

Based upon these industry categories, the GTP staff

has developed a conceptual land use plan consisting on projects on existing GTP property. These projects include specific areas called out in SB 402 language as well as additional projects to be used to identify infrastructure requirements in and around Global TransPark. Projects under evaluation include:

- Dry Storage Facility - Agriculture
- Refrigerated Storage – Pharmaceuticals and Agriculture
- Bulk Storage - Densified Biomass, Wood Chips, Agriculture
- Maintenance/Repair/Overhaul Operations
- Aircraft Paint Facility
- Heavy Lift Cargo Operations
- Aircraft Charter Operations
- Military Storage and Reset Operations
- Air Cargo Facility
- Cargo Distribution Center
- Cargo Transshipment
- Fumigation - Agriculture
- Manufacturing - UAV/UAS, Heavy Equipment, Aircraft Components
- Aircraft Demolition Facility
- Defense Support Operation
- Emergency Management/HADR Prepositioning Facility
- Air Passenger Service
- IT Data Center
- Aircraft Test and Evaluation Facility
- Commercial Vehicle Maintenance Operation
- Aircraft Engine Maintenance and Test Facility
- Cogeneration Facility - Energy
- Precision Measurement and Calibration Facility
- Non-Destructive Testing Facility

As of this report, project and infrastructure cost analysis is underway. The study team will use this data in conjunction with market analysis from the study to determine which projects offer the most advantageous options for economic growth, job creation, and most favorable cost-benefit and return on investment. This will aid in providing viable economic development options to the legislature as well as provide the GTP and other state agencies ideas, options and direction for future economic development across the state.

## Prior Studies

A number of studies that will inform the process have been performed on the GTP, including:

- ***Master Plan for Global TransPark***
- ***North Carolina Should Weigh Continued Investment in the Global TransPark Authority and Consider How to Repay the Escheat Fund Loan***
- ***Harvey Parkway Extension and CSX Rail Spur Feasibility Study***
- ***NC Global TransPark Rail Spur Environmental Assessment and Finding of No Significant Impact***
- ***NCGTP Institute Rd Relocation Topographic Survey***

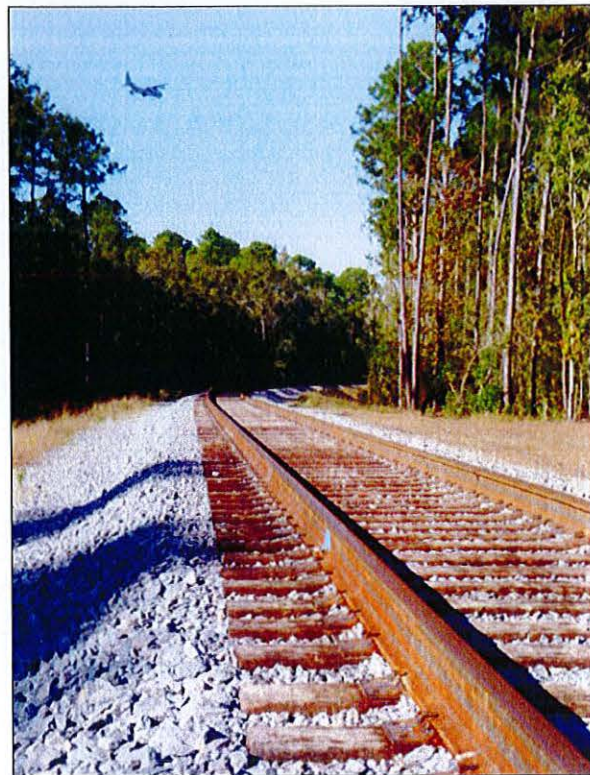
The following are related studies that may provide useful information relevant to the GTP:

- ***The Relationship Between Seaports and the Intermodal Hinterland in Light of Global Supply Chains, OECD, 2008***
- ***Economic and Market Analysis for an Inland Intermodal Port, at Prichard, WV***
- ***Western North Carolina Inland Port Feasibility Study***
- ***NCRR – Track Relocation Feasibility Study Havelock to Morehead City***
- ***Northern Carteret Bypass Feasibility Study***
- ***Statewide Logistics Plan for North Carolina***
- ***Seven Portals Study***
- ***NC Maritime Strategy***
- ***Radio Island Traffic Assessment***
- ***R110 Carteret Rail Road Bridge at NC Port In Morehead City***

## Study Schedule

The deliverables for the GTP study component will be completed in accordance with the schedule below:

3/7/14	Validate and Incorporate Prior Studies
4/30/14	Data Collection, Workshops, and Forecasting Model Inputs
6/30/14	Market Scenarios
8/31/14	Identify Infrastructure Improvements and Estimate Cost
10/31/14	Economic Impact and Benefit Cost Assessment, and Alternatives for Project Financing
11/14/14	Draft Report Complete
12/15/14	Final Report



Kinston Free Press



# North Carolina State Ports Authority, Port of Morehead City Component

## Introduction

*The Port of Morehead City is a strategic asset for the State of North Carolina, one that supports multiple economic development initiatives. It is designated as a strategic port for military activities and is a member of the National Port Readiness Network.*

*The Port of Morehead City component study is assessing the economic feasibility of infrastructure and access improvements for the Global TransPark and the North Carolina State Port Authority. The study will evaluate alternatives to improve rail and highway capacity and access. This study will also be coordinated closely with the Global TransPark Study described above.*

### The Port of Morehead City at a Glance

- Breakbulk and bulk facility four miles from Atlantic Ocean
- Deep water port
- Second largest importer in the U.S. for natural rubber
- A leading exporter of phosphate, featuring dry-bulk facility with 225,000-ton capacity warehouse plus open storage
- Access to Interstates 95 and 40 is available via U.S. Highways 70 and 17
- Direct rail service to Port of MHC and Radio Island by CLNA
- Class I rail service by NS
- Nine berths on 5,500' wharf frontage
- 177,000-square foot warehouse for high value commodities such as paper, steel, and lumber
- Radio Island is located across Newport River from Port and includes 150 acres suitable for port industrial development (with municipal water and sewer)



## Legislative Requirements

The following items were specifically requested to be included in the study:

- Assess highway and rail infrastructure improvements or service scenarios that improve access and throughput to the Global TransPark and North Carolina State Port Authority, Morehead City Terminal, addressing at a minimum, the relative benefits and costs of each highway or rail project, as well as the impacts on freight movements for the highway system and connecting rail corridors.

- As part of this assessment, the department shall, in collaboration with the NCRR, evaluate alternate routes to improve rail capacity and access to the Morehead City terminal and Radio Island site.

## Action Plan

To meet these requirements, the NCDOT Rail Division will manage the completion of the study and has contracted the private engineering firm of AECOM to provide the technical assistance to complete the analysis.





### Study Methodology

Highway and rail infrastructure investments that improve the efficiency of the port and Radio Island via increased terminal capacity for loading and unloading would improve the economic value of the Port and potentially generate spillover benefits for GTP or other assets connected to the port through trade and commerce. Current NS operation on the NCRR line requires assembly of trains on the main track; numerous grade crossings along and including US 70 in Morehead City are blocked by train switching and set-outs that cause highway delays of up to 20 minutes of vehicular delay per train movement. Rail operation practices will be analyzed to seek benefits to the rail/road conflicts.

Upgrades to the existing track alignment and the construction of an off-site rail yard to build and break down trains will be considered. The previously identified best relocation alternative corridor was south of Havelock, continuing eastward along the southern boundary of the Croatan National Forest and across the Intracoastal Waterway where it would head southward around the Beaufort-Morehead City Municipal Airport and across Gallant's Channel to Radio Island. This alternative would require mitigating potential environmental impacts.

The 2012 completion of the rail spur at GTP provided a rail connection to the port from the GTP via NCRR. Due to the market potential associated with this new physical connection and other initiatives that leverage the combination of these two assets, a task has been developed to coordinate with the GTP component (described separately).

Conceptual alternatives for improving rail/traffic interactions in MHC proper will also be investigated and coordinated with NCRR, NS, NCDOT Division of Highways, and Morehead City.

### Other Issues Being Studied

Evaluation of the access to the MHC Port from the east via Radio Island will be addressed. This access was studied by the North Carolina Railroad Company in the *NCRR – Track Relocation Feasibility Study*.

The study will be reviewed with intent to incorporate the beneficial study findings, and determine if the current situation results in altered conclusions. In conjunction with this investigation, coordination with NCDOT Division of Highways regarding the current Gallant's Channel bridge project has been made. Issues with the currently proposed US 70 Gallants Channel highway bridge remain to be resolved if appropriate, dependant on conceptual railroad alignments. Also, a current feasibility study is underway at NCDOT that investigates improvements to US 70 in Morehead City to decrease traffic congestion and improve traffic operations. This study is being coordinated with the SB-402 studies, and concepts revealed in coordination with NCRR are being investigated.

Data on freight flows will be shared with other studies that are underway at NCDOT, such as the *NC Rail Plan*, and will be integrated into the information collection.

This study will also share information coming out of the stakeholder workshops held as part of the GTP task. While there are a few planned workshops to be held independently as part of this component, it is anticipated that marine port access at Morehead City may also be a point of discussion in the workshops set up to explore market options for GTP as well, and this information will be distributed to inform this task.



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## Overall Study Process

- Validate and incorporate information from prior studies
- Preliminary assessment of infrastructure (on-site and facility access) and service deficiencies or opportunities.
- Potential demand revealed by initial data collection and analysis
- Evaluate the potential for freight markets and evaluate market scenarios
- Stakeholder workshops
- Types of firms and existing employers that might use the rail service
- Freight flows
- Identify candidate investments and estimate cost
- Determine what it would take to realize the market opportunities identified in the market scenarios. Conceptual projects/alignments chosen for evaluation.
- Estimate return on investment and identify beneficiaries
- Evaluate the investments for their economic impact return and BCA ratio to ensure that the recommendations are built on solid analysis and to inform the programming of candidate recommendations
- Assess implementation needs: agreements and funding
- The implementation discussion will consider any agreements with other railroads or institutional arrangements needed to advance the project if its return on investment is favorable.
- Developing the funding approach to implement infrastructure projects often requires coordination among numerous partners to achieve the long-term environmental, economic, and quality-of-life goals that are the basis for sustainability. The economic analysis of beneficiaries can be used to help motivate the funding discussion to highlighting what each party to the transaction receives from the project.
- Address the applicability of the study findings for future project evaluation and delivery
- Provide Draft and Final Report

Private engineering firm assistance will be utilized throughout this process.

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## Study Progress

The following items have been completed to date:

### Data Collection

The steering committee has researched previous planning studies and reports for inclusion in the study. *(See list of Prior Studies below)* The goal of this step is to enhance the understanding of the interaction between this project and other planning work, and to maximize the efficiency of the work being performed. Data collection efforts have included coordination with stakeholders, regulators and potential customers. A listing of data collection efforts to date includes the following:

- A document search was performed to obtain previous planning work to understand the project history, and to maximize the efficiency of the study process.
- The team has coordinated with the US DOT Surface Transportation Board to determine applicable requirements.
- A planning review of proposed alternatives has been performed.
- Coordinated with Norfolk Southern staff regarding potential for intermodal operations.
- Coordinated with stakeholders to determine opportunities that the project might bring.

The North Carolina State Ports Authority staff has developed a number of project scenarios to identify potential infrastructure requirements that will facilitate growth in business at the ports. These projects include areas called out in SB 402.

- Roll On/Roll Off Facility to handle military and vehicular cargo
- Nascent Container Operations
- Barge Handling Facility
- Intermodal capacity and capability improvements
- Natural Gas and Liquid bulk facilities
- Support Facility – potential off-shore wind farm
- Vessel Shore Power Connections
- Improved on-port rail and truck accommodations and access

The study team will use this data in conjunction with market analysis from the study to determine which projects offer the most advantageous options

for economic growth, job creation, reduced costs and favorable return on investment. This will aid in providing viable economic development options to the legislature as well as provide the Ports and other state agencies ideas, options and direction for future economic development across the state.

### Prior Studies

Several studies have been performed in the Morehead City area that will inform the process:

- ***NCRR – Track Relocation Feasibility Study***
- ***Northern Carteret Bypass Feasibility Study***
- ***Radio Island Traffic Assessment***
- ***R110 Carteret Rail Road Bridge at NC Port In Morehead City***

The following are related studies that may provide useful information relevant to MHC:

- ***NC Maritime Strategy***
- ***Master Plan for Global TransPark***
- ***The Relationship Between Seaports and the Intermodal Hinterland in Light of Global Supply Chains***
- ***Economic and Market Analysis for an Inland Intermodal Port, at Prichard, WV***
- ***Western North Carolina Inland Port Feasibility Study***
- ***Statewide Logistics Plan for North Carolina***
- ***Seven Portals Study***

### Study Schedule

The deliverables for this study component will be completed in accordance with the schedule below:

4/7/14	Validate and Incorporate Prior Studies
4/30/14	Data Collection, Workshops, and Forecasting Model Inputs
6/30/14	Market Scenarios
8/31/14	Identify Infrastructure Improvements and Estimate Cost
10/31/14	Economic Impact and Benefit Cost Assessment
11/14/14	Draft Report
12/15/14	Final Report



*Spirit shipping fuselage from Morehead City*



# Wallace to Castle Hayne Component

## Introduction

*The Wallace to Castle Hayne Rail Line Reactivation Study (W2CH) is assessing the economic feasibility of restoring rail service along a section of track right-of-way located in Pender County, generally parallel to I-40 and US-117. The study will consider the potential demand for use of the corridor, the cost of restoring the connection, market potential of surrounding sites, potential upgrades, return-on-investment and the overall benefits of the project. This project will also evaluate improved infrastructure access to the Port of Wilmington.*

*NCDOT acquired the Wallace to Castle Hayne rail right-of-way from CSXT in 1994, and has been a steward of the corridor, maintaining the property for the possibility of service restoration since that time. Restoration of W2CH is supported by military interests, local and state agricultural and economic development interests and the Port of Wilmington. While not specifically called out by SB-402, the Port of Wilmington analysis is being included in the W2CH Component as an essential terminus, end-user, and market driver.*

### Wallace to Castle Hayne at a Glance

- 27-mile section of track between Wallace and Castle Hayne abandoned by CSX in 1986 and tracks removed
- Reactivation of W2CH would shorten north/south rail traffic distance to Wilmington by approximately 60 miles.
- Would reopen rail access to Pender County industrial sites along W2CH

#### Port of Wilmington:

- Class I rail service to Wilmington provided by CSXT
- Direct rail service to Port of Wilmington provided by WTRY
- Terminal facilities serving container, bulk and breakbulk operations.
- Foreign Trade Zone 66
- 42-foot navigational channel
- Modern transit and warehouse facilities
- State-of-the-art container cranes and support equipment
- Nine berths with 6,768' of wharf frontage
- Nearly 1 million sq.ft. of prime covered and sprinklered storage
- 100+ acres of paved open storage





## Legislative Requirements

The following items were specifically requested to be included in the study and are being progressed by Parsons Brinkerhoff and NCDOT:

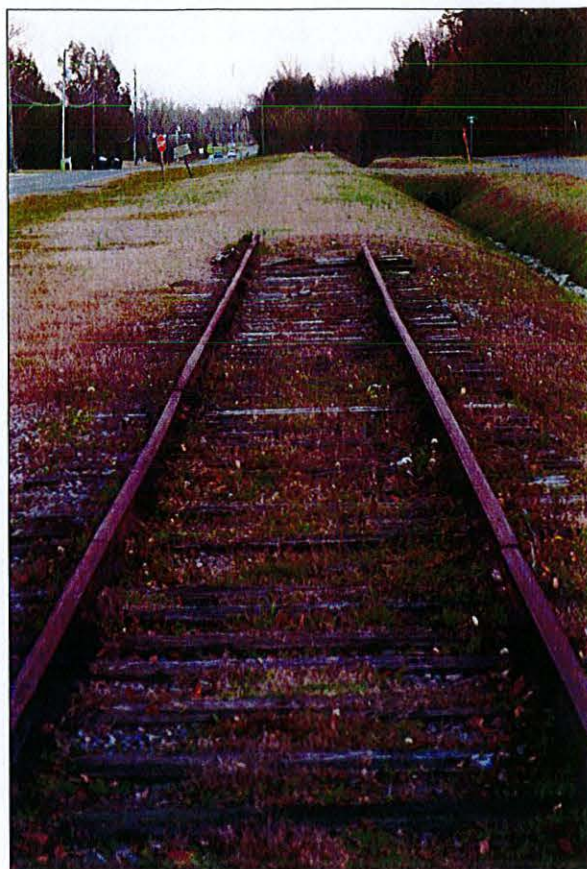
- Project scope and development time line
- Assessment of technical feasibility, including traffic flow analysis and railroad capacity modeling, with CSXT input and validation
- Service models addressing operating scenarios over the line segment and connections to other rail lines, as well as rate implications, with CSXT input and validation
- Preliminary engineering, construction, maintenance, and operating cost, with review by CSXT
- Service and market demand for rail service, identifying projected utilization by industry and impacts to alternate rail routes
- Strategic value assessment, including return on investment, direct financial return to the state, and state, regional, and local economic impact
- Strategic value of the corridor to military installations and as a connection to national and regional railroad corridors
- Inventory of commercial and industrial sites or terminals benefiting from restored rail service or improved connectivity
- Alternatives for project financing

## Action Plan

To meet these requirements, the NCDOT Rail Division will manage the completion of the study and has contracted the private engineering firm of Parsons Brinkerhoff to provide the technical assistance to complete the analysis.

### Study Methodology

This study investigates the W2CH rail line, but also will consider railroad infrastructure improvements to the Port of Wilmington and potential impacts of these improvements to the highway network. While not specifically called out by SB-402, the Port of Wilmington analysis is being included in the W2CH Component as an essential terminus, end-user, and market driver.



### Private Engineering Firm Tasks

The following provides the general scope of the private engineering firm assigned to the project:

- Validate and incorporate information from prior studies
- Preliminary assessment of infrastructure and service opportunities
- Data collection from workshops, industry outreach, stakeholder engagement and forecast model inputs
- Identify need, develop project scope and time line for environmental, design, and construction
- Assess market(s) impacted and potential demand
- Assess technical feasibility
- Estimate the preconstruction costs, construction costs, maintenance costs and operating costs
- Perform strategic value assessment including return on investment, direct financial return to the state, benefits to state, and economic impact to both region and the state
- Identify alternatives for project financing
- Draft and final report



### CSXT Tasks

- Assist in analysis and validation of capacity and flow modeling, operational scenarios, as well as costs of construction, operation, and maintenance.
- Access to CSX property in conjunction with this study.
- Data provision in support of these technical studies.

### Other Issues Being Studied

Concepts for access to the Port of Wilmington that would reduce conflicts in Wilmington proper are being investigated. These include bridge options. Likewise, improved vehicular access to the port is being studied and coordinated with ongoing NCDOT Division of Highways concepts.



### Study Progress

The following items have been completed to date:

#### Data Collection

The steering committee has researched previous planning studies and reports for inclusion in the study. (See list of Prior Studies below) The goal of this step is to enhance the understanding of the interaction between this project and other planning work, and to maximize the efficiency of the work being performed.

#### Overall Study Process

Significant line data has already been assembled. In addition, Parsons Brinckerhoff is currently obtaining additional data including, but not limited to:

- Railroad operating and engineering data
- Parcel data and ownership information
- Historical railroad data and route characteristics

A stakeholder interview plan has been finalized, with

stakeholder interviews to be scheduled beginning in early March.

Commodity Flow Data is being obtained from AECOM as part of the State Rail Plan development and integration with the EIS studies, and this will be provided to Parsons Brinckerhoff. This data should be available in March.

During the study, the team also anticipates conducting one or more site visits to verify existing conditions and begin the process of assessing the technical feasibility of restoring the Wallace to Castle Hayne corridor.

### Legislative and Legal Review

The team has identified applicable Federal and State regulations that could affect the study. This includes contact with the Federal Surface Transportation Board (STB) regarding implications of restoration of service.

### Prior Studies

Prior studies that will inform the Wallace to Castle Hayne study include:

- *Southeast Rail Environmental Screening*
- *Department of Defense Report to Congress on Projected Requirements for Military Throughput at Strategic Seaports*
- *Restoration of the Wallace to Castle Hayne Rail Corridor and Associated Port/Rail Improvements*

The following are related studies that may contain information useful to the component study:

- *Statewide Logistics Plan for North Carolina*
- *Seven Portals Study*
- *NC Maritime Strategy*

### Study Schedule

The deliverables for the study will be completed in accordance with the schedule below:

3/14/14	Market Demand
7/31/14	Technical Feasibility/Operating Plan
7/31/14	Cost Estimates
10/31/14	Assessment of Funding Alternatives
10/31/14	Strategic Value Assessment
11/14/14	Draft Report
12/31/14	Final Report