
Data Collection Plan

North Carolina Department of Transportation Strategic Transportation Corridor Vision Plans

Corridor P: Future I-42

Wake County to Port of Morehead City

Corridor S: Future I-795

Wilson County to I-40 in Sampson County

Corridor X: Jacksonville to Greenville (US 258, NC 11, US 13)

US 17 in Onslow County to US 64E in Edgecombe County

Updated: March 16, 2020

March 2020





Table of Contents

Chapter	Page
Table of Contents.....	i
1. Introduction.....	1
2. Data Analysis.....	1
3. Data to be Collected.....	1
Appendices	
Appendix A.....	9
List of Tables	
Table 1. Data Collection Requirements	3
Table A-1. Additional Information on Mobility Conditions, Vision and Goals, and Performance Measures	9
Table A-2. Base Map, Human and Environmental GIS Layers.....	12



1. Introduction

In 2015, NCDOT identified a network of key multimodal corridors called Strategic Transportation Corridors (STC) to support smart planning, help set long-term investment decisions, and ensure that North Carolina’s economic prosperity goals are achieved. The STC is intended to promote transportation system connectivity, provide high levels of mobility, and improve access to important state and regional activity centers throughout the state. A key element in the advancement of the STCs is the development of corridor master plans, with identification of a high-level corridor mobility vision and associated corridor improvement action strategies.

The purpose of the master plan is to identify a mobility vision and broad improvement strategies for an entire corridor, guide improvements and development in a manner that defines a long-term vision and performance level for the corridor, and help protect the corridor’s key functions as defined in the corridor profiles. NCDOT has initiated the development of master plans for STC P, S, and X. Corridor P – Future I-42/US 70E/NCRR runs from I-440 in Wake County to the Port of Morehead City, Corridor S – I-795/US 117 runs from I-95 in Wilson County to I-40 in Sampson County, and Corridor X – US 258/NC 11/US 13 runs from US 17 in Onslow County to US 64 in Edgecombe County.

Accurate data will serve as the foundation for the master plans. The information available to define the corridors and its needs depends on the availability of complete, current, and reliable data. The Data Collection Plan (DCP) will identify data that is available, how it is to be collected, and the application of the data for corridors P, S, and X. The DCP is a snapshot of the data needs envisioned for corridors P, S, and X. As the development of the master plans progress, the data will be vetted as to its application for the master planning efforts, and additional data and/or sources may be identified.

2. Data Analysis

The data collected for corridors P, S, and X will be used for identification and evaluation of existing corridor conditions, identification and evaluation of future corridor conditions, and evaluation of existing and future freight activity/demands on the corridor including origins and destinations, routes, modes, and commodity types.

The analysis of conditions and performance of the master plans will include an analysis of physical, operational, and regulatory conditions and performance of freight transportation systems in the corridor, including identification of bottlenecks that prevent smooth freight flow. This analysis will identify capacity issues resulting from physical constraints, operational inefficiencies, and other corridor concerns. The analysis will focus on the mobility features in the corridors and services, such as capacity; it will not include assessing asset conditions, such as pavement or structure conditions.

3. Data to be Collected

The data will be used to identify the current infrastructure and future improvements in the corridor and to evaluate the conditions in the corridor. Collection of “Transportation Facilities Inventory” data will allow for the evaluation of the current infrastructure in the corridor. “Transportation Plans” will identify anticipated improvements and expansion of the transportation system. The remaining data sets will be used to assess the conditions in the corridor as well as evaluate recommendations during the corridor master plan development. Data sources included in Table 1: Data Collection Requirements along with stakeholder input will be used for the evaluation of existing and future travel demand and major travel markets along the corridor as well as person and freight mobility challenges and opportunities. The data gathered will also be used to develop and evaluate alternative multimodal passenger and freight mobility concepts.



If a website link is provided in the table, this data may be downloaded directly from the site referenced. Otherwise, the data will be obtained through coordination with the entity listed. The table also identifies the application, or how the data will be utilized toward meeting the objectives of the master planning efforts. Finally, the table includes a cursory assessment of the information provided by the data source.

One drawback to infrastructure data is that it is not real-time. Condition information can be affected by natural causes, economic conditions, and route changes. Data about lower-priority infrastructure is likely to suffer from less frequent updates resulting in less accurate information. In addition, each data source for a transportation mode has its own strengths and limitations. This may be compounded by some local and regional data that may be inconsistent along the corridor.

Table 1. Data Collection Requirements

Data Elements	Data Sources	Download/Means of Collection	Data Date	Date Obtained	Application	Assessment
Highway Assets Inventory	NCDOT GIS and Statewide Travel Demand Model	https://gis11.services.ncdot.gov/arcgis/rest/services/NCDOT_StateMaintainedRoadsQtr/MapServer Statewide Travel Demand Model Network http://ncdot.maps.arcgis.com/home/webmap/viewer.html?layers=7367c33b80f346178ea5e158ec4d5b68			Transportation Facilities Inventory Maps	Roadway attributes including: number of lanes, lane width, mileage, functional classification, facility capacity, railroad crossings, and bridges.
Bicycle Inventory	NCDOT Division of Bicycle and Pedestrian Transportation	https://connect.ncdot.gov/projects/bikeped/pages/pbin.aspx			Transportation Facilities Inventory Maps	Location and attributes of existing bicycle and pedestrian facilities.
Transit Inventory	Local and Regional transit providers	Data Request			Transportation Facilities Inventory Maps	Transit agencies would be able to provide transit routes and other transit infrastructure in their area.
Railroad Inventory	NCDOT Rail Division and Federal Railroad Administration	http://dotw-xfer01.dot.state.nc.us/gisdot/DOTRailroad/NC_Rail_Track_SHP.zip and https://safetydata.fra.dot.gov/OfficeofSafety/publicsite/crossing/crossing.aspx			Transportation Facilities Inventory Maps	Location of existing at-grade rail crossing, public and private rail lines, including short line and improvements from grant funding.
Airport Inventory	NCDOT Division of Aviation	https://www.ncdot.gov/divisions/aviation/Pages/nc-airports.aspx			Transportation Facilities Inventory Maps	Location of existing airports and their expansion plans.
Ports Inventory	North Carolina Ports Authority	Data Request			Transportation Facilities Inventory Maps	Location of existing ports and their expansion plans.
Mobility Conditions	See Appendix A	See Appendix A: Additional Information on Mobility Conditions, Vision and Goals, and Performance Measures			Study Area Maps	Primary Activity Centers and mobility conditions including but not limited to key employers, foreign/free trade zones, major tourist destinations, hospitals, universities, colleges, trauma centers, K-12 schools, public lands, and high-profile projects and studies.

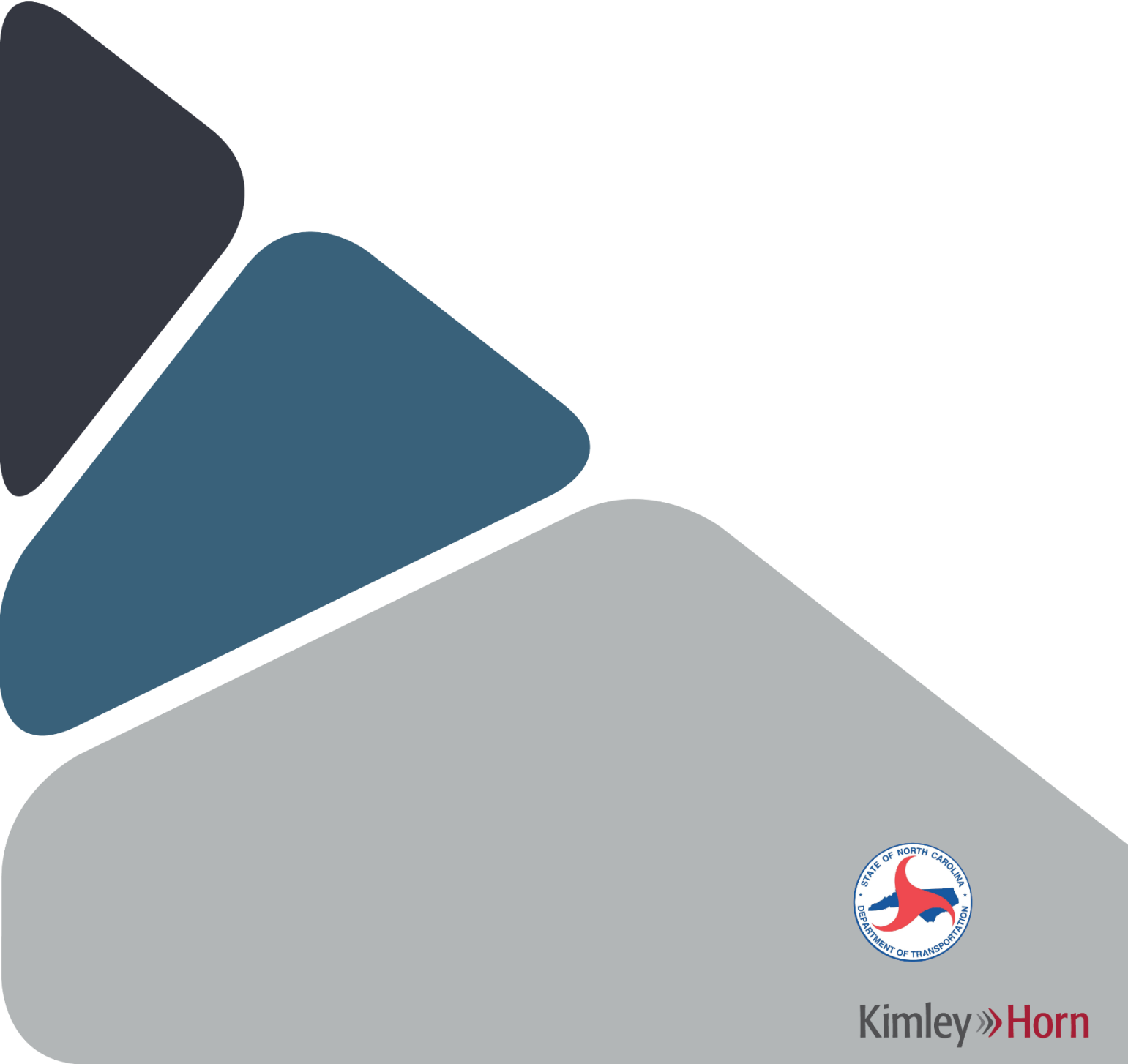
Data Elements	Data Sources	Download/Means of Collection	Data Date	Date Obtained	Application	Assessment
Transportation Plans	NCDOT TPD, MPOs, NCDOT Divisions, Local Governments	CTPs - https://connect.ncdot.gov/projects/planning/Pages/Comprehensive-Transportation-Plans.aspx MTPs – Individual MPO websites Local Projects – Data Request Division Projects – Data Request			Identify planned transportation improvements and adopted recommendations (mapped)	MTPs and CTPs include projects to meet future transportation needs; MTIPs identify projects that are anticipated to be programmed. Consistency of the projects will be evaluated.
Statewide Bike/Ped Plan	WalkBikeNC	NC Bike Route Recommendations: https://www.ncdot.gov/bikeped/walkbikenc/pictures/bikeroutes.pdf Program Recommendations: https://www.ncdot.gov/bikeped/walkbikenc/pictures/ChapterSeven.pdf			Identify planned bicycle and pedestrian improvements	Statewide bicycle/pedestrian plans identify existing, recommended improvements, and new facilities to handle future bicycle and pedestrian needs.
Statewide Transit Plan	NCDOT Public Transportation Division	https://www.ncdot.gov/divisions/public-transit/statewide-strategic-plan/Pages/statewide-strategic-plan-documents.aspx	2/18/2019		Identify planned transit improvements	Statewide transit plans identify existing, recommended improvements, and new facilities to handle future public transportation needs.
State Transportation Improvement Program	NCDOT – Division of Planning and Programming	https://connect.ncdot.gov/projects/planning/Pages/State-Transportation-Improvement-Program.aspx			Identify projects programmed in the STIP in a timeline table	STIP identify projects that are funded. Consistency of planned and programmed projects will be evaluated.
Feasibility Studies	NCDOT – Feasibility Studies Unit	Data Request			Identify recommendations from completed feasibility studies along the corridor	Feasibility Studies provide a more expansive analysis of areas along the corridor.

Data Elements	Data Sources	Download/Means of Collection	Data Date	Date Obtained	Application	Assessment
Traffic Forecasting Data	NCDOT ArcGIS Online Portal: GO!NC	https://www.arcgis.com/home/webmap/viewer.html?webmap=dd4fe2927b924bbb81cbd5d9075108c1			Identify and evaluate the forecasted future traffic along the STC corridors	Traffic forecasting data is organized by the age of the forecast.
Bicycle and Pedestrian Plans	NCDOT Integrated Transportation Division	https://connect.ncdot.gov/projects/bikeped/pages/pbin.aspx			Identify planned bicycle and pedestrian improvements	Local bicycle/pedestrian plans and regional bicycle plans identify existing, recommended improvements, and new facilities to handle future bicycle and pedestrian needs.
Performance Measures	Capital Area MPO, Greenville MPO, Goldsboro MPO, Jacksonville MPO, New Bern Area MPO, (See Appendix A)	See Appendix A: Additional Information on Traffic Generators, Vision and Goals, and Performance Measures			To produce a unified evaluation system for the STC network, it is necessary to understand what measures (if any) are currently being used for NCDOT and MPOs along the corridor.	Performance measures used by NCDOT and MPOs to evaluate the transportation system's performance.
Local and Regional Visions	The same sources as are listed for performance measures, plus vision and goals from regional planning products produced by RPOs in the area: Down East RPO, Eastern Carolina RPO, Mid-Carolina RPO, Mid-East RPO, and Upper Coastal Plain RPO.	See Appendix A: Additional Information on Land Use, Vision and Goals, and Performance Measures			To produce a unified evaluation system for the STC network, it is necessary to understand what measures (if any) are currently being used for NCDOT, MPOs, and RPOs along the corridor.	Transportation plans include goals and visions for the planning area and the transportation system.
LEP and Title VI Data	2011-2015 America Community Survey Data	Links to ArcGIS data layers used for CTP development are available at: https://connect.ncdot.gov/projects/planning/Pages/TransPlanManualCTP.aspx			Identify Title VI and other protected populations that need to be identified and accounted for in the Stakeholder Involvement Process and other aspects of the planning process.	Specific protected populations are mapped to the census block group level.

Data Elements	Data Sources	Download/Means of Collection	Data Date	Date Obtained	Application	Assessment
Resiliency Model	NCDOT Traveler Information Management System (TIMS)	https://tims.ncdot.gov/tims/		2/24/19	Identify historical flood points	Major accidents, construction or maintenance projects, and natural disasters that affect road conditions.
Travel Markets	Truck commodity flows can be converted to less-than truckload (LTL) and truckload (TL) truck volumes. CFS micro data and truck count factors from existing TDMs in the corridor can be used to estimate truck volumes. The CFS micro database, includes shipment weight, distance, commodity code, origin, destination, and mode is used to The CFS micro data analysis results in the following shipment categories: a. Parcel shipments, b. LTL shipments: shipment weight between 150 and 10,000 lbs., c. Partial truckload shipments, d. Full truckload shipments: shipment weight > 30,000 lbs.	NCDOT Statewide Freight Flows Access Tool includes 2045 forecast flows. https://public.tableau.com/profile/cambridge.systematics#!/vizhome/NorthCarolinaFreightFlowTool/Story1	3/15/2018		Identify freight flows in the corridor	Current and forecasted truck trips in the corridor. Any consideration of rail capacity forecasting should be discussed. As a rule, Class 1 railroads oppose public sector attempts to estimate or forecast capacity on their assets.
Mobility Conditions (Baseline and Design Year)	NCDOT GIS, TPD	Data Request/FTS https://services.arcgis.com/NuWFvHYDMVmmxMeM/ArcGIS/rest/services/NCDOT_AADT_Stations/FeatureServer			To evaluate the current transportation system, as well as any recommended improvements	Existing traffic data for primary facilities along the corridor that have been collected or prepared by NCDOT.
Travel Demand Models	NCDOT TPD	Data Request/FTS			To evaluate the current transportation system, as well as any recommended improvements	Current statewide and regional (MPO) travel demand model sets in TransCAD files that model the primary transportation system.

Data Elements	Data Sources	Download/Means of Collection	Data Date	Date Obtained	Application	Assessment
Freight Flows	NC Multimodal Statewide Freight Plan - created a disaggregated Freight Analysis Framework Ver. 4 (FAF-4) dataset that combines several other sources for rail and air cargo flows. According to the Freight Flow Analysis Report, a tool was developed in MS Access Database. It does not say how the tool was made available to NCDOT.	https://connect.ncdot.gov/projects/planning/Statewide-Freight-Plan/Pages/default.aspx			Identify freight flows in the corridor	Freight flow information from state or regional freight plans including: Inbound flows to locations across/within can be visualized as two components of the economy in the corridor: 1) Consumer goods (retail) and 2) Business process inputs (manufacturing & construction). Outbound flows represent domestic and international export trade supporting the economy in the corridor. Through flows or overhead freight have no origin or destination within the corridor that may contribute to congestion and associated externalities while creating no value to the local economy.
Additional GIS Data Layers	NCDOT TPD	See Appendix A: Base Map, Human and Environmental GIS Layers			Identify resources that may be in the study corridor	GIS data layers for various resources that is used for base maps and developing transportation plans.

Appendices



Appendix A. Expanded Data Tables

Table A-1. Additional Information on Traffic Generators, Vision and Goals, and Performance Measures

Item	Sub-Item	Geography	Link	Data Date	Date Obtained	Note
Traffic Generators	Foreign/Free Trade Zones	State	https://www.nccommerce.com/grants-incentives/tax-other-cost-savings#foreign-trade-zones-(ftz)			
Traffic Generators	High Profile Projects & Studies	State	https://gis11.services.ncdot.gov/arcgis/rest/services/NCDOT_STIP/MapServer/0 and https://gis11.services.ncdot.gov/arcgis/rest/services/NCDOT_STIP/MapServer/1			
Traffic Generators	Major companies (available by county, sorted by revenue)	State	https://edpnc.com/relocate-or-expand/available-sites-location-data/			
Traffic Generators	Tourist attractions	State	https://www.visitnc.com/things-to-do			Sort by city or region to find nearby attractions
Performance Measures	National Measures	National	https://www.fhwa.dot.gov/tpm/ and https://www.govinfo.gov/content/pkg/FR-2017-01-18/pdf/2017-00681.pdf			
Performance Measures	Comprehensive State Rail Plan	State	https://connect.ncdot.gov/resources/Rail-Division-Resources/Documents/2015%20Comprehensive%20State%20Rail%20Plan-%20Full%20Report.pdf			See page 72/284 for passenger rail performance evaluation metrics. Freight performance ties into NCDOT mission and goals, and input from public and private stakeholders, but is not evaluated in this document.
Performance Measures	NC Association of Rural Planning Organizations	State	http://www.ncarpo.org/uploads/1/3/8/1/13819061/updated_-_ncarpo_oct_2017_pm_overview.pdf			Presentation by Daryl Vreeland on performance management given to NC Association of RPOs (October 2017)
Performance Measures	NCDOT Statewide Performance Measures	State	https://www.ncdot.gov/about-us/our-mission/Documents/2018-annual-report.pdf and http://crtpo.org/PDFs/PerformanceBasedPlanning/NCDOT_Baseline_Performance_Period_Report.pdf and http://crtpo.org/PDFs/PerformanceBasedPlanning/NCDOT_Baseline_Performance_Period_Report.pdf and https://www.ncdot.gov/about-us/our-mission/Performance/Pages/delivery-rate.aspx			
Performance Measures	NC Statewide Multimodal Freight Plan	State	https://connect.ncdot.gov/projects/planning/Statewide-Freight-Plan/Documents/NCDOT_SWFrtPln_FinalReport_180209.pdf			See page 50/104 for freight rail performance measures

Item	Sub-Item	Geography	Link	Data Date	Date Obtained	Note
Performance Measures	Capital Area MPO	MPO	https://www.campo-nc.us/programs-studies/transportation-performance-measures			
Performance Measures	Goldsboro MPO	MPO	http://www.goldsboronc.gov/wp-content/uploads/Goldsboro_2040_%20MTP_Update_Adopted_reduced.pdf			See page 3-12
Performance Measures	Greenville MPO	MPO	https://www.greenvillenc.gov/home/showdocument?id=18773 and https://www.greenvillenc.gov/home/showdocument?id=16543 and https://www.greenvillenc.gov/Home/ShowDocument?id=15406			See Chapter 6 See page 59 See page 12
Performance Measures	Jacksonville MPO	MPO	https://jumpe-nc.org/wp-content/uploads/2017/10/JUMPO-FY-18-UPWP-1.pdf			See page 9
Performance Measures	New Bern Area MPO	MPO	http://files.www.nbamapo.org/documents/NBAMPO_MTP_2.24.16.pdf			See page 8
Vision & Goals	National Goals	National	https://www.fhwa.dot.gov/tpm/about/goals.cfm			
Vision & Goals	NCDOT Mission & Goals	State	https://www.ncdot.gov/about-us/our-mission/Pages/goals-vision.aspx			
Vision & Goals	Capital Area MPO	MPO	https://www.campo-nc.us/transportation-plan/2045-metropolitan-transportation-plan			See 2045 MTP page 17
Vision & Goals	Goldsboro MPO	MPO	http://www.goldsboronc.gov/wp-content/uploads/Goldsboro_2040_%20MTP_Update_Adopted_reduced.pdf			See Chapter 1
Vision & Goals	Greenville MPO	MPO	https://www.greenvillenc.gov/home/showdocument?id=18773			See Chapter 1

Item	Sub-Item	Geography	Link	Data Date	Date Obtained	Note
Vision & Goals	Jacksonville MPO	MPO	http://jumpo-nc.org/goal-objectives/			
Vision & Goals	New Bern Area MPO	MPO	http://files.www.nbampo.org/documents/Vision_Statement.pdf			
Vision & Goals	Down East RPO	RPO	http://www.eccog.org/derpo/			
Vision & Goals	Eastern Carolina RPO	RPO	http://www.eccog.org/ecrpo/#			
Vision & Goals	Mid-Carolina RPO	RPO	http://www.mccog.org/regional_transportation.asp			
Vision & Goals	Mid-East RPO	RPO	http://www.mideastcom.org/demographics.htm			
Vision & Goals	Upper Coastal Plain RPO	RPO	http://ucprpo.org/			

Table A-2. Base Map, Human and Environmental GIS Layers

Data Elements	Data Sources	Means of Collection/Web Link	Data Date	Date Obtained	Application	Assessment
County Boundaries	NCDOT	http://dotw-xfer01.dot.state.nc.us/gisdot/DistDOTData-Current/State/shpm/CountyBoundaryShoreline.zip			Identify resources that may be in the study corridor and used for mapping	GIS data layer used for developing transportation plans.
MPO Boundaries	NCDOT	http://dotw-xfer01.dot.state.nc.us/GISdot/DistDOTData-Current/State/shpe/MPO_RPO_BOUNDARY.zip	2017		Identify resources that may be in the study corridor and used for mapping	GIS data layer used for developing transportation plans.
Municipal Boundaries	NCDOT	http://dotw-xfer01.dot.state.nc.us/gisdot/DistDOTData-Current/State/shpe/MunicipalBoundaries.zip	2017		Identify resources that may be in the study corridor and used for mapping	GIS data layer used for developing transportation plans.
Hurricane Evacuation Routes	NC One Map	http://data.nconemap.gov/downloads/vector/her.zip			Identify resources that may be in the study corridor and used for mapping	GIS data layer used for developing transportation plans and for NEPA/SEPA analysis.
Rivers and Streams	NCDOT	https://data-ncdenr.opendata.arcgis.com/datasets/surface-water-classifications			Identify resources that may be in the study corridor and used for mapping	GIS data layer used for developing transportation plans and for NEPA/SEPA analysis.
Scenic Byways	NCDOT	https://www.arcgis.com/home/webmap/viewer.html?webmap=f3605dcd4af64a09aec7932b7625082e	Last Update 7/17/19		Identify resources that may be in the study corridor and used for mapping	GIS data layer used for developing transportation plans and for NEPA/SEPA analysis.
State Parks	NCDOT	https://ncnhde.natureserve.org/content/data-download	Last Update June 2013 by NCDENR DPR. Much of this information is also included in the NCNHP Managed Areas layer.		Identify resources that may be in the study corridor and used for mapping	GIS data layer used for developing transportation plans and for NEPA/SEPA analysis.

Data Elements	Data Sources	Means of Collection/Web Link	Data Date	Date Obtained	Application	Assessment
Primary Activity Centers		Data request			Identify resources that may be in the study corridor and used for mapping	
Colleges and Universities	NCDOT	http://data.nconemap.gov/downloads/vector/colluniv.zip	Last Update 9/11/07 by Techni Graphic Systems.		Identify resources that may be in the study corridor and used for mapping	GIS data layer used for developing transportation plans and for NEPA/SEPA analysis.
Hospitals	NCDOT	http://data.nconemap.gov/downloads/vector/hls.zip	Last Update 9/20/08 by Techni Graphic Systems		Identify resources that may be in the study corridor and used for mapping	GIS data layer used for developing transportation plans and for NEPA/SEPA analysis.
Schools- Non-Public	NCDOT	http://data.nconemap.gov/downloads/vector/schlnp.zip	Last Update 9/12/13 by NCCGIA		Identify resources that may be in the study corridor and used for mapping	GIS data layer used for developing transportation plans and for NEPA/SEPA analysis.
Schools- Public	NCDOT	http://data.nconemap.gov/downloads/vector/schlpl.zip	Last Update 8/6/12 by NCCGIA		Identify resources that may be in the study corridor and used for mapping	GIS data layer used for developing transportation plans and for NEPA/SEPA analysis.
AADTs/Traffic Volumes	NCDOT	https://connect.ncdot.gov/resources/State-Mapping/Documents/ncdot-2015-traffic-segments.zip and https://connect.ncdot.gov/resources/State-Mapping/Pages/Traffic-Volume-Maps.aspx	2015		Identify resources that may be in the study corridor and used for mapping	GIS data layer used for developing transportation plans and for NEPA/SEPA analysis.
Bicycle Routes	NCDOT	http://dotw-xfer01.dot.state.nc.us/GISdot/DOTBikeMaps/Bikeroutes_shp.zip	Last Update 05/12/13 by NCDOT and ITRE		Identify resources that may be in the study corridor and used for mapping	GIS data layer used for developing transportation plans and for NEPA/SEPA analysis.
Ferries	NCDOT	https://services.arcgis.com/NuWFvHYDMVmmxMeM/arcgis/rest/services/NCDOT_FerryRoutes/FeatureServer	Last Update 8/12/15		Identify resources that may be in the study corridor and used for mapping	GIS data layer used for developing transportation plans and for NEPA/SEPA analysis.

Data Elements	Data Sources	Means of Collection/Web Link	Data Date	Date Obtained	Application	Assessment
National Highway System (National Highway Planning Network)	FHWA	https://maps3.arcgisonline.com/ArcGIS/rest/services/A-16/FHWA_National_Highway_Planning_Network/MapServer	2013		Identify resources that may be in the study corridor and used for mapping	GIS data layer used for developing transportation plans and for NEPA/SEPA analysis.
Ports	Ports Authority	Data request			Identify resources that may be in the study corridor and used for mapping	
Railroads	NCDOT	http://dotw-xfer01.dot.state.nc.us/gisdot/DOTRailroad/NC_Rail_Track_SHP.zip	Quarterly updated by NCDOT		Identify resources that may be in the study corridor and used for mapping	GIS data layer used for developing transportation plans and for NEPA/SEPA analysis.
Regional Trails	NCDOT	NCDOT TPD Environmental Layers Spreadsheet with links to GIS data	Last update June 2013 by NCDENR DPR		Identify resources that may be in the study corridor and used for mapping	GIS data layer used for developing transportation plans and for NEPA/SEPA analysis.
Roadways	NCDOT	NCDOT TPD Environmental Layers Spreadsheet with links to GIS data			Identify resources that may be in the study corridor and used for mapping	GIS data layer used for developing transportation plans and for NEPA/SEPA analysis.
Strategic Highway Network	FHWA	https://www.arcgis.com/home/webmap/viewer.html?webmap=4593dce8cca34348ad2a112385c48eac	Last Update 7/8/2019		Identify resources that may be in the study corridor and useful for mapping	GIS data layers used for developing transportation plans and for NEPA/SEPA analysis