## Appendix E:

Corridor P
I-40/Future I-42/U.S. 70

Truck Transportation


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## Freight Demand and Destination Data

Freight demand and destination data was derived from three sources, detailed below.

1. STC activity centers - NCDOT guidelines for the STC contain categories of landmarks, destinations, and major hubs identified as "activity centers." These activity centers include destinations and land uses that will likely have higher demand for trucks than other destinations, including military bases, major airports, colleges/universities, and hospitals, among others. These activity centers were identified because of their dependence on the corridor for the shipping and receiving of goods via trucks, among other things.
2. Stakeholder organizations - The NCDOT project team developed a list of stakeholder organizations, including rail and freight representatives, economic development groups, and major employers with 500 or more employees. The stakeholder organizations that have a large facility were included as a freight destination.
3. Additional freight intensive land uses - Other land uses that would have higher demand for truck traffic, such as factories and distribution centers, were identified along the corridor through a desktop review of satellite imagery.

Freight destinations within 25 miles of the corridor were mapped (see Figures 3A-3F) and are listed in Table E-1.
Table E-1. Freight Demand and Destination Data - Corridor P

| Location Name | Type | Source |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Wake County | 1 |  |  |  |
| Raleigh-Durham International Airport | Airport | 1 |  |  |
| North Carolina State University | College/University | 1 |  |  |
| Wake Technical Community College- Southern <br> Wake Campus | College/University | 1 |  |  |
| Wake Med Health \& Hospital | Hospital/Medical Center | 1 |  |  |
| Shaw University | College/University | 2 |  |  |
| Coastal Credit Union Music Park at Walnut |  |  |  |  |
| Creek | Event Center | 3 |  |  |
| Raleigh Memorial Auditorium | Event Center | 3 |  |  |
| Duke Energy Center for the Performing Arts | Event Center | 3 |  |  |
| PNC Arena | Event Center | 3 |  |  |
| White Oak Crossing | Shopping Center | 3 |  |  |
| Martin Marietta - Garner Quarry | Quarry | 3 |  |  |
| Martin Brower/McDonalds Distribution Center | Manufacturing/Distribution Center | 3 |  |  |
| Wake County Transportation | Manufacturing/Distribution Center | 3 |  |  |
| Amazon Distribution Center | Manufacturing/Distribution Center | 3 |  |  |
| NC Department of Transportation | Industrial/Business Park | 3 |  |  |
| Johnson County |  |  |  |  |
| Grifols Therapeutics LLC | Industria//Business Park | 2 |  |  |
| Johnston Community College | College/University | 2 |  |  |
| Johnston Health: Emergency Room | Hospital/Medical Center | 2 |  |  |
| Novo Nordisk Pharmaceutical - DFP | Manufacturing/Distribution Center | 2 |  |  |
| Novo Nordisk DAPI | Factory | 2 |  |  |
| Hanson Aggregates | Quarry | 3 |  |  |
| Wayne Community College | Wayne County | 2 |  |  |
| MasterBrand Cabinets - Kinston Operations |  |  |  |  |
| Facility | Manufacturing/Distribution Center | 3 |  |  |


| Location Name | Type | Source |
| :---: | :---: | :---: |
| Sanderson Farms | Manufacturing/Distribution Center | 2 |
| Kinston Smithfield Packing | Manufacturing/Distribution Center | 2 |
| Lenoir Community College | College/University | 3 |
| Craven County |  |  |
| Marine Corps Air Station Cherry Point | Military Camp | 1 |
| Coastal Carolina Regional Airport | Airport | 2 |
| Bosch Home Appliances | Manufacturing/Distribution Center | 2 |
| CarolinaEast Medical Center | Hospital/Medical Center | 2 |
| Craven Community College | College/University | 2 |
| Marine Corps Air Station Cherry Point | Military Camp | 1 |
| Moen Inc | Manufacturing/Distribution Center | 2 |
| Martin Marietta - Clarks Quarry | Quarry | 3 |
| BSH | Manufacturing/Distribution Center | 3 |
| Moen Warehouse | Manufacturing/Distribution Center | 2 |
| Carteret County |  |  |
| Morehead City Port | Manufacturing/Distribution Center | 1 |
| Carteret Community College | College/University | 2 |
| Carteret Health Care | Hospital/Medical Center | 3 |
| Morehead Plaza Shopping Center | Shopping Center | 3 |
| Veneer Technologies Inc | Manufacturing/Distribution Center | 3 |
| New Bern Mall | Shopping Center | 3 |
| Durham County |  |  |
| Research Triangle Park | Industrial/Business Park | 1 |
| North Carolina Central University | College/University | 1 |
| Durham Technical Community College | College/University | 1 |
| IBM Resiliency Services Bldg 201 | Industrial/Business Park | 3 |
| Hartnett County |  |  |
| Campbell University | College/University | 1 |
| Food Lion Distribution Center | Manufacturing/Distribution Center | 3 |

Note: The source number corresponds to the following types of freight destinations:

1. STC Activity Centers
2. Stakeholder organizations
3. Additional freight intensive uses

## Truck Parking Data

Truck drivers are required to have a 30 -minute break every 8 hours and to stop driving after 14 consecutive hours due to federal hours of service (HOS) requirements. While helping to improve safety, these requirements often result in drivers searching for parking at predictable time intervals, typically at night. This puts a strain on key freight corridors that have insufficient truck parking relative to demand. When drivers can't find spaces at designated truck parking areas, they are faced with the following options:

- Parking in unauthorized and unsafe locations, such as abandoned parking lots or on freeway shoulders, that put personal safety of the driver at risk, or
- Continuing driving and run the risk of getting a citation for driving past the maximum allowable hours of service or driving while fatigued and getting into a harmful accident.
Table E-2 shows truck parking supply and availability along the corridor. Data was gathered as part of the North Carolina Truck Parking Study (January 2017). The table includes the name of the truck parking facility, the County, whether it is publicly or privately owned, and the number of spaces at the facility. For each facility, truck parking utilization is shown in Figures 3A-3F and in the table below. Truck parking facilities with "full utilization" are those that are fully occupied at least Monday through Friday.
Table E-2. Truck Parking Facility Data - Corridor P

| Location Name | Address | Facility Type | Number of Spaces | Utilization ${ }^{1}$ |
| :---: | :---: | :---: | :---: | :---: |
| Wake County |  |  |  |  |
| County Mart | 4787 NC-11, <br> Bethel, NC 27812 | Private | 38 | Available Spaces |
| Fuel Doc Travel Center | 2403 N Memorial Dr, Greenville, NC 27834 | Private | 32 | Full Utilization |
| Wal-Mart | 4431 New Bern Ave, Raleigh, NC 27610 | Wal-Mart | 0 | No Utilization Information |
| Johnston County |  |  |  |  |
| Big Boy's Truck Stop | 595 Bagley Rd, Kenly, NC 27542 | Private | 100 | Available Spaces |
| Flying J | 1800 Princeton Kenly Rd, Kenly, NC 27542 | Private | 145 | Available Spaces |
| Petro Kenty | $\begin{aligned} & 923 \text { Johnston } \\ & \text { Pkwy, Kenly, NC } \\ & 27542 \end{aligned}$ | Private | 350 | Full Utilization |
| Wal-Mart | 1299 N Brightleaf Blvd, Smithfield, NC 27577 | Wal-Mart | 0 | No Utilization Information |
| Wal-Mart | 5141 NC-42 W, Garner, NC 27529 | Wal-Mart | 0 | No Utilization Information |
| Rest Area: Johnson County I-95 NB | $\begin{aligned} & \hline \text { I-95, Selma, NC } \\ & 27576 \end{aligned}$ | Public | 7 | Full Utilization |
| Rest Area: Johnson County I-95 SB | $\begin{aligned} & \text { I-95, Selma, NC } \\ & 27576 \end{aligned}$ | Public | 7 | Full Utilization |
| Pilot | 1000 Truckstop Rd, Kenly, NC 27542 | Private | 125 | Available Spaces |

${ }^{1}$ Based on 2017 Truck Parking Study

| Location Name | Address | Facility Type | Number of Spaces | Utilization ${ }^{1}$ |
| :---: | :---: | :---: | :---: | :---: |
| Rest Area: Johnston County I-40 WB | 210 N Walden Pond Rd, Benson, NC 27504 | Public | 15 | Full Utilization |
| Rest Area: Johnston County I-40 EB | 1 Medical Dr, Benson, NC 27504 | Public | 15 | Full Utilization |
| Wayne County |  |  |  |  |
| Downeast Truck Stop | 2600 US-117, Goldsboro, NC 27530 | Private | 30 | Available Spaces |
| Kangaroo Express | 1908, Goldsboro, NC 27530 | Private | 12 | Full Utilization |
| Lenoir County |  |  |  |  |
| Kangaroo Express | 509 E New Bern Rd, Kinston, NC 28504 | Private | 20 | Full Utilization |
| Craven County |  |  |  |  |
| Rest Area: Craven County US 70 | 800 Clarks Rd, New Bern, NC 28562 | Public | 10 | Full Utilization |
| Carteret County |  |  |  |  |
| Kangaroo Express | 5230 US-70 Morehead City, NC 28557 | Private | 6 | Available Spaces |

## Truck Percentage Data

This appendix presents 2015 and 2019 truck percentage data for Corridor P of the North Carolina STC. Truck percentage data in Table E-3 is presented using the Annual Average Daily Traffic (AADT) GIS data the from NCDOT and is organized numerically by Route ID within each county. Route IDs correspond to individual segments of the roadway and are used by NCDOT to collect and organize traffic data; the Route IDs used for this report are based on the 2019 Route IDs and milepost segment limits. 2015 AADT and truck percentage data is included for the corresponding 2019 Route ID where it is available. The AADT data represent all vehicles counted for each Route ID, and the total truck percentages include both Single Unit trucks (FHWA Class 4-7) and Multi Unit Trucks (FHWA Class 8-13) (see Table E-4 for examples of each vehicle class). Truck data is only collected on segments of routes included in the National Highway System (NHS) and the North Carolina Truck Network. Truck percentage data on parallel corridors is included for locations where AADT data is not available on the STC corridor. Truck percentages (based on 2019 data) are shown in Figures 3A-3F.

Table E-3. Truck Percentage - 2019 and 2015 Annual Average Daily Traffic

| Route ID | Route | Begin Milepost | End Milepost | 2015 <br> Annual Average Daily Traffic (AADT) | 2015 Total Truck Percentage | 2019 <br> Annual Average Daily Traffic (AADT) | 2019 Total Truck Percentage | Change in Truck <br> Percentage from 2015 to 2019 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Wake County |  |  |  |  |  |  |  |  |
| 10000040092 | US-40 | 18.478 | 20.907 | 109000 | 5.21\% | 115000 | 7.06\% | 1.85\% |
| 10000040092 | US-40 | 20.907 | 22.988 | 105000 | 5.21\% | 112000 | 7.06\% | 1.85\% |
| 10000040092 | US-40 | 22.988 | 26.461 | 84000 | 5.21\% | 93500 | 7.06\% | 1.85\% |
| 20000070092 | US-40 | 26.469 | 27.564 | 28000 | 10.00\% | 15000 | 7.50\% | -2.50\% |
| Johnston County |  |  |  |  |  |  |  |  |
| 20000070051 | US-70 | 0.000 | 2.994 | 28000 | 10.00\% | 32500 | 7.50\% | -2.50\% |
| 20000070051 | US-70 | 2.994 | 5.805 | 32000 | 10.52\% | 31000 | 6.39\% | -4.13\% |
| 20000070051 | US-70 | 5.805 | 8.946 | 26000 | 10.52\% | 33500 | 6.39\% | -4.13\% |
| 20000070051 | US-70 | 8.946 | 11.108 | 23000 | 10.97\% | 28500 | 13.64\% | 2.67\% |
| 20000070051 | US-70 | 11.108 | 12.098 | 26000 | 10.97\% | 27000 | 13.64\% | 2.67\% |
| 20000070051 | US-70 | 12.098 | 13.243 | 25000 | 10.97\% | 25500 | 13.64\% | 2.67\% |
| 20000070051 | US-70 | 13.243 | 15.996 | 25000 | 10.97\% | 31500 | 13.64\% | 2.67\% |
| 20000070051 | US-70 | 15.996 | 16.588 | 26000 | 10.97\% | 32500 | 13.64\% | 2.67\% |
| 20000070051 | US-70 | 19.573 | 20.727 | 20000 | 10.56\% | 24000 | 15.95\% | 5.39\% |
| 20000070051 | US-70 | 20.727 | 21.302 | 30000 | 11.85\% | 31000 | 12.39\% | 0.54\% |
| 20000070051 | US-70 | 21.302 | 22.965 | 23000 | 11.85\% | 28000 | 12.39\% | 0.54\% |
| 20000070051 | US-70 | 22.965 | 26.381 | 21000 | 11.85\% | 27500 | 12.39\% | 0.54\% |
| 20000070051 | US-70 | 26.381 | 27.013 | 26000 | 15.96\% | 27500 | 12.77\% | -3.19\% |
| 20000070051 | US-70 | 27.013 | 27.703 | 24000 | 15.96\% | 25000 | 12.77\% | -3.19\% |
| 20000070051 | US-70 | 27.703 | 29.222 | 23000 | 15.96\% | 28000 | 12.77\% | -3.19\% |
| 20000070051 | US-70 | 29.222 | 29.408 | 25000 | 15.96\% | 29500 | 12.77\% | -3.19\% |
| 22000070051 | US-70 | 0.000 | 2.900 | 16000 | 11.86\% | 18500 | 11.52\% | -0.34\% |
| Wayne County |  |  |  |  |  |  |  |  |
| 20000070016 | US-70 | 0.000 | 1.423 | 24000 | 4.86\% | 26500 | 4.68\% | -0.18\% |
| 20000070096 | US-70 | 0.000 | 1.350 | 25000 | 15.96\% | 29500 | 12.77\% | -3.19\% |
| 20000070096 | US-70 | 1.350 | 2.989 | 24000 | 15.96\% | 27500 | 12.77\% | -3.19\% |
| 20000070096 | US-70 | 2.989 | 4.511 | 23000 | 15.96\% | 12500 | 0.00\% | -15.96\% |
| Lenoir County |  |  |  |  |  |  |  |  |
| 20000070054 | US-70 | 0.430 | 2.588 | 18000 | 12.56\% | 23500 | 11.48\% | -1.08\% |
| 20000070054 | US-70 | 2.588 | 4.108 | 19000 | 9.43\% | 23500 | 12.70\% | 3.27\% |
| 20000070054 | US-70 | 4.108 | 4.388 | 21000 | 9.43\% | 29000 | 12.70\% | 3.27\% |
| 20000070054 | US-70 | 4.388 | 5.832 | 18000 | 9.43\% | 25000 | 12.70\% | 3.27\% |
| 20000070054 | US-70 | 5.832 | 9.682 | 22000 | 9.43\% | 24500 | 12.70\% | 3.27\% |
| 20000070054 | US-70 | 9.682 | 11.350 | 22000 | 10.09\% | 24500 | 10.23\% | 0.14\% |
| 20000070054 | US-70 | 11.350 | 11.733 | 34000 | 10.09\% | 31000 | 10.23\% | 0.14\% |
| 20000070054 | US-70 | 11.733 | 12.226 | 40000 | 7.12\% | 40500 | 7.01\% | -0.11\% |
| 20000070054 | US-70 | 12.226 | 13.431 | 27000 | 8.43\% | 31000 | 10.27\% | 1.84\% |
| 20000070054 | US-70 | 13.431 | 14.221 | 28000 | 8.43\% | 30500 | 10.27\% | 1.84\% |
| 20000070054 | US-70 | 14.221 | 15.417 | 20000 | 11.63\% | 20000 | 14.13\% | 2.50\% |
| 20000070054 | US-70 | 15.417 | 15.793 | 25000 | 7.22\% | 27000 | 10.50\% | 3.28\% |
| 20000070054 | US-70 | 15.793 | 16.254 | 24000 | 7.22\% | 25500 | 10.50\% | 3.28\% |
| 20000070054 | US-70 | 16.254 | 17.405 | 16000 | 13.34\% | 17000 | 15.12\% | 1.78\% |


| Route ID | Route | Begin Milepost | End Milepost | 2015 <br> Annual Average Daily Traffic (AADT) | 2015 Total Truck Percentage | 2019 Annual Average Daily Traffic (AADT) | 2019 Total Truck Percentage | Change in Truck Percentage from 2015 to 2019 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 20000070054 | US-70 | 17.405 | 19.539 | 14000 | 13.34\% | 15000 | 15.12\% | 1.78\% |
| Jones County |  |  |  |  |  |  |  |  |
| 20000070052 | US-70 | 0.000 | 0.556 | 13000 | 13.34\% | 14000 | 15.12\% | 1.78\% |
| 20000070052 | US-70 | 0.556 | 2.444 | 12000 | 13.34\% | 13500 | 15.12\% | 1.78\% |
| 20000070052 | US-70 | 2.444 | 3.903 | 12000 | 13.34\% | 14500 | 15.12\% | 1.78\% |
| 20000070052 | US-70 | 3.903 | 11.899 | 7200 | 13.34\% | 13000 | 15.12\% | 1.78\% |
| Craven County |  |  |  |  |  |  |  |  |
| 20000017025 | US-17 | 5.011 | 5.761 | 17000 | 0.00\% | 20000 | 8.81\% | 8.81\% |
| 20000017025 | US-17 | 5.761 | 8.053 | 21000 | 9.41\% | 23500 | 9.54\% | 0.13\% |
| 20000017025 | US-17 | 8.053 | 9.003 | 28000 | 9.41\% | 31000 | 9.54\% | 0.13\% |
| 20000017025 | US-17 | 9.003 | 10.560 | 45000 | 4.71\% | 48000 | 6.78\% | 2.07\% |
| 20000017025 | US-17 | 10.560 | 11.233 | 53000 | 4.71\% | 57000 | 6.78\% | 2.07\% |
| 20000070025 | US-17 | 17.395 | 18.008 | 53000 | 4.71\% | 57000 | 6.78\% | 2.07\% |
| 20000070025 | US-70 | 0.000 | 0.500 | 7200 | 13.34\% | 13000 | 15.12\% | 1.78\% |
| 20000070025 | US-70 | 0.500 | 7.080 | 11000 | 10.89\% | 13000 | 11.99\% | 1.10\% |
| 20000070025 | US-70 | 7.080 | 9.918 | 12000 | 10.89\% | 14000 | 11.99\% | 1.10\% |
| 20000070025 | US-70 | 9.918 | 10.841 | 17000 | 10.89\% | 19000 | 11.99\% | 1.10\% |
| 20000070025 | US-70 | 10.841 | 11.173 | 17000 | 0.00\% | 20000 | 8.81\% | 8.81\% |
| 20000070025 | US-70 | 18.008 | 18.887 | 48000 | 6.48\% | 50500 | 6.26\% | -0.22\% |
| 20000070025 | US-70 | 18.887 | 20.807 | 38000 | 6.48\% | 39500 | 6.26\% | -0.22\% |
| 20000070025 | US-70 | 20.807 | 24.377 | 28000 | 6.48\% | 29500 | 6.26\% | -0.22\% |
| 20000070025 | US-70 | 24.377 | 27.483 | 29000 | 6.48\% | 29500 | 6.26\% | -0.22\% |
| 20000070025 | US-70 | 27.483 | 32.213 | 29000 | 6.48\% | 32000 | 6.26\% | -0.22\% |
| 20000070025 | US-70 | 32.213 | 33.573 | 26000 | 6.48\% | 27500 | 6.26\% | -0.22\% |
| 20000070025 | US-70 | 33.573 | 34.227 | 29000 | 6.48\% | 31000 | 6.26\% | -0.22\% |
| 20000070025 | US-70 | 34.227 | 34.665 | 31000 | 6.48\% | 32500 | 6.26\% | -0.22\% |
| 20000070025 | US-70 | 34.665 | 35.105 | 23000 | 4.86\% | 24000 | 4.68\% | -0.18\% |
| 20000070025 | US-70 | 35.105 | 36.756 | 28000 | 4.86\% | 30000 | 4.68\% | -0.18\% |
| 20000070025 | US-70 | 36.756 | 37.771 | 24000 | 4.86\% | 26500 | 4.68\% | -0.18\% |
| Carteret County |  |  |  |  |  |  |  |  |
| 20000070016 | US-70 | 1.423 | 2.410 | 21000 | 4.86\% | 25500 | 4.68\% | -0.18\% |
| 20000070016 | US-70 | 2.410 | 3.970 | 26000 | 4.86\% | 25500 | 4.68\% | -0.18\% |
| 20000070016 | US-70 | 3.970 | 5.460 | 29000 | 4.86\% | 28500 | 4.68\% | -0.18\% |
| 20000070016 | US-70 | 5.460 | 6.460 | 21000 | 4.86\% | 25000 | 4.68\% | -0.18\% |
| 20000070016 | US-70 | 6.460 | 7.520 | 27000 | 4.86\% | 32000 | 4.68\% | -0.18\% |
| 20000070016 | US-70 | 7.520 | 9.000 | 29000 | 4.86\% | 33500 | 4.68\% | -0.18\% |
| 20000070016 | US-70 | 9.000 | 10.207 | 31000 | 4.86\% | 36000 | 4.68\% | -0.18\% |
| 20000070016 | US-70 | 10.207 | 11.822 | 29000 | 4.40\% | 34500 | 2.43\% | -1.97\% |
| 20000070016 | US-70 | 11.822 | 12.342 | 29000 | 4.40\% | 32000 | 2.43\% | -1.97\% |
| 20000070016 | US-70 | 12.342 | 12.742 | 29000 | 4.40\% | 32000 | 2.43\% | -1.97\% |
| 20000070016 | US-70 | 12.742 | 13.862 | 27000 | 4.40\% | 32000 | 2.43\% | -1.97\% |
| 20000070016 | US-70 | 13.862 | 14.112 | 24000 | 4.40\% | 24500 | 2.43\% | -1.97\% |
| 20000070016 | US-70 | 14.112 | 15.166 | 23000 | 4.40\% | 25500 | 2.43\% | -1.97\% |

Table E-4. Federal Highway Administration Vehicle Classification Definitions


Source: "FHWA Traffic Monitoring Guide. Appendix C: Vehicle Types" (2014)

Figures 3A-3F: Truck Transportation Data Map

*Truck percentage data is shown on parallel corridors in locations where it is not available for the STC corridor because it is not open to traffic yet
${ }^{* *}$ The number shown within the circle refers to the total number of truck parking spaces at that parking facility
***Other category for Activity Centers includes colleges/universities, military camps, hospitals/medical centers, event centers, and airports

*Truck percentage data is shown on parallel corridors in locations where it is not available for the STC corridor because it is not open to traffic yet
${ }^{* *}$ The number shown within the circle refers to the total number of truck parking spaces at that parking facility
***Other category for Activity Centers includes colleges/universities, military camps, hospitals/medical centers, event centers, and airports

*Truck percentage data is shown on parallel corridors in locations where it is not available for the STC corridor because it is not open to traffic yet
${ }^{* *}$ The number shown within the circle refers to the total number of truck parking spaces at that parking facility
***Other category for Activity Centers includes colleges/universities, military camps, hospitals/medical centers, event centers, and airports

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${ }^{* *}$ The number shown within the circle refers to the total number of truck parking spaces at that parking facility
***Other category for Activity Centers includes colleges/universities, military camps, hospitals/medical centers, event centers, and airports

*Truck percentage data is shown on parallel corridors in locations where it is not available for the STC corridor because it is not open to traffic yet
**The number shown within the circle refers to the total number of truck parking spaces at that parking facility
***Other category for Activity Centers includes colleges/universities, military camps, hospitals/medical centers, event centers, and airports

*Truck percentage data is shown on parallel corridors in locations where it is not available for the STC corridor because it is not open to traffic yet
${ }^{* *}$ The number shown within the circle refers to the total number of truck parking spaces at that parking facility
***Other category for Activity Centers includes colleges/universities, military camps, hospitals/medical centers, event centers, and airports

