Wilmington Area Planning Council

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DRAFT

RESOLUTION

BY THE WILMINGTON AREA PLANNING COUNCIL (WILMAPCO) TO ENDORSE THE FIRST/FINAL MILE NETWORK UPDATE - NEW CASTLE COUNTY

WHEREAS, the Wilmington Area Planning Council (WILMAPCO) has been designated the Metropolitan Planning Organization (MPO) for Cecil County, Maryland and New Castle County, Delaware by the Governors of Maryland and Delaware, respectively; and

WHEREAS, the WILMAPCO Council recognizes that comprehensive planning for future land use, transportation, sustainable economic development, environmental protection and enhancement, and community health and livability are necessary actions to implement the goals and objectives in the 2050 Regional Transportation Plan (RTP); and

WHEREAS, the objective of the First/Final Mile Freight Network Update is to create a greater understanding of first/final mile freight connections that link the local road system to state and national highway networks; and

WHEREAS, the First/Final Mile Freight Network Update will help transportation stakeholders make effective improvements and maintain first/final mile connections while balancing the needs of other transportation users;

NOW, THEREFORE, BE IT RESOLVED that the Wilmington Area Planning Council does hereby endorse the final report and recommendations of the First/Final Mile Freight Network Update for New Castle County.

Date: _____

John Sisson, Chairperson
Wilmington Area Planning Council

First/Final Mile Freight Network Update: New Castle County, DE

FINAL DRAFT REPORT
August 2025

Acknowledgements

This study was produced through the WILMAPCO Fiscal Year 2025 Unified Planning Work Program with collaboration among the following project partners:

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New Castle County Department of Land Use

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List of Acronyms

CMAQ	Congestion Mitigation and Air Quality
CRFC	Critical Rural Freight Corridor
CTP	Capital Transportation Program
CUFC	Critical Urban Freight Corridor
DelDOT	Delaware Department of Transportation
DMTA	Delaware Motor Transport Association
FFM	First/Final Mile
FHWA	Federal Highway Administration
FIS	Freight Intensive Sector
FRA	Federal Railroad Administration
HEP	Hazard Elimination Program
HSIP	Highway Safety Improvement Program
ICE	Intersection Control Evaluation
LT	Long Term
MI	Mile(s)
MPO	Metropolitan Planning Organization
MT	Medium Term
NCC	New Castle County
NCFRP	National Cooperative Freight Research Program
NHFN	National Highway Freight Network
NHPP	National Highway Performance Program
NHS	National Highway System
O-D	Origin-Destination
PAR	Partnership (Solution Set)
PHFS	Primary Highway Freight System
PMA	Protect-Manage-Accommodate (Strategy Framework)
POL	Policy (Solution Set)
PRG	Program (Solution Set)
PRJ	Project (Solution Set)
SLR	Sea Level Rise
ST	Short Term
STP	Surface Transportation Program
TAC	Technical Advisory Committee
TAZ	Traffic Analysis Zone
TIFIA	Transportation Infrastructure Finance and Innovation Act
UD IPA	University of Delaware Institute for Public Administration
UPWP	Unified Planning Work Program
USDOT	United States Department of Transportation
VTTI	Virginia Tech Transportation Institute
WILMAPCO	Wilmington Area Planning Council

Planning Districts / Abbreviations

BW	Brandywine
CP	Central Pencader
GN	Greater Newark
LC	Lower Christina
MOT	Middletown-Odessa-Townsend
NC	New Castle
PM	Piedmont
PC	Pike Creek
RL	Red Lion
UC	Upper Christina
WL	Wilmington

Executive Summary

Scope of Study

This study is a reassessment of the New Castle County portion of the Delaware First/Final Mile (FFM) Freight Network. The statewide FFM Freight Network was initially established in 2021. This update refines the initial county-specific network while also applying or expanding the previously established strategies and guiding principles to address localized freight impacts around the county's FFM freight connections.

First/Final Mile Freight Network

The New Castle County FFM Freight Network (see map on **Page 3**) includes approximately 90 miles of roadway comprising 159 routes. These FFM freight connections generally are lower functional classification roadways that link freight-intensive businesses to higher classification roadways and the broader state and national highway networks. These links are critical to freight transport and economic objectives and serve other important and diverse users in the community, from children walking to school, to residents parking in front of their homes, to bicyclists accessing the nearby greenway. The diversity of users presents challenges to meeting the range of user needs. The project team evaluated the FFM freight network for these conditions to identify areas of concern, potential solutions, and prioritize locations on the network where action may be most needed.

Conflict Screening

Twenty-nine of these routes (18%) are identified as "high conflict" based on a screening review of the existing conditions and characteristics that are indicative of higher potential for conflict between the freight use of the roadway and other users of the roadway and surrounding area. The high conflict routes are found across the county with many concentrated in the more urban / populated areas. These insights are based on five key conflict categories (shown below) associated with the FFM Network:

Needs/Conflicts	Definition
Institutional	**Coordination and communication challenges** that create difficulties coordinating freight investments across multiple levels of government, educating local partners on the importance of freight transportation, or data availability issues
Land Use	**Conflicts arising due to freight routes passing through sensitive areas** (residential, commercial, environmental, or other), including residential exposure to undesirable noise, vibration, and air emissions
Mobility	**Barriers to efficient freight transportation operations**, including congestion and/or physical barriers such as low-clearance bridges, tight turns, narrow lanes/shoulders, or limited passing lanes that introduce travel difficulties or impede direct routing
Safety	**Barriers to safe transportation operations** due to design characteristics or user behaviors that influence the likelihood or severity of crashes, including poor sightlines at intersections, speeding, or co-location of truck routes with bicycle/pedestrian facilities
Condition	**Deteriorated or inadequate infrastructure** that creates conflicts related to the poor condition of pavement or bridges on freight routes, or accelerated deterioration of infrastructure because of frequent and heavy truck traffic

Strategy Framework

Leveraging the conflict screening insights alongside field/aerial reviews of site-specific conditions, each FFM freight route on New Castle County's network was assigned an overarching strategy designation within the Protect-Manage-Accommodate (PMA) framework:

- **Protect** freight industries from unreasonable conflicts in areas where freight industries are dominant or near freight facilities of high importance, requiring that freight needs should be a priority emphasis
- **Manage** conflicts in tactical and targeted ways in areas where both freight and non-freight activities are significant land uses, requiring a balance between freight and other transportation users
- **Accommodate** freight needs while preventing major issues in areas where non-freight businesses and/or residential communities are dominant, or where freight is subordinate to other transportation users

Of the 159 FFM freight routes updated in New Castle County, 39 routes were designated for 'Protect' freight strategies, 67 routes for 'Manage' freight strategies, and 53 routes for 'Accommodate' freight strategies.

Solutions and Implementation Opportunities

At a broad level, a toolbox of potential improvements (shown below) via policies, partnerships, projects, and programs is recommended to help maintain routes and minimize conflicts on the FFM Freight Network. Improvement options are intended for use in tandem with the network and conflict screening data and PMA designations, and in coordination with other local planning initiatives and stakeholders, to help effectively and efficiently balance the needs of local communities and freight users on the FFM Freight Network.

First/Final Mile Freight Network Solutions Toolbox

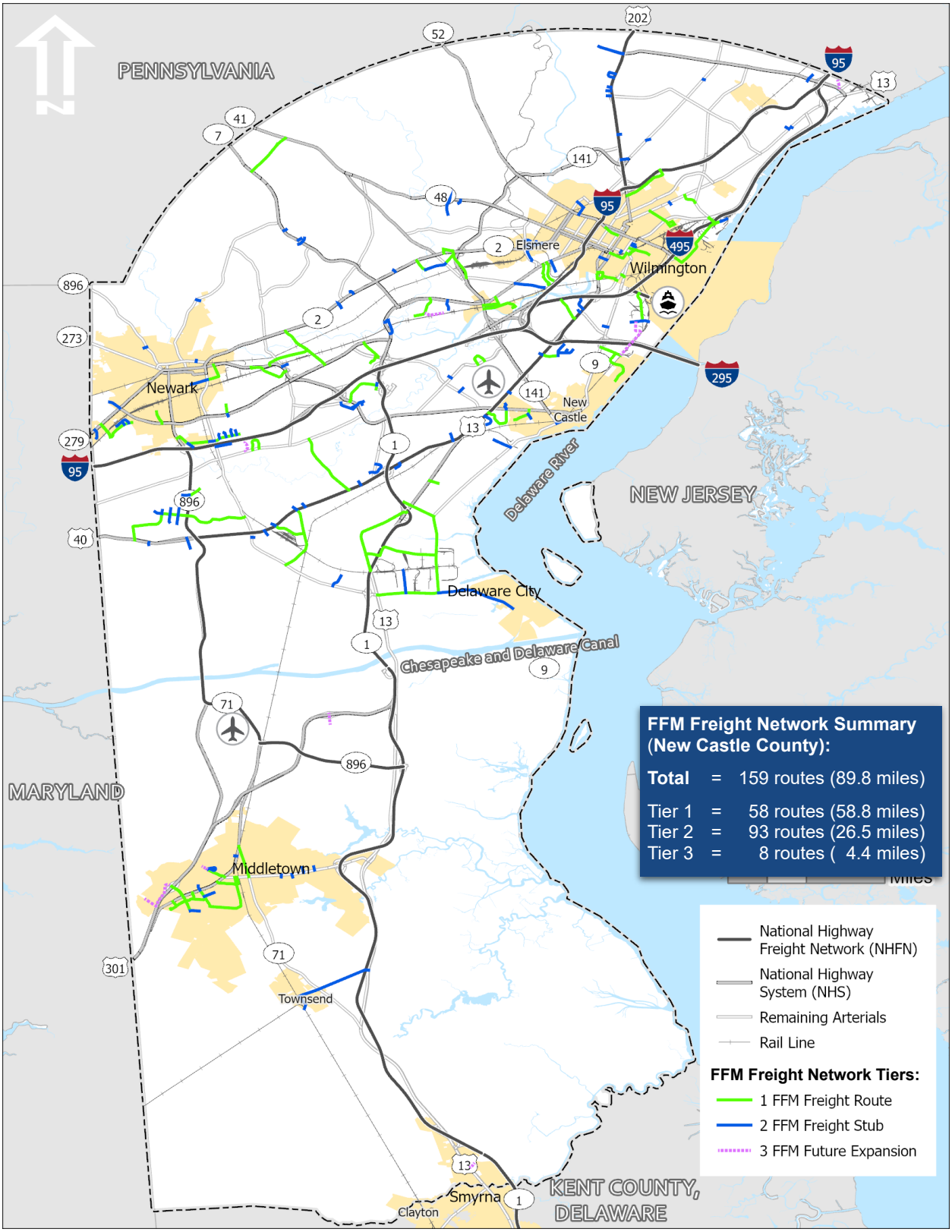
POLICY Solutions
- Knowledge Sharing
- First/Final Mile Plan Checks
- Data Management
- Truck Routing & Restrictions

PROJECT Solutions
- Intersection Improvements
- Roadway Improvements
- Operational Improvements
- Multimodal Conflict Reduction

PARTNERSHIP Solutions
- Stakeholder Coordination
- Truck Safety Education
- Public Outreach & Engagement

PROGRAM Solutions
- Federal Funding Programs
- State Funding Programs
- MPO Funding Programs

First/Final Mile Freight Network – New Castle County Update (2025)



NOTE: For a fully interactive webmap version of the above, refer to: https://www.wilmapco.org/finalmile/

1 Introduction

1.1 Overview

This study is a reassessment of the New Castle County portion of the **Delaware First/Final Mile (FFM) Freight Network**. The statewide FFM Freight Network was initially established in 2021. This update refines the initial county-specific network while also applying or expanding the previously established strategies and guiding principles to address localized freight impacts around the county's FFM freight connections.

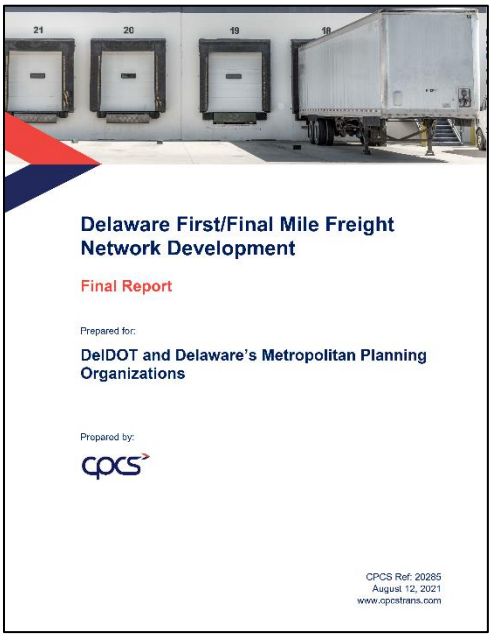
First/Final Mile Freight Connections

First/final mile freight connections (in the context of this study) generally include lower functional classification roadways (often collectors or local roads) that link freight-intensive businesses to higher classification roadways and the broader state and national highway networks.

The first part of this reassessment reviews and updates the routes and connections on the FFM Freight Network throughout New Castle County based on recent/relevant changes to industry, policies, traffic, and other conditions. The second part compares the updated network to relevant policy, planning, or project documents and seeks to implement the Protect-Manage-Accommodate (PMA) strategy framework that was established as part of the initial 2021 study to help address existing and future potential conflict points between goods movement activities, freight versus non-freight land uses, and all users of the multimodal transportation system.

1.2 Background and Definitions

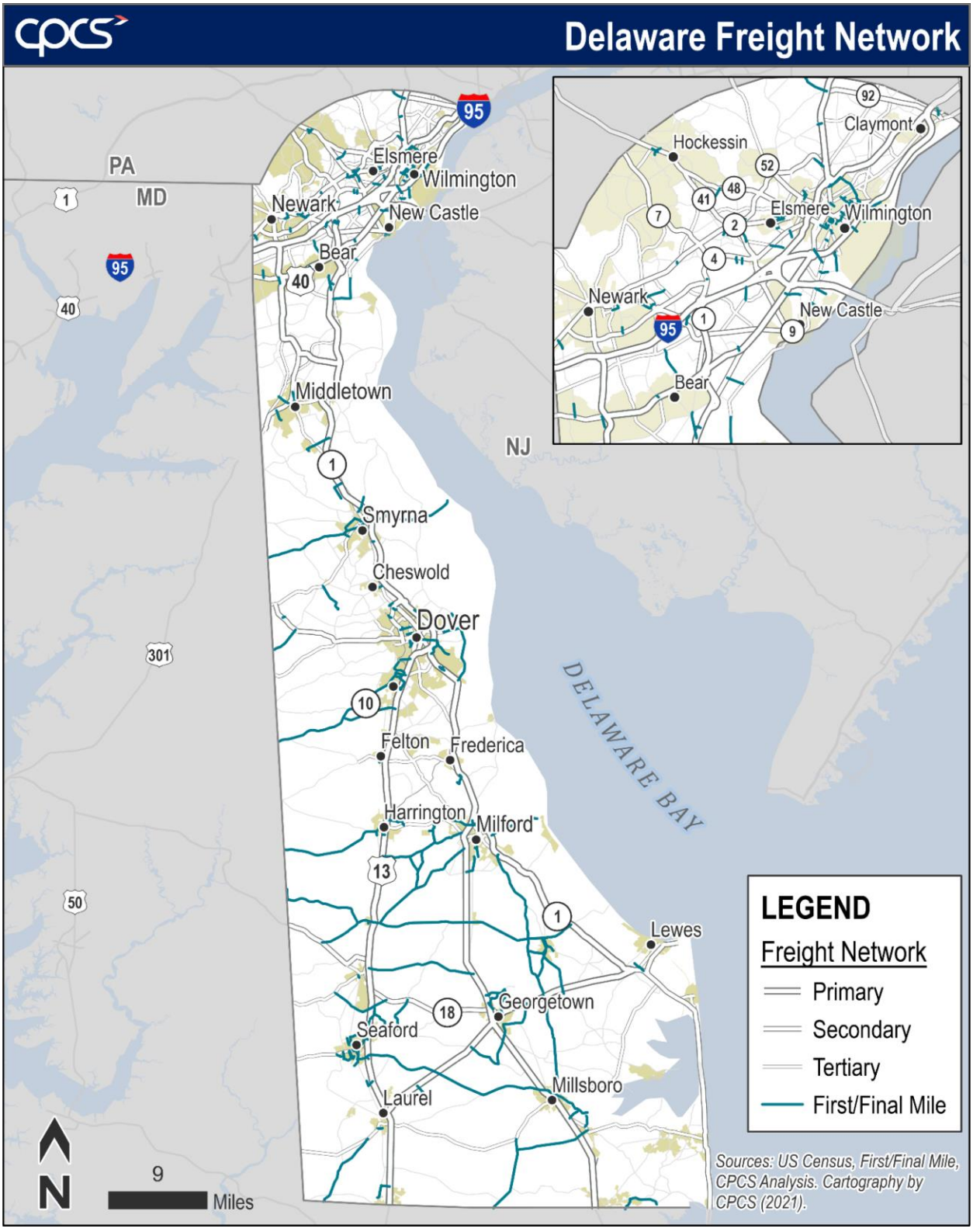
Partners: This county-specific update of the FFM Freight Network reflects a collaborative effort between the Wilmington Area Planning Council (WILMAPCO), New Castle County (NCC) Department of Land Use, and Delaware Department of Transportation (DelDOT) Planning Division. It builds upon statewide efforts initially completed via the 2021 *Delaware First/Final Mile Freight Network Development* study.[1]



2021 First/Final Mile Freight Network: The 2021 statewide study identified key FFM truck connections that linked mainline routes with truck-generating or freight-handling sites such as manufacturing facilities, retail hubs, distribution centers, warehouses, ports, intermodal terminals, and farms. Study results included data-driven screening and expansion of the state-specific FFM freight network consisting of approximately 294 miles of freight connections with most following collector roads (76%) or local roads (21%). The 2021 statewide FFM freight network (**Exhibit 1**) was the starting point for the more recent updates in New Castle County.

[1] CPCS for DelDOT and Delaware MPOs, *Delaware First/Final Mile Freight Network Development*, August 12, 2021, wilmapco.org/finalmile/.

Exhibit 1: First/Final Mile Freight Network – Delaware Statewide (2021)



Strategic Organizational Tools: To help contextualize freight needs and conflicts and prioritize which freight conflicts to address, the 2021 statewide study established three strategic organizational components addressing (1) categories of needs/conflicts, (2) types of solutions, and (3) a broader strategic lens referred to as the Protect-Manage-Accommodate (PMA) framework. These organizational tools have been carried forward with the New Castle County updates and are defined in **Exhibit 2** through **Exhibit 4**.

Key References and GIS Data Resources: A wide variety of data and mapping resources were explored to support the objective identification, selection, and assessment of routes for the FFM Freight Network update. Most of these resources leveraged information available directly from WILMAPCO and/or DelDOT planning partners, Delaware *FirstMap*[2], the Federal Highway Administration (FHWA), or similar agency-level datasets. Details of the screening data sources are presented in **Appendix A**.

1.3 OBJECTIVES AND KEY TASKS

Modern supply chains rely on virtually all modes of transportation and strategically positioned distribution hubs to support the efficient, fast, and affordable movement of freight. However, their operations and corresponding traffic generation can negatively impact or conflict with adjacent land uses and other users of the transportation system. While much of the state's commerce stays along the upper end of the transportation network hierarchy (i.e., interstates and principal arterials), there are places at either the first or final miles of a freight-related trip that require travel along parts of the transportation network designed for and serving multiple uses.

The first/final mile freight network is among the most misunderstood portions of transportation networks, even among industry professionals. Overall, these facilities are often lower functionally classified routes on which freight/passenger vehicle conflicts are more visible and a negative public perception of truck traffic may be much greater. These conflicts may occur in tandem with lower priorities regarding regular maintenance practices, timely improvements to geometric design standards, or the potential for lower priorities for roadway and safety improvements. Some connections also overlap residential areas, which can create added conflicts between freight mobility and other users of the multimodal transportation system.

Key Objectives: To help track and address first/final mile freight issues in New Castle County, the key objectives of this study are to (1) update the county-specific portion of the Delaware FFM Freight Network, (2) reassess the network to screen for potential conflicts, and (3) identify strategies via the Protect-Manage-Accommodate framework to help address localized freight impacts and conflicts with non-freight land uses.

Key Tasks: Updates documented throughout this study include key tasks covering the following:

1. Review/refine FFM freight network criteria **(CHAPTERS 1-2)**
2. Update the NCC FFM freight network **(CHAPTER 2)**
3. Screen the updated network for needs/conflicts **(CHAPTER 3)**
4. Review the updates alongside relevant policy/planning documents **(CHAPTERS 3-4)**
5. Identify policy, traffic, or other improvement opportunities **(CHAPTERS 4-5)**

[2] State of Delaware Department of Technology and Information (DTI), *FirstMap* (Delaware's Enterprise Geographic Information System), last accessed May 30, 2025, de-firstmap-delaware.hub.arcgis.com/.

Exhibit 2: Organizational Tools/Definitions – Needs/Conflict Categories

Needs/Conflicts	Definition
Institutional	**Coordination and communication challenges** that create difficulties coordinating freight investments across multiple levels of government, educating local partners on the importance of freight transportation, or data availability issues
Land Use	**Conflicts arising due to freight routes passing through sensitive areas** (residential, commercial, environmental, or other), including residential exposure to undesirable noise, vibration, and air emissions
Mobility	**Barriers to efficient freight transportation operations**, including congestion and/or physical barriers such as low-clearance bridges, tight turns, narrow lanes/shoulders, or limited passing lanes that introduce travel difficulties or impede direct routing
Safety	**Barriers to safe transportation operations** due to design characteristics or user behaviors that influence the likelihood or severity of crashes, including poor sightlines at intersections, speeding, or co-location of truck routes with bicycle/pedestrian facilities
Condition	**Deteriorated or inadequate infrastructure** that creates conflicts related to the poor condition of pavement or bridges on freight routes, or accelerated deterioration of infrastructure because of frequent and heavy truck traffic

Exhibit 3: Organizational Tools/Definitions – Types of Solutions

Types of Solutions		Definition
Four P's	**Policies**	Standards, tools, or recommendations that govern data collection, maintenance, development, or operation of the first/final mile freight network routes
	Partnerships	State and local stakeholder collaboration to better understand, communicate about, or implement efforts to address first/final mile freight network needs and issues
	Projects	Design/construction of infrastructure maintenance, improvement, or expansion projects
	Programs	Coordination to support project investments and secure/allocate funding

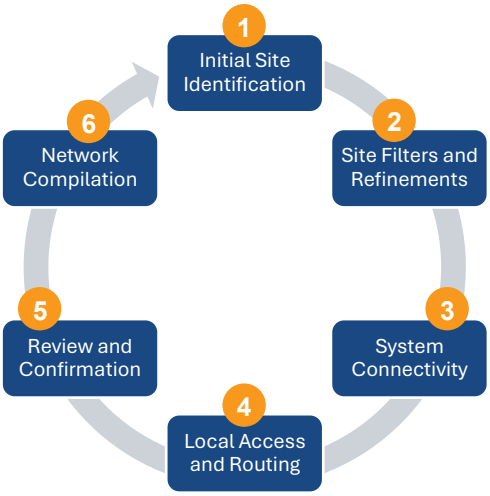
Exhibit 4: Organizational Tools/Definitions – Protect-Manage-Accommodate Framework

Strategic Lens	Definition
Protect	**Protect freight industries from unreasonable conflicts** in areas where freight industries are dominant or near freight facilities of high importance, requiring that freight needs should be a priority emphasis
Manage	**Manage conflicts in tactical and targeted ways** in areas where both freight and non-freight activities are significant land uses, requiring a balance between freight and other transportation users
Accommodate	**Accommodate freight needs while preventing major issues** in areas where non-freight businesses and/or residential communities are dominant, or where freight is subordinate to other transportation users

2 First/Final Mile Freight Network Refinements

2.1 2025 NETWORK REFINEMENT PROCESS

Several data and mapping resources were explored to support the objective identification of candidate routes for the FFM Freight Network, and the refined process ultimately leveraged a qualitative/quantitative approach spanning six iterative steps (illustrated at right and detailed below). These steps generally followed a "connect the dots" approach by first identifying sites or areas with potentially notable levels of truck generating or freight handling activity and then identifying the locally relevant routes needed to connect that activity to the broader roadway and freight transportation networks.



2.1.1 STEP 1 – Initial Site Identification

Potential sites or areas with truck generating or freight handling activity were initially identified based on reviews of Freight Intensive Sector (FIS) employment data, land use data, and aerial imagery alongside local knowledge of freight-centric business locations such as industrial parks, warehouses, or other freight activity hubs. The FIS employment reviews focused on four major groups of activities (inset below and detailed in **Appendix B**) that typically generate higher volumes of raw freight and/or freight/truck trips. Supplemental GIS and land use data was also leveraged to consider agricultural areas that may not otherwise be well represented in terms of employment numbers, as well as MPO/stakeholder knowledge of new or planned major warehousing and distribution facilities. The initial set of freight-centric sites/areas were mapped and overlaid with the state's roadway networks to continue filtering and refinements in subsequent Steps 2-3.

Freight Intensive Sector (FIS) Employment

Detailed in **Appendix B**, targeted FIS employment groupings for FFM freight network development included:

(1) Natural resource extraction, utilities, and construction
(2) Manufacturing
(3) Wholesale trade, transportation, and warehousing
(4) Retail trade, accommodation, and food services

2.1.2 STEP 2 – Site Filters and Refinements

To focus on areas with potentially more significant levels of truck/freight activity, individual sites from Step 1 were filtered based on an assumed minimum number of employees (inset at right). Locations were also reviewed via aerials and online mapping to filter out apparent anomalies (e.g., wrong address, closed or former business, incorrectly categorized land use, or other out-of-data information, etc.).

Employment Thresholds

Based on high-level reviews of the overall FIS employment datasets, thresholds for individual site consideration for FFM freight network development purposes assumed:

> 100 employees for any retail trade site
> 20 employees for any other employment type

The aerial reviews in this approach often involved correcting (or at least accounting for) subtle issues in the employment dataset itself. Examples include blatantly erroneous addresses such as a business in the middle of a forest, suspected administrative locations such as a small business or billing office in an obvious residential area, or new/missing locations such as a warehouse or manufacturing site evident on the aerial that does not otherwise appear in the filtered employment data. Manual adjustments were also based on local knowledge and reasonable assumptions of potential freight needs. Typical examples included filtering out isolated sites where truck delivery demands would not likely rise to the level of requiring a dedicated FFM freight connection (e.g., a single local restaurant, pub, or small business site, as opposed to clusters of businesses in a larger commercial shopping plaza or an industrial park).

2.1.3 STEP 3 – System Connectivity

The next level of filtering narrowed the list of potential sites/areas that may require FFM freight connections by eliminating locations that already have direct access to higher tier roadway and freight networks included as part of the state's broader transportation system (inset at right and mapped per **Exhibit 5**). These higher-tier roadway and freight networks generally encompass the mainline travel routes throughout Delaware, so sites with direct access to these routes have no need for a separate truck connection.

Higher-Tier Systems

Separate FFM freight network connections are NOT required for sites/areas with direct access to the:

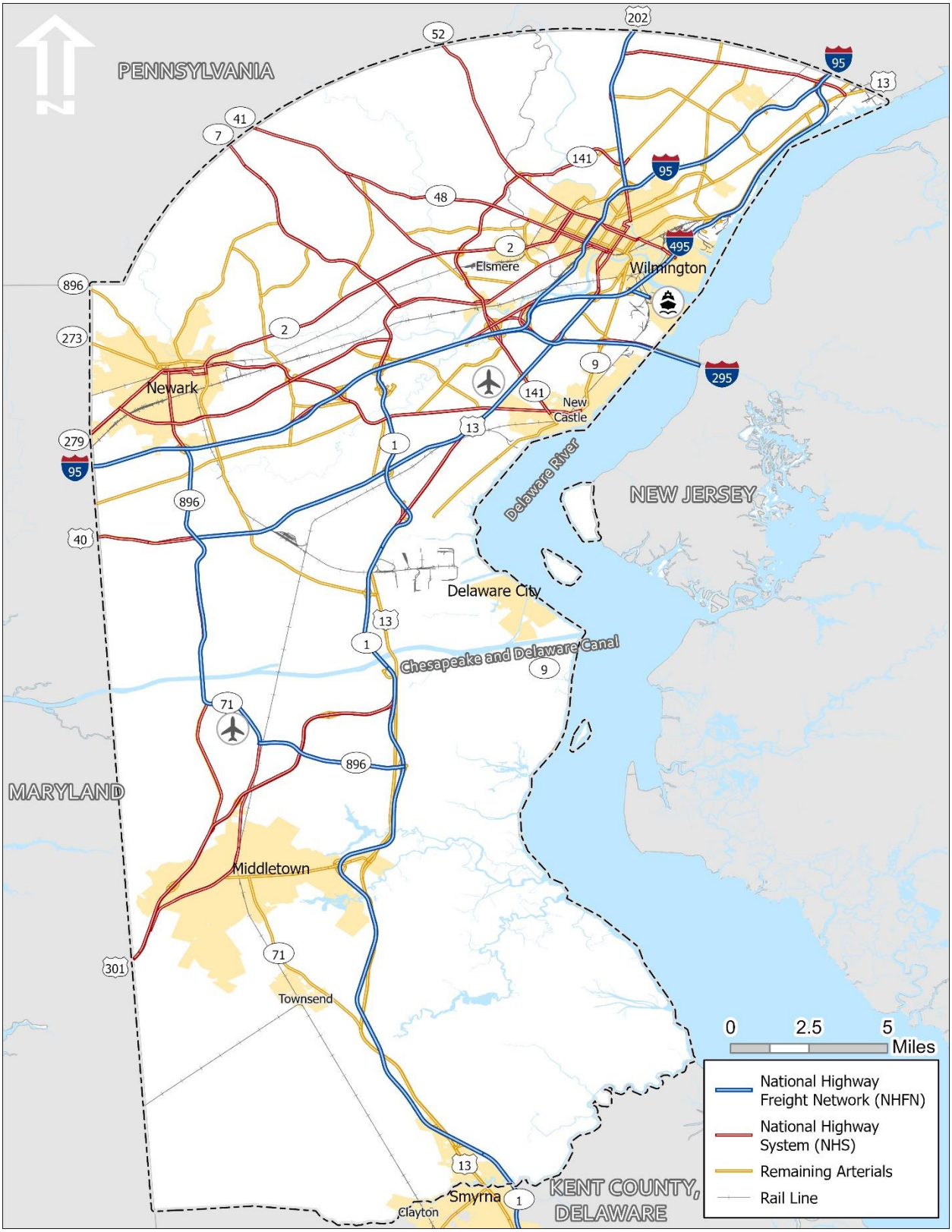
- Interstate System
- National Highway Freight Network (NHFN)
- National Highway System (NHS)
- Other significant arterial corridors

Key among these systems is the National Highway Freight Network (NHFN), which is a federally designated network intended to support state, regional, and national freight flows. The NHFN consists of four subsystems of roadways that include Primary Highway Freight System (PHFS) routes, non-PHFS Interstate routes, and state/MPO-designated Critical Rural Freight Corridor (CRFC) and Critical Urban Freight Corridor (CUFC) routes. Within Delaware, the NHFN collectively captures all of I-95, I-495, and I-295 within state limits; one Intermodal Connector along Terminal Avenue between I-495 and the Port of Wilmington; and (under the CRFC/CUFC designations) portions of US 9, US 13, US 40, US 113, and US 202, as well as various Delaware State Route (SR) segments along SR 1 and SR 896.

In the context of FFM freight connectivity, and in addition to the NHFN considerations above, other portions of Delaware's roadway network that were assumed to already effectively capture freight access included routes on the National Highway System (NHS) and routes functionally classified (typically) as major/minor arterials. Both the NHFN and NHS networks generally imply that a higher tier of roadway systems management, operations, planning/programming, and/or funding resources are already in place; and the same, though to a lesser extent, can be stated for the state's arterial network. Where direct connectivity to these routes is not available, needs and opportunities for FFM freight network designation will likely be more relevant (and more important) for ongoing state, county, and local planning purposes.

Coupled with GIS overlays, this system connectivity review refocused efforts onto a smaller subset of freight-centric sites/areas where truck travel must rely on the use of lower functional classification roadways (typically collectors or local roads) for connectivity to the broader surrounding roadway and freight networks.

Exhibit 5: Background Highway Freight Networks – New Castle County (2025)

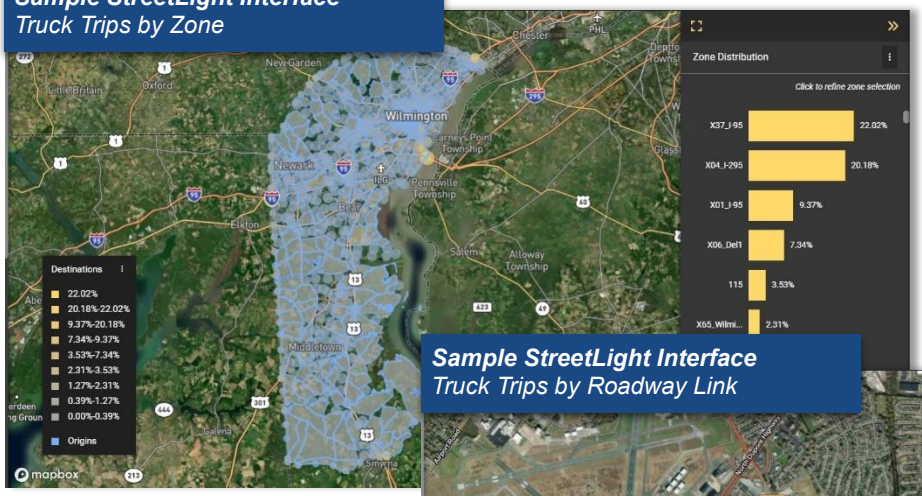


2.1.4 STEP 4 – Local Access and Routing

With freight intensive areas of interest established through prior steps, the next phase shifted to determining viable access and routing between those locations and the surrounding roadway and freight networks. The approach considered site-by-site aerial and mapping reviews, roadway conditions, land use conflicts, known route restrictions, truck origin-destination (O-D) insights, and other factors to determine the likely directions and paths for first/final mile truck access. In many cases, access and routing options were limited or readily apparent, and the roadway segments along an obvious path between a site/area and the broader roadway and freight networks were compiled and mapped for inclusion on the FFM Freight Network.

Where multiple routing options were possible or the most appropriate path was not readily apparent, route characteristics, conditions, restrictions, conflicts, etc., were further investigated. This effort included leveraging StreetLight O-D data resources to explore both general and area-specific truck travel patterns. At a high level, StreetLight data helped to explore the potential directionality of freight to/from individual traffic analysis zones (TAZs) by reviewing the proportion of truck trips between a given zone and selected major roadway entry/exit points at the county boundaries (**Exhibit 6**). Where further insight was needed, a more detailed analysis of truck trips along a specific roadway (or set of roadway links) relative to customized entry/exit gates along routes connecting to/from that portion of roadway was also conducted. Collectively, and in coordination with ground-truthing in the next step of the approach, insights were used to compile routes for the updated FFM Freight Network.

Sample StreetLight Interface
Truck Trips by Zone



Sample StreetLight Interface
Truck Trips by Roadway Link

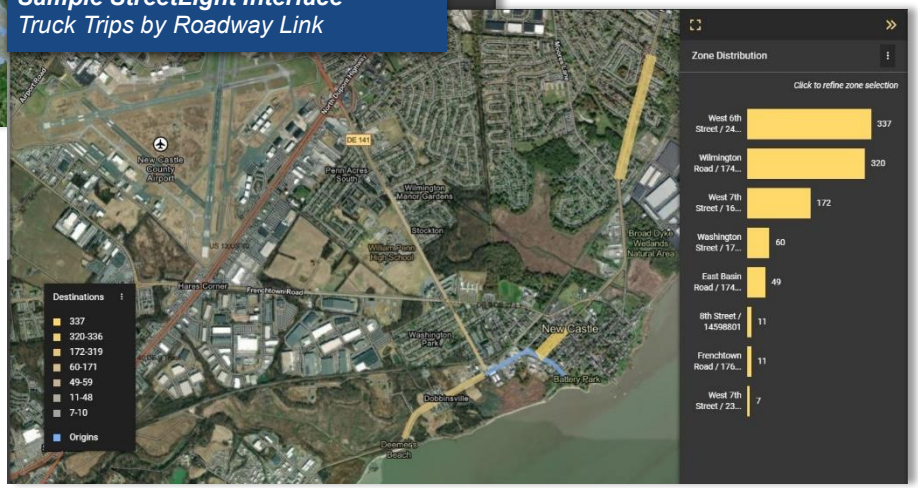
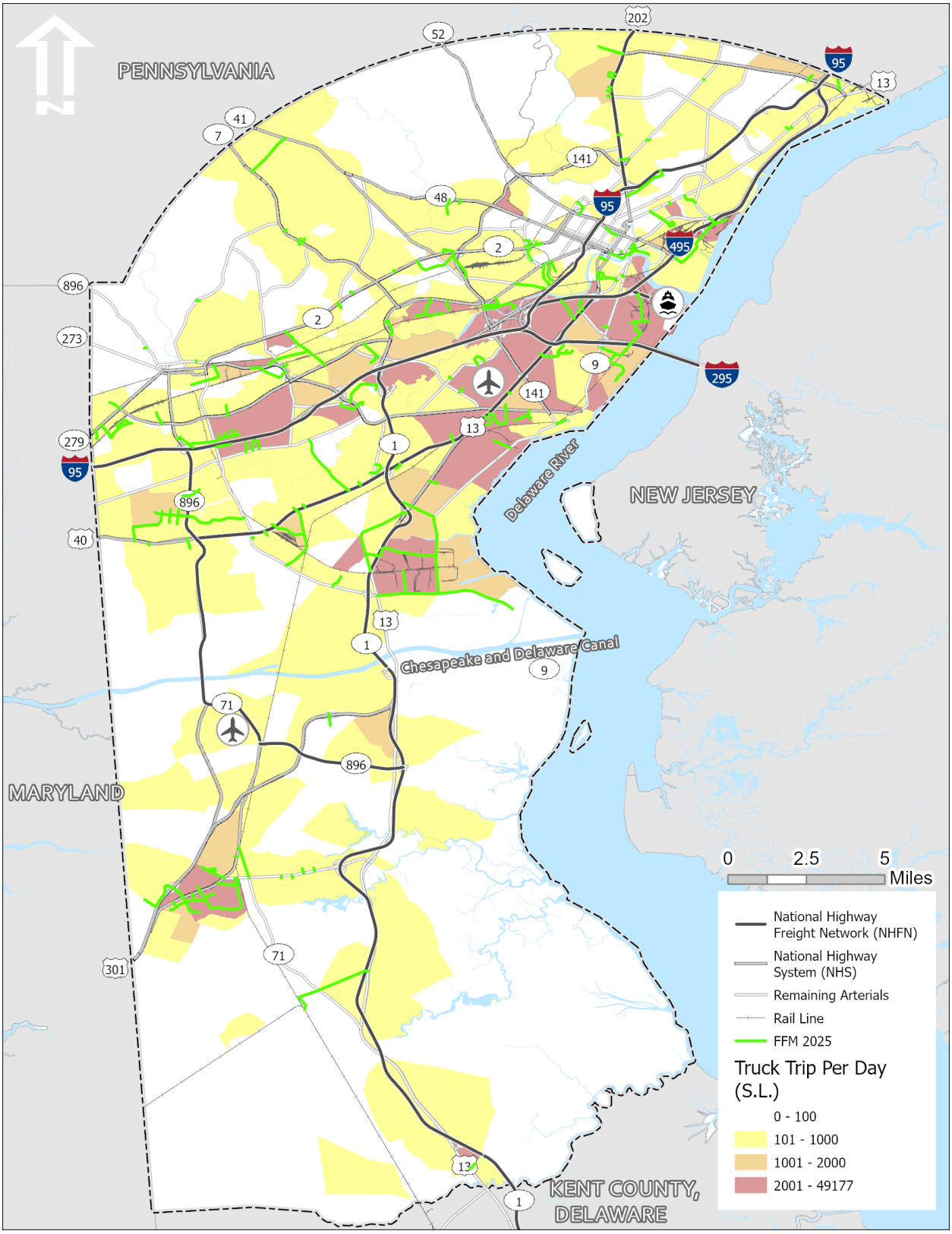


Exhibit 6: Daily Truck Trips by Zone – New Castle County (2024 StreetLight Data)

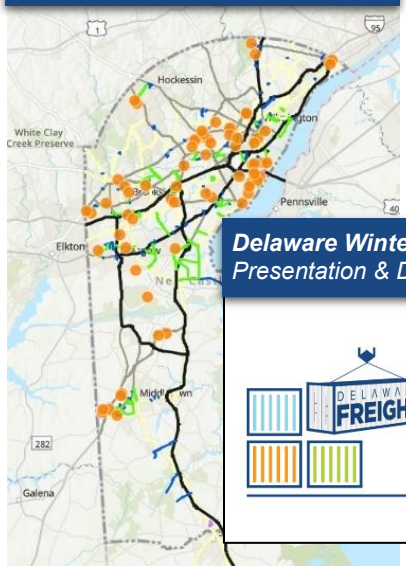


2.1.5 STEP 5 – Review and Confirmation

Following the initial network update, agency/stakeholder reviews were completed to leverage local knowledge and insights relevant to the potential list of FFM freight routes. These efforts primarily involved joint discussions and draft reviews with WILMPACO, New Castle County, and DelDOT Planning. Resources involved direct coordination meetings and the use of ArcGIS Online survey interfaces to share early versions of the mapped routes and provide the opportunity for direct map-based commenting. Additionally, collaborative driving tours were conducted in December 2024 and May 2025 to field review, ground-truth, and revise or confirm selected routes and assumptions.

Broader freight-related stakeholder input opportunities were also solicited via presentation and display table setups held in conjunction with the Delmarva Winter Freight Forum on December 11, 2024; and broader discussion with the WILMAPCO Council and Technical Advisory Committee (TAC) beginning in early 2025. These combined agency/stakeholder review efforts supported ongoing network refinements, a better understanding of current and future land uses served by the proposed routes, and preparations for ongoing assessment of corridor needs, improvement opportunities, and policy perspectives.

ArcGIS Online Feedback Survey
Agency & Stakeholder Comments



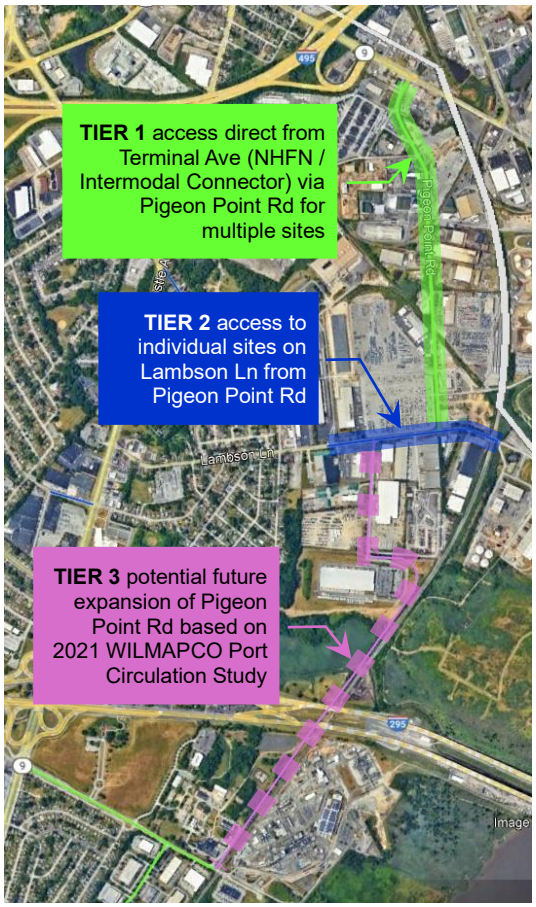
Delaware Winter Freight Meeting
Presentation & Display Table

Field Reviews / Driving Tours
Corridor & Land Use Insights

2.1.6 STEP 6 – Network Compilation

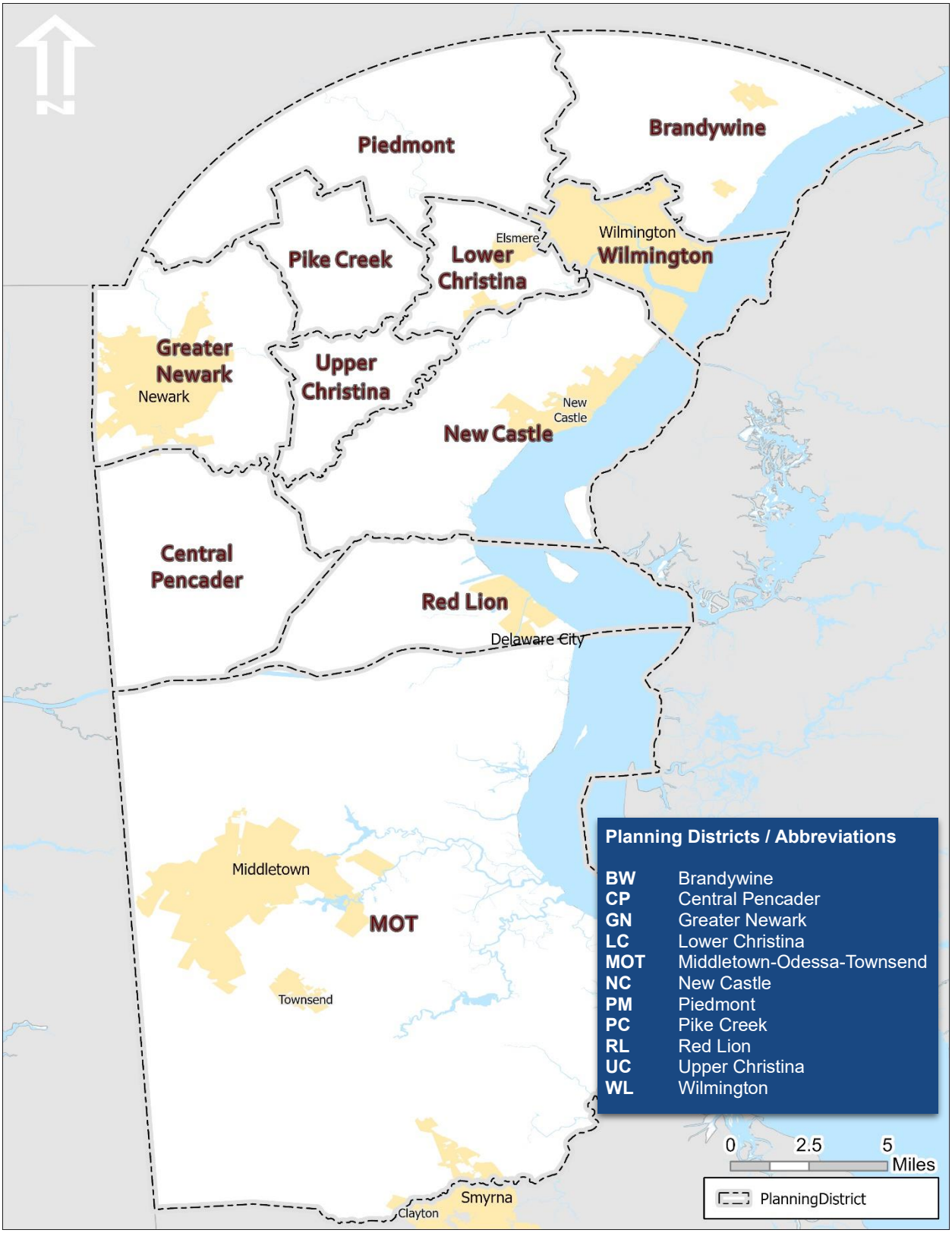
The final step in the initial network identification process involved compiling, organizing, and mapping the updated list of routes for ease of reference in terms of identifying/inventorying the corridors and preparing for subsequent corridor screening and assessment. As part of this compilation, this update introduced a three-tiered FFM Freight Network system to better distinguish and plan for variations between different routes on the network. Tiers were manually assigned to each proposed route based on its general characteristics or primary role in terms of network connectivity or land use access (**Exhibit 7**).

Exhibit 7: First/Final Mile Freight Network Tier Descriptions

Network Tier	Typical Role / Description	Example
TIER 1 FFM Freight Route	Provides direct connectivity with higher functional class roadways and typically serves larger clusters of freight intensive land use (e.g., industrial parks), and/or connects access to/from multiple lesser (Tier 2) network stubs	
TIER 2 FFM Freight Stub	Provides localized access to individual freight intensive sites, often branching off from larger (Tier 1) FFM Freight Network routes, and/or provides isolated site-specific or short-distance connectivity directly to higher functional class roadways	
TIER 3 FFM Potential Future Route Expansion	Highlights routes for advanced planning consideration relative to potential future FFM Freight Network expansion that may be needed to serve future freight intensive growth areas or known development sites	

Finally, within the organizational context of this update, FFM Freight routes were numbered and organized geographically based on existing Delaware Statewide Planning District boundaries. This approach references the 11 existing planning districts within New Castle County (**Exhibit 8**).

Exhibit 8: Planning District Map – New Castle County (2025)



2.2 2025 NETWORK UPDATE

Based on the six-step iterative process described in Chapter 2.1 and building off comparisons to the initial statewide network established in 2021, the New Castle County portion of the FFM Freight Network was updated for 2025 as summarized below (**Exhibit 9** and **Exhibit 10**). The updated (2025) network encompasses 159 corridors and approximately 90 total miles, which reflects approximately 40% additional mileage compared to the initial (2021) network within New Castle County. The increase in network coverage is primarily attributable to the incorporation of FFM Freight Network stub connections (Tier 2), as well as potential future expansion opportunities (Tier 3). Basic corridor inventory details (by planning district) are compiled in **Appendix C** and include:

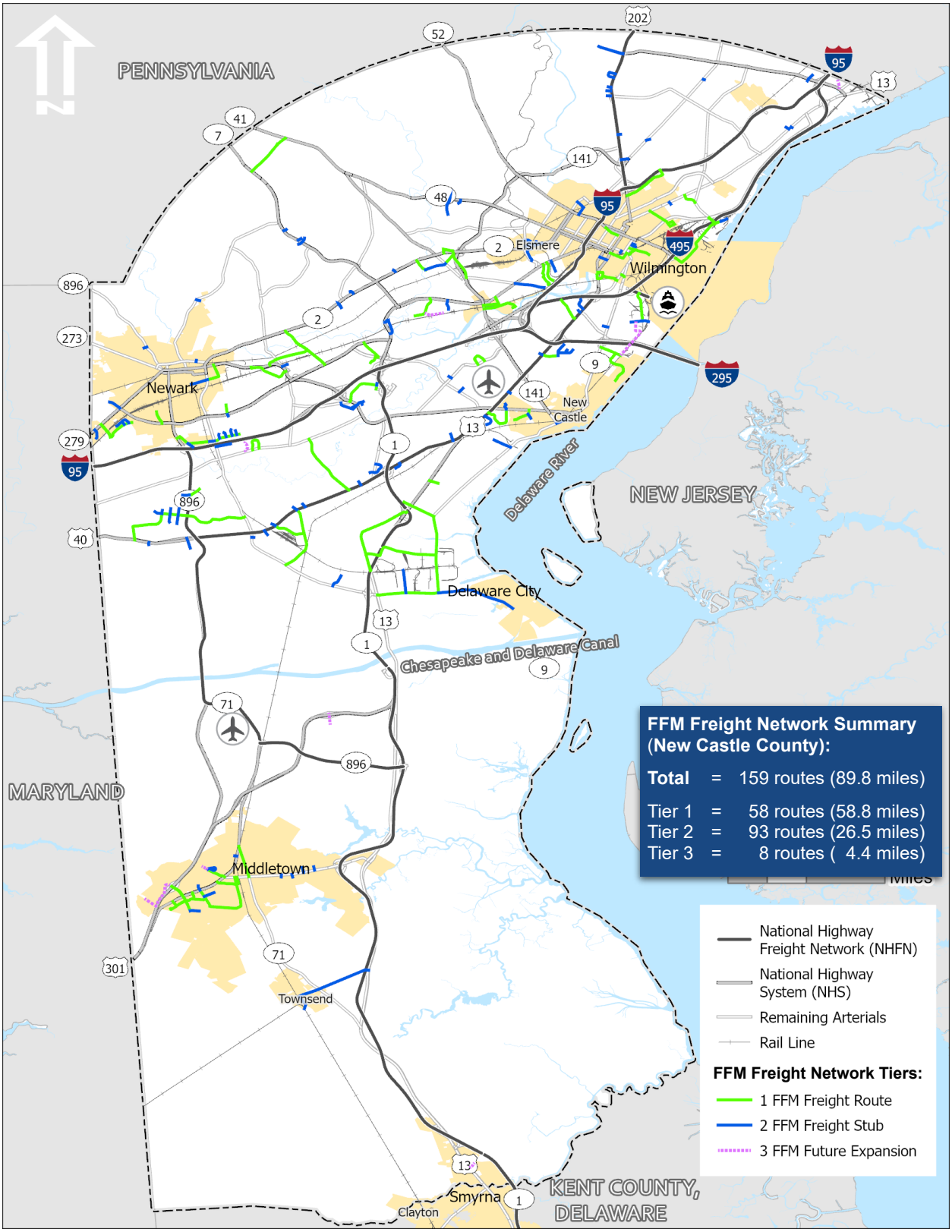
- Route ID number, route name, and notable connected areas each route intends to serve
- Route length, typical number of lanes (bi-directional), and functional classification
- Typical speed limit range (where data was available)
- Typical lane widths and left/right shoulder widths (where data was available)
- Existing sub-area plan/study references that may be relevant to a route's location

The updated network serves as the basis for subsequent conflict screening and strategy assessments in this study. This network can ultimately be leveraged for ongoing corridor monitoring and planning reference throughout future local, county, and statewide planning efforts.

Exhibit 9: First/Final Mile Freight Network – Summary by New Castle County Planning District (2025)

Planning District		First/Final Mile Freight Routes by District							
		TOTAL		Tier 1		Tier 2		Tier 3	
		#	Miles	#	Miles	#	Miles	#	Miles
BW	Brandywine	18	6.8	3	4.0	14	2.5	1	0.3
CP	Central Pencader	16	8.9	5	6.7	11	2.2	-	-
GN	Greater Newark	21	10.1	8	6.7	13	3.0	1	0.4
LC	Lower Christina	18	10.0	8	5.6	9	3.9	1	0.5
MOT	Middletown-Odessa-Townsend	22	13.6	8	7.7	10	3.9	4	2.0
NC	New Castle	29	13.0	9	6.9	19	4.8	1	1.3
PM	Piedmont	1	1.3	1	1.3	-	-	-	-
PC	Pike Creek	7	0.7	-	-	7	0.7	-	-
RL	Red Lion	7	11.7	4	8.6	3	3.1	-	-
UC	Upper Christina	10	9.1	6	7.5	4	1.6	-	-
WL	Wilmington	10	4.7	6	3.7	4	0.9	-	-
--	TOTAL	159	89.8	58	58.8	93	26.5	8	4.4

Exhibit 10: First/Final Mile Freight Network – New Castle County Update (2025)



NOTE: For a fully interactive webmap version of the above, refer to: https://www.wilmapco.org/finalmile/

3 First/Final Mile Freight Network Conflict Screening

3.1 CONFLICT SCREENING APPROACH

Conflict screening for the updated (2025) FFM Freight Network relied on a set of qualitative/quantitative attributes organized by five categories of potential conflicts (defined earlier per **Exhibit 2**) that include:

1. **Institutional** coordination and communication challenges
2. **Land Use** conflicts arising due to freight routes passing through sensitive areas
3. **Mobility** barriers to efficient freight transportation operations
4. **Safety** barriers that may influence the likelihood or severity of crashes
5. **Conditions** based on deteriorated or inadequate infrastructure

Based on available data, planning/policy documents, and relevant freight-related concerns or interest areas, 33 individual screening attributes were identified to help inform the types and/or severity of potential conflicts unique to each corridor on the FFM Freight Network (**Exhibit 11**).

Screening results were aggregated and simplified to estimate a range of low to high conflict potential along any given corridor. These ratings are NOT intended to suggest which corridors are the least/most significant, active, problematic, etc., in terms of their freight role or truck operations. Rather, they focus on summarizing the potential for conflicts between freight/truck activities and other non-freight interests based on the surrounding land uses, multimodal transportation uses, and other relevant conditions captured by the screening attributes.

The FFM routes provide, by definition, necessary first/final mile truck connections to access local business and industry sites; and these sites collectively serve Delaware's local and state economic engines, while also providing the jobs, goods, and services that Delaware residents rely on. While maintaining truck access along the identified FFM routes is critical to keeping these businesses operational, and thus keeping the stream of jobs, goods, and services moving, understanding where and what types of potential conflicts are more likely to occur provides valuable intelligence to help planning partners manage these unique elements of the transportation system more effectively.

Conflict Screening Assumptions

Individual screening attributes (33 total across 5 categories) and primary data sources are summarized in **Exhibit 11**.

The basis for individual screening attributes and Low/Medium/High conflict rating thresholds are expanded in **Appendix D**, as are screening summaries by category by route tier.

The higher-level compilations of screening results for the overall network (summarized in **Chapter 3.2**) are based on an expanded 1-5 conflict rating scale as follows:

- **Rating 1** = Low
- **Rating 2** = Low-Medium
- **Rating 3** = Medium
- **Rating 4** = Medium-High
- **Rating 5** = High

Exhibit 11: Conflict Screening Attributes and Data Sources

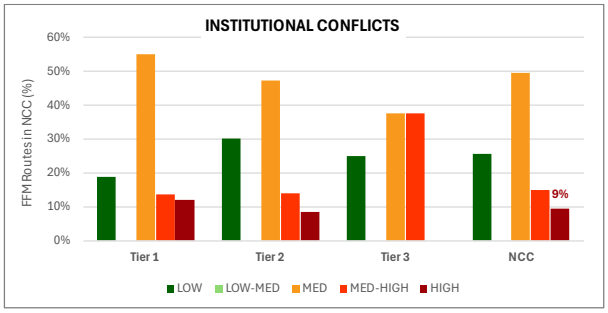
ID / Category / Screening Attribute			Data Source	Influence [a]
1	**INSTITUTIONAL**			
	1a	Area Type	US Census / WILMAPCO	★★★
	1b	Jurisdictional Coordination	Delaware FirstMap	★
	1c	Road Maintenance Responsibility	DelDOT Gateway	★
	1d	Population Density	US Census / ACS / WILMAPCO	★★
	1e	Truck Activity Level	StreetLight via WILMAPCO	★★★
2	**LAND USE**			
	2a	Existing Land Use	Delaware 2022 Land Cover	★★★
	2b	Future Land Use	NCC Future Land Use Map	★★★
	2c	Planning Investment Level	Office of State Planning Coordination	★
	2d	Environmentally Sensitive Areas	FirstMap, FEMA, WILMAPCO	★★
	2e	Recreational Land Uses	FirstMap, NCC REST Service	★
	2f	Environmental and/or Transportation Justice	WILMAPCO, DelDOT	★★
	2g	Air Quality	EPA via WILMAPCO	★★★
3	**MOBILITY**			
	3a	Lane Widths	DelDOT Road Inventory	★★
	3b	Shoulder Widths	DelDOT Road Inventory	★★★
	3c	RR At-Grade Crossing Train Frequency	FRA	★
	3d	RR At-Grade Crossing Blockage Time	FRA	★
	3e	Bridge Vertical Clearance Over Road	WILMAPCO	★
	3f	Bridge Weight Restriction	WILMAPCO	★
	3g	Truck Turn Clearance	Field/Aerial Observations	★
4	**SAFETY**			
	4a	Truck-Involved Crashes	WILMAPCO	★★★
	4b	Truck-Involved Crash Severity	WILMAPCO	★★
	4c	Intersection Safety Rankings	WILMAPCO	★★★
	4d	RR At-Grade Crossings	FirstMap, FRA	★
	4e	Bike Route	FirstMap, NCC, DelDOT	★★★
	4f	Sidewalks	DelDOT Non-Motorized Inventory	★★
	4g	Crosswalks	DelDOT Non-Motorized Inventory	★★
	4h	Schools	FirstMap	★★★
	4i	On-Street Parking	2022 LULC, Field/Aerial Observations	★
5	**INFRASTRUCTURE CONDITIONS**			
	5a	Bridge Conditions	FHWA National Bridge Inventory	★
	5b	Pavement Conditions	DelDOT Road Inventory	★★★
	5c	Pavement Marking Conditions	Field/Aerial Observations	★★★
	5d	Signing Conditions	Field/Aerial Observations	★★
	5e	Sea Level Rise Impact	WILMAPCO, DNREC	★★

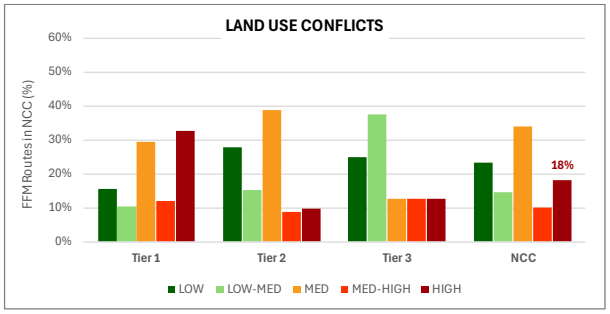
[a] **Table Note:** "Influence" in this context was based on a review of screening results for each attribute (see Appendix D), summarized on a three-star basis from least (★) to most (★★★) influence to determine those criteria that generally showed more differentiation across the set of FFM freight routes and identified routes with higher conflict potential.

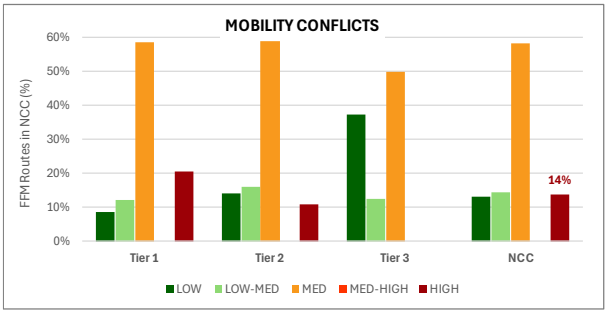
3.2 CONFLICT SCREENING RESULTS

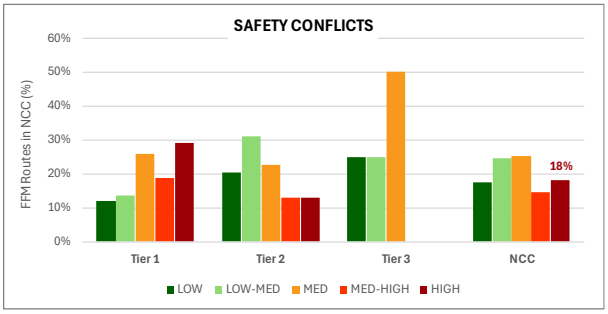
Detailed threshold assumptions and screening results for each attribute are included in **Appendix D**. Summary charts below (**Exhibit 12**) indicate the proportion of the New Castle County FFM freight network that falls within the assumed low-to-high rating bins for each of the five screening categories and the overall countywide network. Corresponding overall conflict ratings by location are mapped on the following page, including labeled identification of all 'High' conflict routes (**Exhibit 13**).

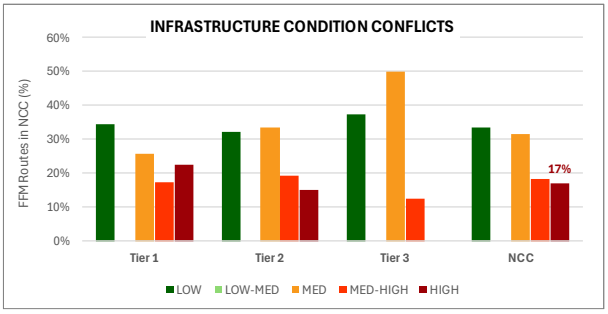
Exhibit 12: Conflict Screening Summary Charts (Rating Proportions by Category / by Tier)

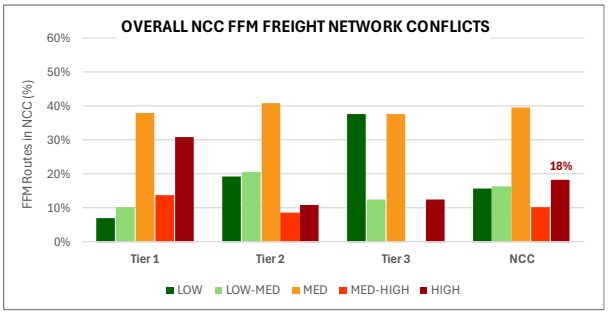








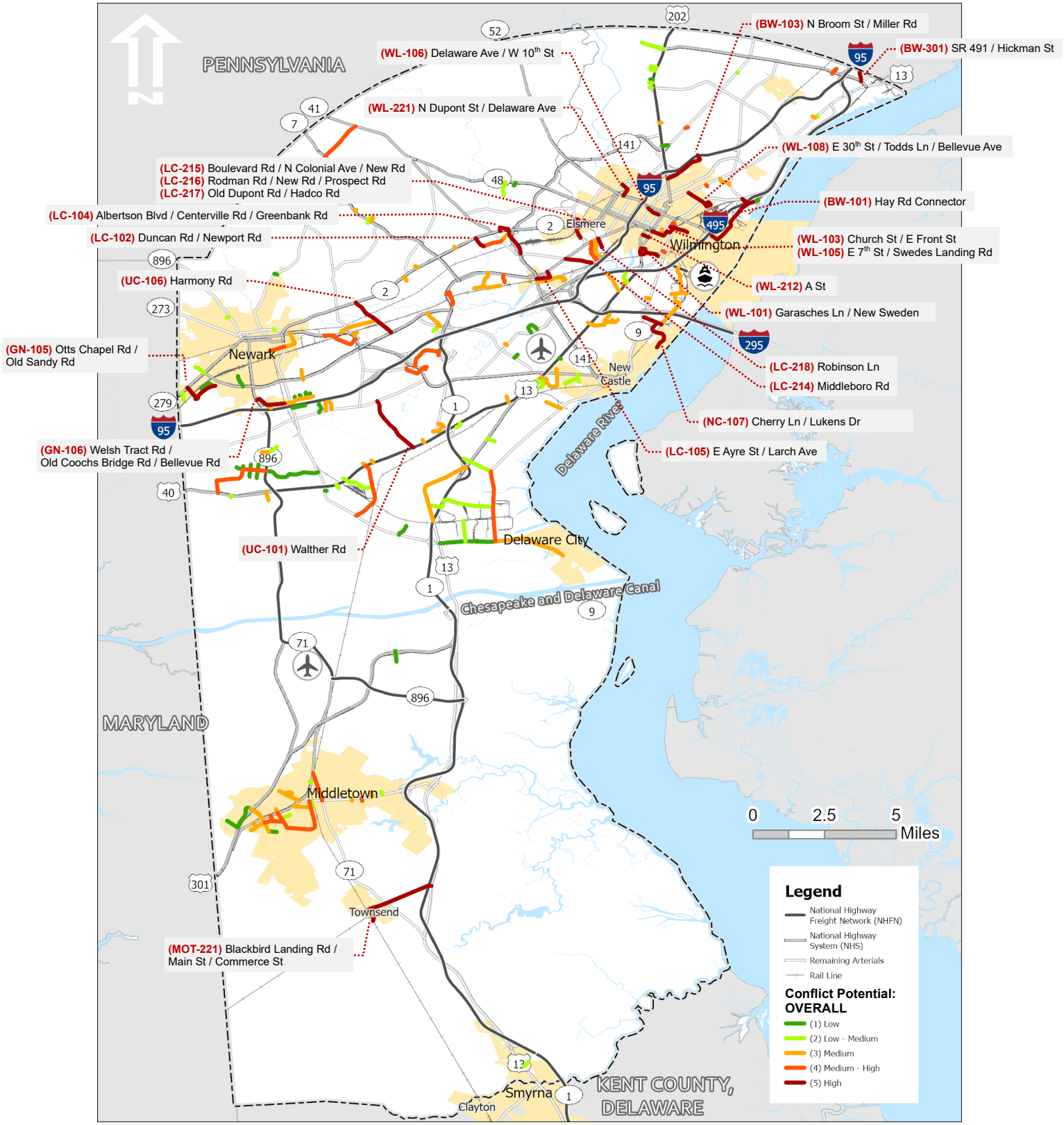




Overall High Conflict Routes

Approximately 18% of all FFM freight routes in New Castle County were rated as having overall 'High' conflict potential. Locations include 29 routes countywide, covering the Tier 1 (18), Tier 2 (10), and Tier 3 (1) corridors labeled on the Conflict Screening Summary Map (Exhibit 13) on the following page.

Exhibit 13: Conflict Screening Summary Map (Overall Rating by Location)



NOTE: For a fully interactive webmap version of the above, refer to: https://www.wilmapco.org/finalmile/

3.3 PROTECT-MANAGE-ACCOMMODATE FRAMEWORK

Leveraging the conflict screening insights alongside field/aerial reviews of site-specific conditions, each FFM freight route on New Castle County's network was assigned an overarching strategy designation within the Protect-Manage-Accommodate (PMA) framework introduced in Chapter 1. These qualitatively assigned designations are mapped (by corridor) on the following page (**Exhibit 14**) and imply the following:

PROTECT

Under a 'Protect' framework, freight movement is a priority need along the FFM freight route. This scenario typically occurs in areas where freight industries are dominant or near freight facilities of high importance. Planning perspectives should emphasize the protection of freight industries from unreasonable conflicts and ensure that efficient freight access, mobility, and infrastructure are available.

MANAGE

Under a 'Manage' framework, both freight and non-freight activities are significant land uses and require shared access along the FFM freight route. This scenario often occurs in mixed-use commercial areas, business parks, or highly developed urban areas. Planning perspectives should emphasize the management and resolution of conflicts in tactical and targeted ways that require a balance between freight, passenger vehicles, and varying degrees of local/residential traffic, including multimodal transit, bicycle, and pedestrian activities.

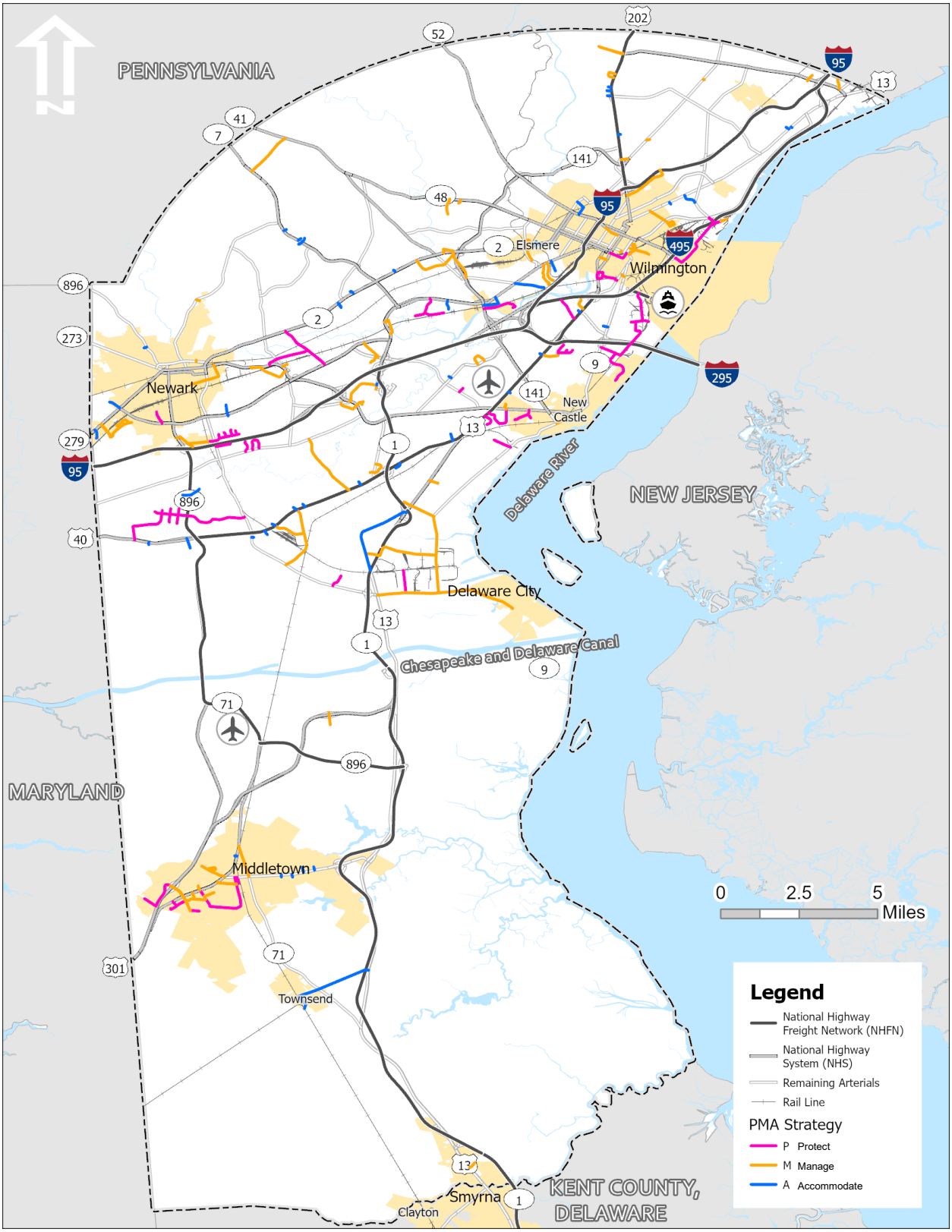
ACCOMMODATE

Under an 'Accommodate' framework, freight access may be limited and/or freight movement may be generally subordinate to other transportation users. This scenario can occur where non-freight businesses and/or residential communities are dominant, where the intended freight access 'ends' at a specific point along many of the shorter Tier 2 FFM freight stubs, or where trucks must use local road connections as their only available route to access isolated or 'landlocked' sites for freight travel, access, and delivery needs. Overarching strategies policies, improvement plans, or corridor operations and management perspectives should include an emphasis on accommodating local freight access needs while preventing major conflicts or issues with the surrounding non-freight land uses, other multimodal transportation users, and local business or residential needs.

PMA Framework Designations by Route

Of the 159 FFM freight routes updated in New Castle County, 39 routes were designated for 'Protect' freight strategies, 67 routes for 'Manage' freight strategies, and 53 routes for 'Accommodate' freight strategies, with locations per the Protect-Manage-Accommodate Strategy Map (Exhibit 14) on the following page.

Exhibit 14: Protect-Manage-Accommodate Strategy Map



NOTE: For a fully interactive webmap version of the above, refer to: https://www.wilmapco.org/finalmile/

4 First/Final Mile Freight Network Solutions

Continuing the organizational context from the initial (2021) statewide FFM Freight Network study, DelDOT, MPOs, and their planning partners have four types of tools improve the overall first/final mile freight system including policies, partnerships, projects, and programs. Strategy details organized around these components creates a toolkit of potential solution options that can be explored and applied to help manage or resolve conflicts on the FFM freight network by enhancing overall systems management while also providing the flexibility to address location-based needs or issues specific to each route. Most, if not all, of these solution options will provide value not just for truck access and first/final mile concerns, but also for broader travel, mobility, and safety interests for all other users of the transportation system.

4.1 POLICIES

Policy-based solutions focus on standards, tools, or recommendations that govern data collection, maintenance, development, or operation of the FFM freight network. Many of these options rely on broader state or county planning efforts to develop, maintain, and apply data and information assets; or to coordinate with land use planning and system routing details that may require formal ordinance or designation support to implement and enforce changes. Policy solution options are summarized in **Exhibit 15**.

4.2 PARTNERSHIPS

Partnership-based solutions focus on state and local stakeholder collaboration to better understand, communicate, educate, or implement efforts to address first/final mile freight network needs and issues. These efforts may include the development of new outreach and education resources or meetings that are unique to first/final mile topics, but they may also take advantage of existing activities already being conducted, for example, as part of other sub-area planning efforts or through agencies such as Delaware Motor Transport Association (DMTA) or University of Delaware Institute for Public Administration (UD IPA). Partnership solution options are summarized in **Exhibit 16**.

4.3 PROJECTS

Project-based solutions focus on design and construction of infrastructure maintenance, improvement, or expansion projects. Project development may be considered in a standalone fashion to design and advertise projects that will directly address identified first/final mile needs, but implementation opportunities will likely be greater when first/final mile needs can instead be captured and accounted for as other broader transportation system improvements are working their way through the project development pipeline. Project improvement needs may encompass intersections, roadway corridors, operations and maintenance, access and connectivity, or broader multimodal considerations based on route specific details. Project solution options are summarized in **Exhibit 17**.

4.4 PROGRAMS

Program-based solutions focus on coordination to support project investments and secure/allocated funding. These efforts are directly related to the Project solution options referenced above, as they cover the critical aspects of funding and programming needed for implementation. As with the Project category, implementation opportunities will likely be greater when first/final mile needs can be captured and accounted for as part of other broader transportation system improvements (versus the potential challenges of an isolated standalone improvement). Program solution options are summarized in **Exhibit 18**.

Exhibit 15: First/Final Mile Freight Network Solutions (POLICIES)

POLICY (POL) Solutions	Conflict Emphasis				
	Institutional	Land Use	Mobility	Safety	Conditions
POL 1 – KNOWLEDGE SHARING *Make first/final mile network knowledge readily available to partners*	•	•			
1.1 Advertise and conduct freight outreach opportunities					
1.2 Manage publicly accessible online mapping tools					
1.3 Compile and update online freight resource libraries					
POL 2 – FIRST/FINAL MILE PLAN CHECKS *Incorporate first/final mile checks into project or plan screening tools*	•	•	•	•	•
2.1 Consider FFM Freight Network details and PMA perspectives in local plans/studies and future development reviews					
2.2 Incorporate or adopt use of Freight and Land Use Planning Considerations Checklist (see copy per **Appendix F**)					
2.3 Refine local ordinances for freight land use trip generation assumptions					
2.4 Refine local ordinances for freight land use onsite truck staging/parking					
POL 3 – DATA MANAGEMENT *Implement freight data changelogs and succession plans*	•				
3.1 Provide FFM freight network review and updates on a regular cycle					
3.2 Enhance staff on-boarding and data maintenance resources					
3.3 Enhance metadata and data dictionaries					
POL 4 – TRUCK ROUTING & RESTRICTIONS *Designate truck routes and restrictions*		•	•	•	•
4.1 Truck route assignments or route restrictions					
4.2 Time-of-day restrictions					
4.3 Truck size/weight restrictions					
4.4 Hazmat restrictions					
4.5 Emissions control restrictions					
4.6 Commercial vehicle parking/loading restrictions					

Exhibit 16: First/Final Mile Freight Network Solutions (PARTNERSHIPS)

PARTNERSHIP (PAR) Solutions	Conflict Emphasis				
	Institutional	Land Use	Mobility	Safety	Conditions
PAR 1 – STAKEHOLDER COOORDINATION *Educate local planning stakeholders about freight operations*		•	•	•	
1.1 Develop freight-relevant outreach materials					
1.2 Engage UD IPA in FFM Freight Network data and coordination					
1.3 Coordinate with local chambers of commerce					
1.4 Coordinate with local economic development agencies					
PAR 2 – TRUCK SAFETY EDUCATION *Support truck safety education and outreach for the public*			•	•	
2.1 Develop safety-relevant outreach materials					
2.2 Engage DMTA in public outreach coordination					
2.3 Promote “Sharing the Road Program” (Virginia Tech Transportation Institute)					
PAR 3 – PUBLIC OUTREACH & ENGAGEMENT *Continue public outreach and inclusion for freight projects*		•			
3.1 Leverage existing community monitoring/engagement efforts for sub-area planning to further coordinate freight needs					
3.2 Engage local community members in outreach efforts					
3.3 Identify context-sensitive freight impact mitigation opportunities					

Exhibit 17: First/Final Mile Freight Network Solutions (PROJECTS)

PROJECT (PRJ) Solutions	Conflict Emphasis				
	Institutional	Land Use	Mobility	Safety	Conditions
PRJ 1 – INTERSECTION IMPROVEMENTS *Build truck-relevant intersection improvements*			•	•	
1.1 Implement geometric improvements for truck turning clearance					
1.2 Add and/or lengthen intersection turn lanes					
1.3 Include mountable truck aprons in roundabout designs					
1.4 Consider truck operations in innovative intersection designs					
PRJ 2 – ROADWAY IMPROVEMENTS *Build truck-relevant roadway improvements*			•	•	•
2.1 Ensure adequate lane widths					
2.2 Add and/or widen shoulder widths					
2.3 Implement pavement patching/resurfacing improvements					
2.4 Ensure adequate pavement/shoulder design for truck loads					
2.5 Relocate truck route/access point to new connector road					
2.6 Ensure adequate horizontal curve design					
2.7 Ensure adequate vertical clearance					
PRJ 3 – OPERATIONAL IMPROVEMENTS *Optimize truck-relevant operational influences*			•	•	•
3.1 Adjust signal timings and detection for truck operations					
3.2 Add and/or enhance roadway pavement markings					
3.3 Enhance signing for positive truck guidance					
3.4 Enhance signing for truck restrictions					
3.5 Clear encroaching vegetation or other roadside obstructions					
3.6 Provide designated loading/delivery zones					
3.7 Expand and/or enhance truck parking opportunities					
3.8 Expand and/or enhance onsite truck parking/staging areas					
PRJ 4 – MULTIMODAL CONFLICT REDUCTION *Minimize conflicts with other modes of travel*		•		•	
4.1 Consider alternate truck routing or new/relocated access					
4.2 Consider truck widths / travel needs near on-street parking areas					
4.3 Consider truck widths / travel needs in Complete Streets design					
4.4 Enhance, buffer, or relocate pedestrian facilities					
4.5 Enhance, buffer, or relocate bicycle facilities					

Exhibit 18: First/Final Mile Freight Network Solutions (PROGRAMS)

PROGRAM (PRG) Solutions	Conflict Emphasis				
	Institutional	Land Use	Mobility	Safety	Conditions
PRG 1 – FEDERAL FUNDING PROGRAMS *Leverage federal funding programs for first/final mile improvement opportunities*			•	•	•
1.1 National Highway Performance Program (NHPP)					
1.2 Surface Transportation Program (STP)					
1.3 Highway Safety Improvement Program (HSIP)					
1.4 Congestion Mitigation and Air Quality Improvement Program (CMAQ)					
1.5 Transportation Infrastructure Finance and Innovation Act (TIFIA)					
1.6 Federal competitive grant programs [b]					
PRG 2 – STATE FUNDING PROGRAMS *Leverage state/county-level funding programs for first/final mile improvements*			•	•	•
2.1 Coordinate w/ DE Capital Transportation Program (CTP)					
2.2 Coordinate w/ DE Highway Safety Improvement Program (HSIP)					
2.3 Coordinate w/ DE Rail Hazard Elimination Program (HEP)					
2.4 Explore new state line-item funding programs for freight needs					
PRG 3 – MPO FUNDING PROGRAMS *Leverage MPO programs for first/final mile improvements*			•	•	•
3.1 Coordinate w/ MPO Unified Planning Work Program (UPWP)					
3.2 Coordinate w/ Intersection Control Evaluation (ICE) findings and related funding, study, and/or implementation opportunities					
3.3 Explore new MPO line-item funding program for freight needs					

Table Notes:

[a] Eligibility for programs will vary with coverage generally including National Highway System (NHS) routes (via NHPP); federal-aid highways (via STP); efforts to reduce fatalities and serious injuries (via HSIP); efforts to reduce congestion and improve air quality in nonattainment and maintenance areas (via CMAQ); federal credit assistance for select project types including highway, rail, and intermodal freight transfer facilities (via TIFIA).

[b] Grant program guidance and opportunities vary widely and are subject to change between funding reauthorizations. Refer to USDOT resources via https://www.transportation.gov/grants/dot-navigator/find-federal-grant-opportunities.

5 Implementation Opportunities

As noted in the prior chapter, the pursuit of implementation opportunities for FFM Freight Network improvements may vary from standalone efforts to mutually beneficial planning for first/final mile needs as part of other broader transportation system improvements. To better prepare for the pursuit of implementation opportunities, information in this chapter compiles insights relevant to timeframe and cost perspectives, sub-area plan coordination, strategy reviews for "High" conflict FFM freight routes (including details in **Appendix F**), site-specific example opportunities, emphasis on the use of the Freight and Land Use Planning Considerations Checklist (similar to the template in **Appendix G**), and future data updates.

5.1 TIMEFRAME AND COST PERSPECTIVES

Specific solutions, implementation timeframes, and costs will vary significantly as each FFM freight route and its local context, needs, and constraints will all be unique. While variable, a high-level set of assumptions for typical timeframe and cost considerations is summarized below (**Exhibit 19**).

Exhibit 19: First/Final Mile Freight Network Solutions (TIMEFRAMES AND COSTS)

FFM Freight Network Solutions		Typical Timeframe	Typical Cost
Policy (POL) Solutions			
POL 1	Knowledge Sharing	Ongoing	$ - $$
POL 2	First/Final Mile Plan Checks	Ongoing	$
POL 3	Data Management	Ongoing / Periodic	$
POL 4	Truck Routing & Restrictions	ST - MT	$ - $$
Partnership (PAR) Solutions			
PAR 1	Stakeholder Coordination	Ongoing	$ - $$
PAR 2	Truck Safety Education	Ongoing	$ - $$
PAR 3	Public Outreach & Engagement	Ongoing	$ - $$
Project (PRJ) Solutions			
PRJ 1	Intersection Improvements	ST – MT	$$ - $$$
PRJ 2	Roadway Improvements	MT – LT	$$ - $$$
PRJ 3	Operational Improvements	ST – MT	$ - $$$
PRJ 4	Multimodal Conflict Reduction	ST – LT	$ - $$$
Program (PRG) Solutions			
PRG 1	Federal Funding Programs	MT – LT	Funding pursuit costs vary but are also integral within the overall agency planning/programming processes. Higher cost burdens will be involved for competitive grant pursuits or for the development of new state/MPO programs.
PRG 2	State Funding Programs	ST – LT	
PRG 3	MPO Funding Programs	ST – LT	

Table Legend:

Timeframe = (ST) Short Term ~ 1 to 3 years; (MT) Medium Term ~ 3 to 8 years; (LT) Long Term ~ 8+ years

Cost = ($) Low Cost; ($$) Medium Cost; ($$$) High Cost; Ongoing/Periodic implies based on project/program needs.

5.2 SUB-AREA PLAN COORDINATION

Sub-area transportation plans have been completed for several areas throughout New Castle County. Those plans were developed with public and stakeholder involvement and reflect local community goals and strategies. Many FFM freight routes fall within a sub-area planning area. To ensure coordination and the best outcomes for the community, actions associated with FFM freight routes where there is a sub-area plan should include consultation of that plan and, where applicable, the associated monitoring/stakeholder organization. Likewise, further sub-area planning and implementation should involve consideration of the FFM freight network and this report. Cross coordination will support more efficient and effective outcomes for both the FFM freight network and the local community.

Recent sub-area plans relevant to this FFM freight network update are listed below and referenced (by corridor) in the lists of FFM freight routes included in the appendices (see **Appendix C** and **Appendix F**).

- 7th Street Peninsula Study - wilmapco.org/7thstreetpeninsula/
- Churchmans Crossing Study / Transportation Improvement District - wilmapco.org/churchmans/
- City of New Castle Transportation Plan - wilmapco.org/cityofnewcastle/
- Governor Printz Corridor Study - wilmapco.org/governorprintz/
- Kirkwood Highway Study - wilmapco.org/kirkwood/
- Newark Transit Study - wilmapco.org/newarktransit/
- Newark Transportation Improvement District – deldot.gov/Programs/transportation-improvement-districts/
- Newport Transportation Plan - wilmapco.org/newport-transportation-plan/
- North Claymont Area Master Plan - wilmapco.org/ncamp1/ncampreport.pdf
- Route 9 Master Plan - wilmapco.org/route9/
- Southern New Castle County Master Plan - wilmapco.org/snccmp/
- US 202 / Concord Pike Study - wilmapco.org/202-2/
- US 40 Corridor Improvement Plan – deldot.gov/projects/index.shtml?dc=corridor&name=us-40

5.3 INTERSECTION INVENTORY AND IMPROVEMENTS

Intersections are critical points along freight routes, often introducing bottlenecks and movement conflicts that can significantly impact the efficiency and safety of goods movement. Efficiently managing intersections is crucial for reducing congestion, delays, and crashes, ultimately optimizing freight transportation and minimizing environmental impacts. During the land use development process, intersections are generally where most of the required improvements are made to mitigate traffic impacts. Ideally, as part of the preliminary land use development process, considerations should be made to account for maintaining the safe and efficient flow of freight regardless of whether the active plan or development is freight related. Additionally, a proactive approach can be seen as an opportunity to address many minor freight-related issues (e.g., signage, striping, truck aprons, etc.) by incorporating freight-relevant improvements into other project or development work efforts as they are being designed and implemented.

FFM Freight Network Intersection Inventory

Appendix E lists over 220 key intersections along the 2025 FFM Freight Network in New Castle County with characteristics for location, type, functional classification, safety and congestion statistics, and proximity to existing or ongoing WILMAPCO studies. These details aim to support broader land use development, sub-area planning, intersection evaluation, or similar initiatives to help expand ongoing and future implementation opportunities for freight-relevant intersection improvements.

5.4 STRATEGY REVIEW FOR HIGH CONFLICT FFM FREIGHT ROUTES

Based on the screening approach, results, and PMA framework summarized in Chapter 3, 'High' conflict FFM freight routes include those that received an overall potential conflict rating of 5 on the study's 1-5 (low-to-high) rating scale. As part of the 2025 network update, the subset of overall 'High' conflict routes was reviewed to identify possible network improvement strategies that may be exceptionally relevant to each route based on strategy options from **Exhibit 15** through **Exhibit 18** (Chapter 4).

'High' Conflict FFM Freight Route Insights

Appendix F summarizes route specific insights (sample below) for high conflict routes that may be used to lay the groundwork for future coordination efforts and follow-up studies that would be necessary to further identify, assess, select, budget, and implement specific improvements on any given route.

ID	Route Name	PMA Framework Assignment	Conflict Scores					Strategies														
								POL				PAR			PRJ				PRG		
			Institutional	Land Use	Mobility	Safety	Condition	POL 1 - Knowledge Sharing	POL 2 - First/Final Mile Plan Checks	POL 3 - Data Management	POL 4 - Truck Routing & Restrictions	PAR 1 - Stakeholder Coordination	PAR 2 - Truck Safety Education	PAR 3 - Public Outreach & Engagement	PRJ 1 - Intersection Improvements	PRJ 2 - Roadway Improvements	PRJ 3 - Operational Improvements	PRJ 4 - Multimodal Conflict Reduction	PRG 1 - Federal Funding Programs	PRG 2 - State Funding Programs	PRG 3 - MPO Funding Programs
Brandywine District (BW)																					
TIER 1																					
BW-101	**Hay Rd Connector** (incl. E 12th St, Edgemoor Rd, Lighthouse Rd)	P	4	2	5	5	5	✓	✓			!	✓		✓	!	!	✓	✓	✓	✓
BW-103	**N Broom St / Miller Rd** (incl. Talley Rd)	M	3	5	5	5	1		✓		✓	✓	!	✓	✓	!	✓	!			

In many cases, most if not all strategies may be applicable to at least portions of each high conflict FFM freight route listed in **Appendix F**. However, the review in this case focused on those strategies that merit extra emphasis (denoted by a checkmark (✓) in the sample above) and a select few that may serve more as primary recommendations (denoted by an exclamation point (**!**) in the sample above) based on the specific conflicts unique to each route. Details in **Appendix F** also identify "special considerations" for each corridor to help inform future improvement or implementation planning details.

5.5 SITE-SPECIFIC EXAMPLE DETAILS

Based on insights from the FFM related field views, conflict screening, and coordination conducted as part of this update, six site-specific example details were documented to take a closer look at potential improvement concepts or implementation needs for a handful of FFM freight network routes. These examples (and their related FFM freight routes) include the following:

- **Newport Area / Sears Boulevard Extension**: affects FFM freight routes on MacArthur Drive (LC-212), First State Boulevard (LC-101), and Sears Boulevard (LC-301). This concept focuses on a potential new freight connection that would divert freight access away from residential streets.

- **Robinson Business Park:** affects the FFM freight route on Robinson Lane (LC-218). This concept focuses on accommodation strategies that may provide enhanced organization and safety along a route where truck access to Robinson Business Park directly overlaps multimodal residential traffic.

- **Middleboro Road and Meco Drive Access Limitations:** affects FFM freight routes on Middleboro Road (LC-214) and Brookside Drive/Meco Drive (LC-107). This concept focuses on accommodation strategies with freight access that bypasses residential, school, and park traffic, with options to explore a future localized connection that could accommodate diversion to a separate route.

- **Old DuPont Road Spot Improvements:** affects the FFM freight route on Old DuPont Road/Hadco Road (LC-107). This concept reflects a mixed-use freight and residential traffic situation and focuses on spot improvements that would affect all modes via upgraded pavement markings, intersections, curb cuts, and pedestrian facilities.

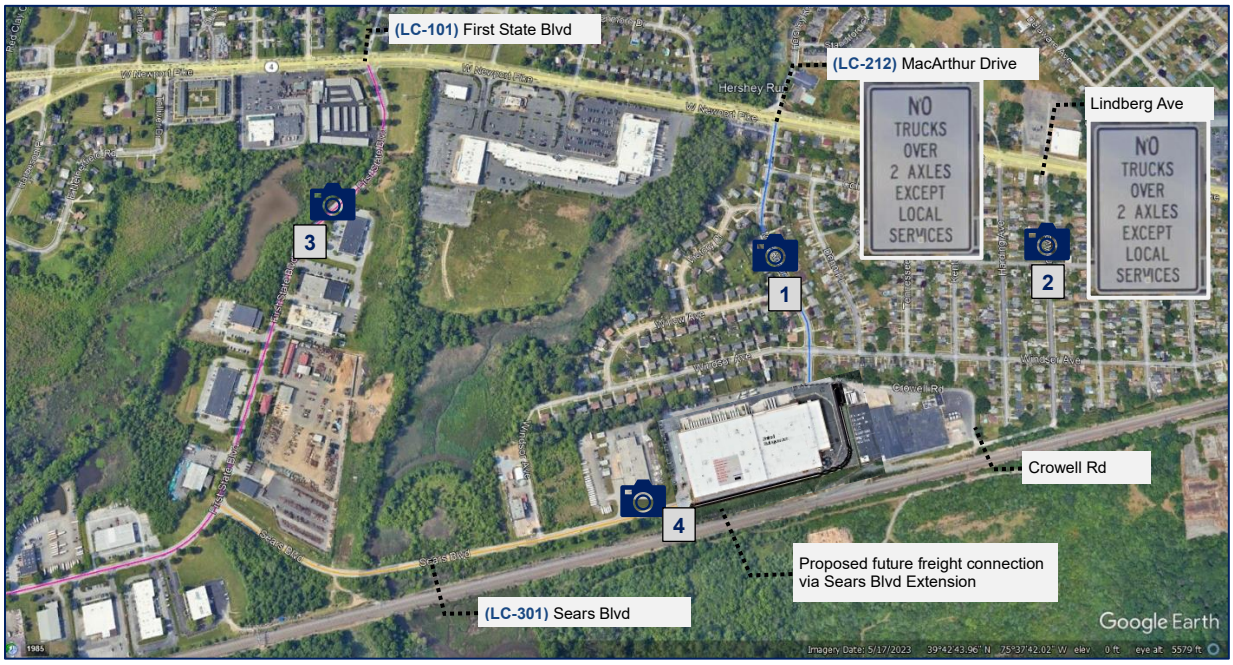
- **Route 4 and Harmony Road Intersection:** affects the FFM freight route on Harmony Road (UC-106). This concept focuses on intersection improvements that balance the needs of multimodal pedestrian/bicycle users while also accommodating required turn clearance for large trucks.

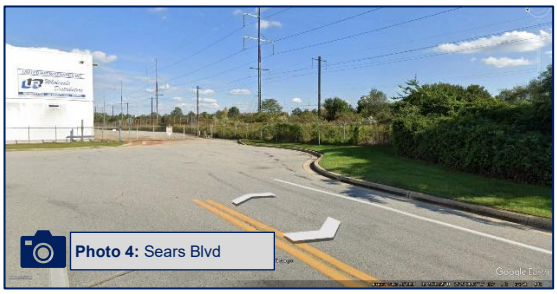
- **Pigeon Point Road Extension:** affects FFM freight routes on Pigeon Point Road (NC-109), Lambson Lane (NC-230), Cherry Lane (NC-107), and a potential future new roadway connection via the Pigeon Point Extension (NC-301). The route focuses on enhancing truck access efficiency between Port Wilmington and I-295, while also providing opportunities to help mitigate the impacts of port related truck traffic on the surrounding residential communities and streets.

5.5.1 Newport Area / Sears Boulevard Extension

Freight Issue: Existing local freight access in the Newport area generates direct travel conflicts along Lindberg Avenue and MacArthur Drive between Delaware Route 4 (West Newport Pike) and a "stranded" freight site along Crowell Road. Both access roads are primarily residential streets.

Improvement Opportunity: Continue to manage existing truck access along Lindberg Avenue or MacArthur Drive via outreach, education, access limitations, signing and marking improvements, or other strategies that mesh with the PMA's "Accommodate" framework. Longer term, pursue the construction of an alternate truck access connection via extension of Sears Boulevard to relocate trucks onto a more appropriate route via First State Boulevard and Sears Boulevard (reference DelDOT Project **#T202209902**).

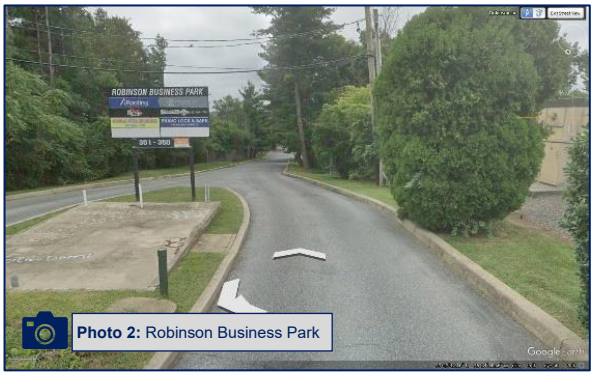




5.5.2 Robinson Business Park

Freight Issue: Existing local freight access generates direct travel conflicts along Robinson Lane between Delaware Route 4 (Maryland Avenue) and access to/from Robinson Business Park. The route sees a mix of residential and commercial traffic, including Evergreen Apartments directly adjacent to the street with on-street parking, pedestrian traffic, and related residential activities.

Improvement Opportunity: Consider appropriate route upgrades to help manage existing car and truck travel and related residential conflicts along Robinson Drive via outreach, education, signing and marking improvements, or other strategies that mesh with the PMA's "Accommodate" framework. Adding, extending, or upgrading pavement markings, for example, may help to organize and calm traffic along the route, including a focus on defining travel lanes, turn lanes, parking areas, pedestrian crosswalks, or similar.



5.5.3 Middleboro Road and Meco Drive Access Limitations

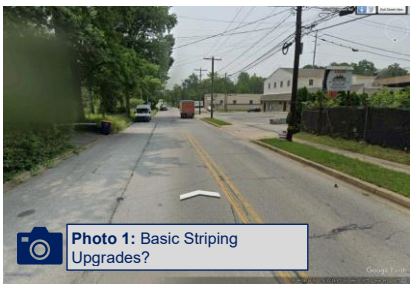
Freight Issue: Existing local freight access generates direct travel conflicts along Middleboro Road between Delaware Route 4 (Newport Pike / Maryland Avenue) and business/industrial sites along its eastern end and along Meco Circle. These conflicts include residential, school, and recreational traffic including Richardson Park Elementary School, Delaware Military Academy, and Banning Regional Park.

Improvement Opportunity: Continue to manage potential conflicts along Middleboro Road via outreach, education, or other strategies that mesh with the PMA's "Accommodate" framework. Longer term, explore ownership, right-of-way, maintenance, and/or access issues along Meco Circle to develop a potential future connection between Meco Circle and Meco Drive, which is currently blocked by curbing and barrier. With a direct connection, truck access to business/industrial areas at the eastern end of Middleboro Road and along Meco Circle could be re-routed to a more freight-appropriate Tier 1 FFM freight connection (LC-107) from Delaware Route 4 onto Brookside Drive and Meco Drive.

5.5.4 Old DuPont Road Spot Improvements

Freight Issue: Portions of Old DuPont Road (LC-217) and connectivity to Hadco Road (LC-217) provide direct access to local freight/industrial sites located near Delaware Route 100 (South DuPont Road), while also providing direct access for local residential homes and apartments along the same route. Shared use of the roadway inevitably results in periodic conflicts between freight and residential travel activities.

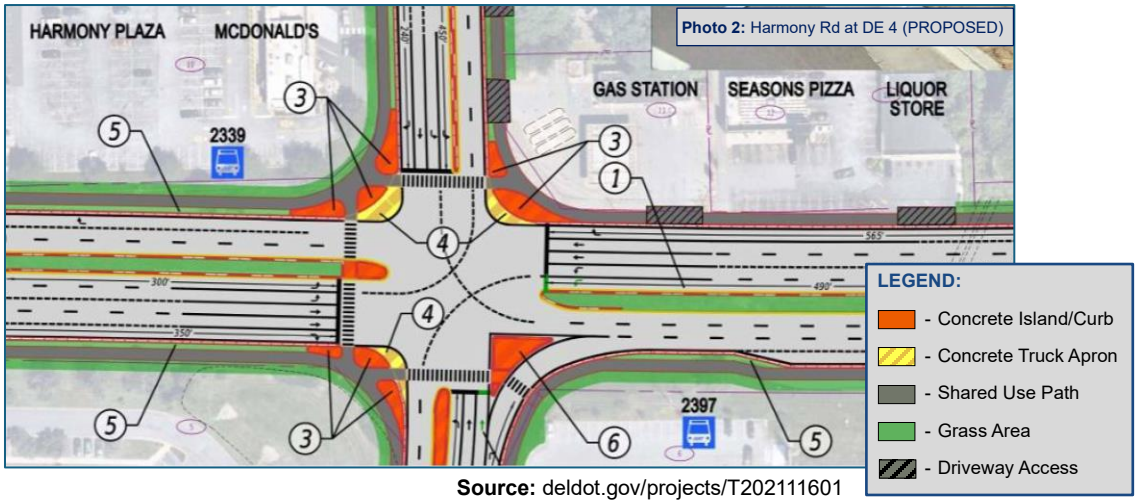
Improvement Opportunity: Manage potential conflicts along Old DuPont Road via outreach, education, or other strategies that mesh with the PMA's "Manage" and/or "Accommodate" framework. These efforts should explore spot-improvements along the route to help reduce conflict potential, especially at critical intersection junctions or where residential/pedestrian traffic may be more frequent. Such improvements may include basic pavement marking upgrades, intersection improvements, a reduction of closely spaced curb cuts, and pedestrian and/or crosswalk improvements where appropriate.



5.5.5 Route 4 and Harmony Road Intersection

Freight Issue: Harmony Road (UC-106) generally provides a north/south link between Delaware Route 4 (Ogletown Stanton Road) and Delaware Route 2 (Capitol Trail), including truck access for local commercial shopping plazas as well as freight/industrial clusters approximately midway, near Ruthar Drive (UC-105). This truck activity shares the roadway with significant surrounding residential traffic, including multimodal pedestrian, bicycle, and transit connections at the intersection of Harmony Road and Delaware Route 4.

Improvement Opportunity: Manage truck access along Harmony Road using strategies that mesh with the PMA's "Manage" or "Accommodate" framework while also exploring intersection improvements at the intersection of Harmony Road and Delaware Route 4. These improvements should emphasize creation of a protected intersection that enhances pedestrian access while also maintaining required truck turning clearance using new truck aprons in lieu of the existing larger radii corners and sweeping right-turn slip lanes (reference DelDOT Project **#T202111601**).



Source: deldot.gov/projects/T202111601

5.5.6 Pigeon Point Road Extension

Freight Issue: Existing truck activity to/from Port Wilmington and the surrounding industrial areas do not currently have direct access to I-295, and conflicts between truck traffic and residential neighborhood interests do occur. A series of previous studies, including the WILMAPCO Port Circulation Study (May 11, 2022) (wilmapco.org/freight/Port_Access_Final.pdf), have explored options to keep trucks out of existing and future neighborhoods while simultaneously improving freight movement efficiency and potential opportunities to handle industrial area expansion.

Improvement Opportunity: As detailed in the 2022 WILMAPCO Port Circulation Study, options to extend Pigeon Point Road would provide enhanced access between Port Wilmington and I-295 and tentatively reduce the volume of trucks currently using Delaware Route 9 (New Castle Avenue) north of I-295 up to the Southbridge Community, in support of the Route 9 Corridor Master Plan. Proposed connections could include a new roadway that generally parallels the Norfolk Southern rail corridor and connects from Lambson Lane (NC-230) via Davidson Lane (NC-301) to Cherry Lane (NC-107) with access to I-295 via the existing I-295 / DE 9 interchange. Additional coordination should also include the newer (currently underway as of 2025) Southbridge Truck Bypass Study (wilmapco.org/southbridge/).

5.6 FREIGHT AND LAND USE PLANNING CONSIDERATIONS CHECKLIST

Relative to an expanding network of warehouses, distribution centers, and e-commerce activities, Delaware has explored key planning considerations for freight-related development. Products include a summary checklist to help determine what general types of freight and land use impacts may need to be considered in local planning or economic development work. This product was initially introduced with the 2021 FFM Freight Network Study, refined and re-referenced in the 2022 Delaware State Freight Plan, and has continued to evolve as an overarching emphasis on first/final mile conflicts and needs continues to grow. A copy of the latest revision to this form has been further updated as part of this 2025 FFM Freight Network Study and is included for reference in **Appendix G**.

Ongoing work by the New Castle County Department of Land Use is also reviewing content similar to the Freight and Land Use Planning Considerations Checklist included here, tentatively linking portions of that content and/or the checklist itself to formal county ordinance updates.

5.7 FFM FREIGHT NETWORK UPDATE DATA

In addition to the above strategy lists, example details, and planning checklists, additional FFM freight network tools/resources may continue to be developed and explored using the technical datasets, screening summaries, and related mapping developed for this update. Examples may include the development of online publicly accessible mapping resources, additional strategy reviews for specific corridors, or expansion/consideration relative to other counties within Delaware. All relevant electronic mapping/screening details will be shared across WILMAPCO, New Castle County, and DelDOT staff for future system reference and ongoing network management or refinements.

First/Final Mile Freight Network Update: New Castle County, DE

APPENDIX A:

Screening Data Sources

Appendix A: Screening Data Sources

Category and Screening Attributes		Dataset, Vintage	Source
1	**INSTITUTIONAL**		
1a	**Urban/Rural Area Designation**	Census Urban Areas, 2020 (smoothed)	US Census Bureau (via WILMAPCO)
1b	**Jurisdictional Coordination**	Municipalities (accessed Fall 2024)	Delaware FirstMap
1c	**Road Maintenance Responsibility**	Road Maintenance Responsibility (accessed Spring 2025)	DelDOT Gateway feature service
1d	**Population Density**	Population Demographics by TAZ, August 2024 (DE_TAZ_Aug24_region.shp)	American Community Survey, US Census Bureau (via WILMAPCO)
1e	**Truck Activity Level**	varies	StreetLight (via WILMAPCO)
2	**LAND USE**		
2a	**Existing Land Use**	Delaware Land Cover, 2022	Delaware FirstMap
2b	**Future Land Use**	Future Land Use (accessed Spring 2025)	New Castle County GIS Explorer feature service
2c	***SSPS* Planning Investment Level**	Strategies for State Policies and Spending, 2020	Delaware FirstMap
2d	**Environmentally Sensitive Areas**		
-	Wetland Location	Wetlands (non-regulatory), 2017 (accessed Fall 2024)	Delaware FirstMap
-	Natural Protected Area Location	Public Protected Lands, Nature Preserves, Natural Areas (accessed Fall 2024)	Delaware FirstMap
-	Wellhead Protection Area Location	Hydrology feature set (accessed Spring 2025)	New Castle County GIS Explorer feature service
-	Flood Plain	National Flood Hazard Layer, 2024	FEMA
2e	**Recreational Land Uses**		
-	Byways	Byways (accessed Spring 2025)	New Castle County GIS Explorer feature service
-	Recreational Land	Outdoor Recreation Areas (accessed Fall 2024)	Delaware FirstMap
-	Recreational Trails and Pathways	Trails and Pathways (accessed Fall 2024)	Delaware FirstMap
2f	**Environmental and/or Transportation Justice**	EJ and TJ Areas (EJ_Areas_TJ2025_region.shp)	WILMAPCO
2g	**Air Quality**	Diesel Emissions, 2020 (EJ_Screen_2020_Freight_Emissions_region.shp)	EJ Screen Tool, EPA (via WILMAPCO)
3	**MOBILITY**		
3a	**Lane Widths**	DelDOT Road Inventory, 2023 (accessed Fall 2024)	Delaware FirstMap
3b	**Shoulder Widths**	DelDOT Road Inventory, 2023 (accessed Fall 2024)	Delaware FirstMap
3c	**RR At-Grade Crossing Train Frequency**	Rail Network Safety Data (accessed Spring 2025)	FRA (https://fragis.fra.dot.gov/GISFRASafety/)
3d	**RR At-Grade Crossing Blockage Time**	Blocked Crossing Data (accessed Spring 2025)	FRA (https://www.fra.dot.gov/blockedcrossings/incidents)
3e	**Bridge Vertical Clearance Over Road**	Delaware Bridges 2.0 (accessed Fall 2024)	Delaware FirstMap
3f	**Bridge Weight Restriction**	National Bridge Inventory 2.0 (accessed Spring 2025)	FHWA
3g	**Truck Turn Clearance**	field work conducted Spring 2025	Field/Aerial Observations
4	**SAFETY**		

Appendix A: Screening Data Sources

Category and Screening Attributes		Dataset, Vintage	Source
4a	**Truck-Involved Crashes**	Truck Class Crash Points Classes 4 and 5 (TRK_Class_4_5_2019_2023_point.shp)	WILMAPCO
4b	**Truck-Involved Crash Severity**	Truck Class Crash Points Classes 4 and 5 (TRK_Class_4_5_2019_2023_point.shp)	WILMAPCO
4c	**Intersection Safety Rankings**	Intersection Crash Rankings, 2021-2023 (Int_21_23_10plus_FINAL_point.shp)	WILMAPCO
4d	**RR At-Grade Crossings**	Delaware RR Crossings 2.0 (accessed Spring 2025)	Delaware Firstmap
4e	**Bike Route**	Delaware Bicycle Network Model 2.0 (accessed Spring 2025)	Delaware Firstmap
4f	**Sidewalks**	Delaware Nonmotorized Inventory, 2019 (DE_NonmotorizedInventory_2019_polyline)	WILMAPCO
4g	**Crosswalks**	Delaware Nonmotorized Inventory, 2019 (DE_NonmotorizedInventory_2019_polyline)	WILMAPCO
4h	**Schools**	Delaware Schools (accessed Fall 2024)	Delaware FirstMap
4i	**On-Street Parking**	Delaware Land Cover, 2022; field work conducted Spring 2025	2022 LULC, Field/Aerial Observations
5	**INFRASTRUCTURE CONDITIONS**		
5a	**Bridge Conditions**	National Bridge Inventory 2.0 (accessed Spring 2025)	FHWA
5b	**Pavement Conditions**	Road Inventory 2.0 (accessed Spring 2025)	Delaware FirstMap
5c	**Pavement Marking Conditions**	field work conducted Spring 2025	Field/Aerial Observations
5d	**Signing Conditions**	field work conducted Spring 2025	Field/Aerial Observations
5d	**Sea Level Rise**	Delaware Coastal Inundation, 2017	Delaware Firstmap (via WILMAPCO)

First/Final Mile Freight Network Update: New Castle County, DE

APPENDIX B:

Freight Intensive Sector (FIS)

Employment Data

APPENDIX B:

2025 Freight Intensive Sector (FIS) Employment Data Review

Employment data can further an understanding of where freight demands and truck activity are more concentrated. Relevant details include key employment locations or clusters (based on traffic analysis zones or TAZs) as well as employment by industry sector, particularly for Freight Intensive Sectors (FIS). Though FIS industries often capture much of the heavy cargo that is traditionally thought of in the context of freight planning, all sectors of the economy generate various types of freight activity, but each does so in different amounts. NCFRP has classified typical freight activities and contribution levels for FIS and non-FIS industries (**Exhibit B-1**) based on the following:

Freight Intensive Sectors (FIS)

Based on guidance from the National Cooperative Freight Research Program (NCFRP), **FIS** may be described as industry sectors within the economy where the production and consumption of cargo is central to the activity performed by the establishment, as compared to Non-Freight Intensive Sectors (**non-FIS**) where the cargo itself is of secondary importance. Nationwide, about 45% of industry establishments and half the employment correspond to FIS.

Source: NCFRP Research Report 37 [3]

- **Freight Generation (FG)** is the amount of cargo generated by a commercial establishment, with dominant examples relating to agriculture, quarrying, or manufacturing.
- **Freight Trip Generation (FTG)** is the number of freight vehicle trips generated by a commercial establishment, with dominant examples relating to wholesale/retail trade or food services.
- **Service Trip Generation (STG)** is the number of service trips generated by a commercial establishment, including notable volumes of traffic from a wide variety of technicians and service providers for many non-FIS industries such as professional services, healthcare, or education. These trips often involve vans, pickups, or single unit trucks that occupy curb/delivery space for extended periods, often directly influencing urban freight delivery and parking needs.[3]

FIS industries are especially dependent on efficient freight and goods movement systems to be competitive within the marketplace. Within New Castle County, FIS employment (as filtered for this study) comprises over 19% of the county's total employment with a notable FIS presence in manufacturing, oil and gas extraction, transportation and warehousing, hospitality, and food services.[4] From the perspective of FFM freight connectivity, these details reflect compiled FIS employment in four industry sub-groups with each grouping anticipated to have similar types of freight/truck activities or related FFM transportation needs. Groupings generally consisted of (1) natural resource extraction, utilities, and construction; (2) manufacturing; (3) wholesale trade, transportation, and warehousing; and (4) retail trade, accommodation, and food services (**Exhibit B-2** through **Exhibit B-6**).

[3] **Source:** National Academy of Sciences, Engineering, and Medicine – Transportation Research Board (TRB), NCFRP Research Report 37 – Using Commodity Flow Survey Microdata and Other Establishment Data to Estimate the Generation of Freight, Freight Trips, and Service Trips: Guidebook, 2017, https://www.trb.org/NCFRP/Blurbs/175283.aspx.

[4] **Source:** All employment details leveraged for this study reflect Year 2022 employment data shared by WILMAPCO and compiled by the consultant team based on data resources from *Data Axle* (https://www.data-axle.com/).

Exhibit B-1: Typical Freight Contributions by Industry Sector [3]

NAICS	Description	Freight Generation (FG)	Freight Trip Generation (FTG)	Service Trip Generation (STG)
	Freight Intensive Sectors (FIS)			
11	Agriculture, Forestry, Fishing, and Hunting	+++	+	+
21	Mining, Quarrying, and Oil and Gas Extraction	+++	+	+
22	Utilities	++	+	+
23	Construction	+++	+	+
31-33	Manufacturing	++	++	+
42	Wholesale Trade	++	+++	++
44-45	Retail Trade	++	+++	++
48-49	Transportation and Warehousing	++	++	++
72	Accommodation and Food Services	++	+++	++
	Non-Freight Intensive Sectors (non-FIS)			
51	Information	+	+	++
52	Finance and Insurance	+	+	++
53	Real Estate and Rental and Leasing	+	+	++
54	Professional, Scientific, and Technical Services	+	+	+++
55	Management of Companies and Enterprises	+	+	++
56	Administrative and Waste Services	+	+	++
61	Educational Services	+	+	++
62	Health Care and Social Assistance	+	+	++
71	Arts, Entertainment, and Recreation	+	+	++
81	Other Services (except Public Administration)	+	+	++

Table Legend: +++ = major contributor; ++ = mid-level contributor; + = small contributor

Exhibit B-2: FIS Employment Groupings based on FFM Freight Perspectives

Map Group and Symbol [a]	NAICS [b]	Typical FIS Industries
GROUP 1: Natural Resource Extraction, Utilities, and Construction		
●	**11**	Agriculture, Forestry
●	**21**	Mining, Quarrying
●	**22**	Utilities
●	**23**	Construction
GROUP 2: Manufacturing		
⬟	**3111-3122**	Food, Beverage, Tobacco
⬟	**3131-3231**	Textiles, Apparel, Leather, Wood, Paper Products
⬟	**3241-3262**	Petroleum/Chemical Products, Plastics, Rubber
⬟	**3271-3329**	Non-metallic Mineral Products, Metals, Fabricated Metals
⬟	**3331-3399**	Machinery, Equipment, Vehicles, Electrical Products, Misc. Products
GROUP 3: Wholesale Trade, Transportation, and Warehousing		
▲	**42**	Wholesale Trade
▲	**48-49** [c]	Transportation (Freight Emphasis) [c]
▲	**4931**	Warehousing
Per Exhibit B-5	**--**	Complete, Partial, Planned, and Promoted Warehouse Activity (WILMAPCO) [d]
GROUP 4: Retail Trade, Accommodation, and Food Services		
■	**44-45**	Retail Trade
■	**7211-7213**	Accommodation
■	**7223-7225**	Food Services

Table Notes:

(a) Employment mapping in this study reflects sites meeting the minimum employment thresholds as defined in Chapter 2.1.2, including at least 100 employees for any retail trade site, and at least 20 employees for any other employment type.

(b) Industry groupings and categorization are based on assessment of two-digit and four-digit *North American Industry Classification System* (NAICS) codes (https://www.naics.com/search/).

(c) To match the freight context of this study, employment mapping for NAICS 48-49 (Transportation and Warehousing) reflects only a customized partial subset of this category focusing on activities that are more directly relevant to freight/truck traffic, e.g., including NAICS 4821 (Freight Rail Transportation), NAICS 4841 (General Freight Trucking), etc., but excluding NAICS 4853 (Taxi and Limousine Service), NAICS 4854 (School and Employee Bus Transportation), etc.

(d) Additional warehouse activity data reflects planning-level information compiled by WILMAPCO for assumed Complete, Partial, Planned, and Promoted sites reflecting (as of December 2024) ~13.6 million SF of warehouse activity in New Castle County in various planning phases or construction.

Exhibit B-3: New Castle County FIS Employment Map (Group 1)

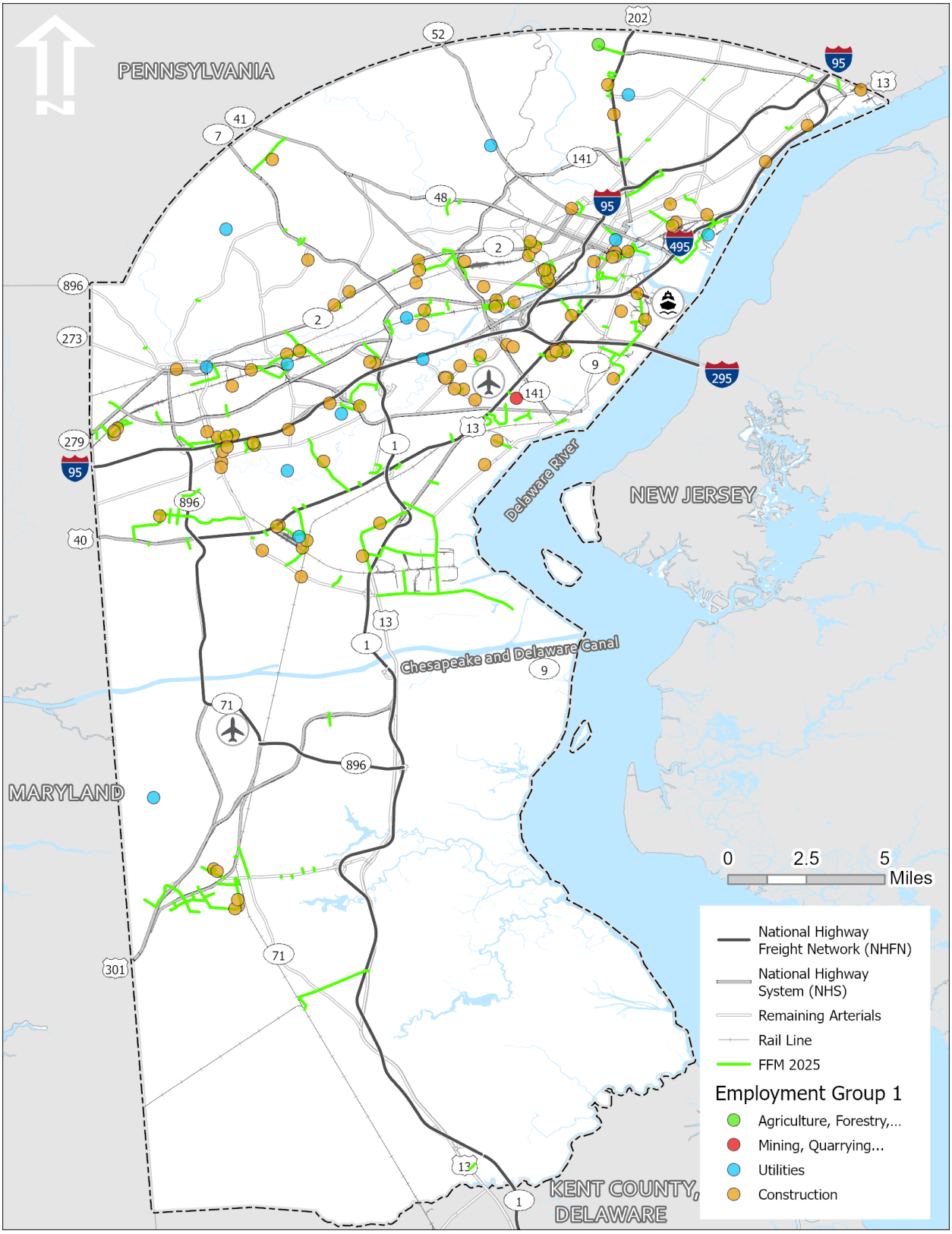


Exhibit B-4: New Castle County FIS Employment Map (Group 2)

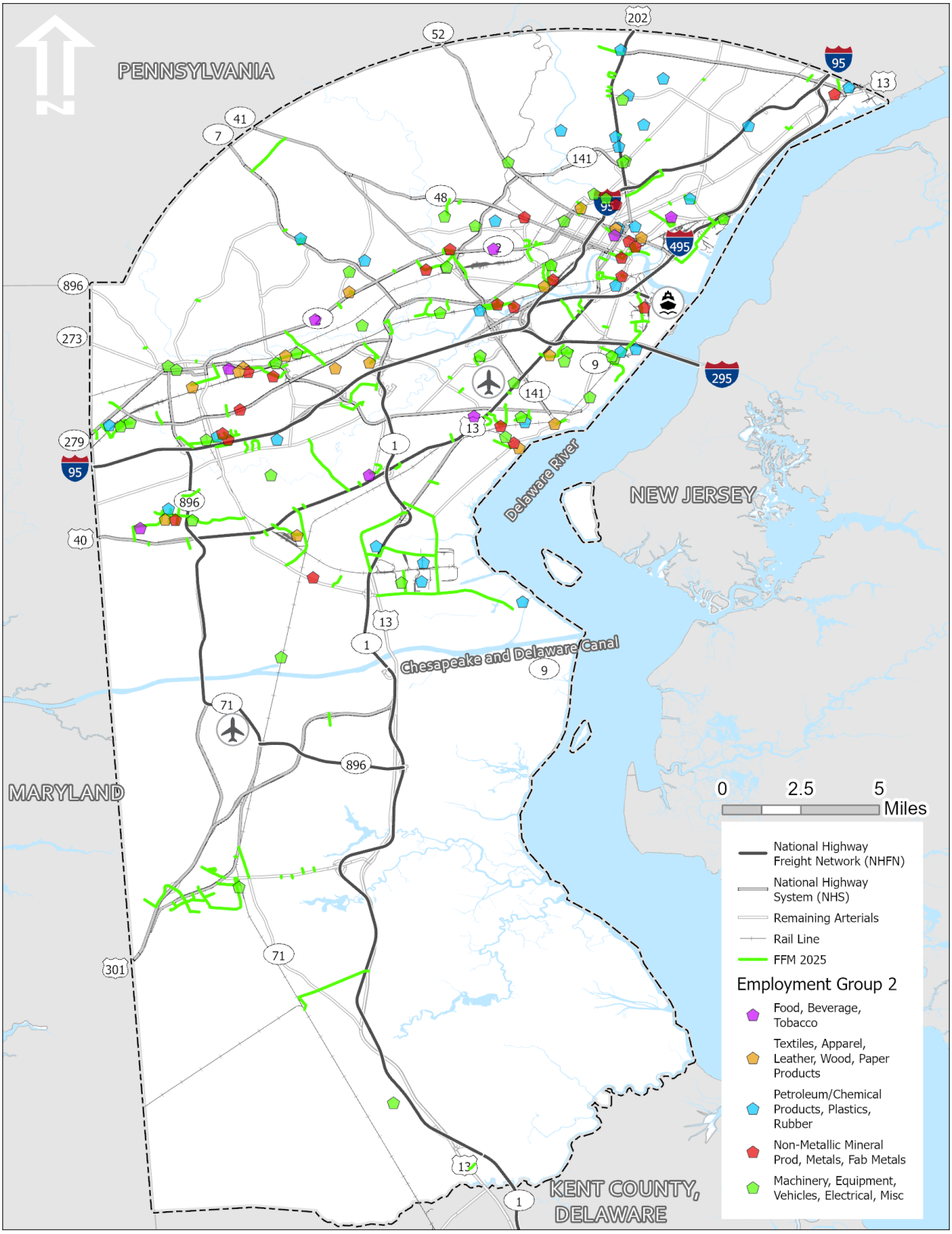


Exhibit B-5: New Castle County FIS Employment Map (Group 3)

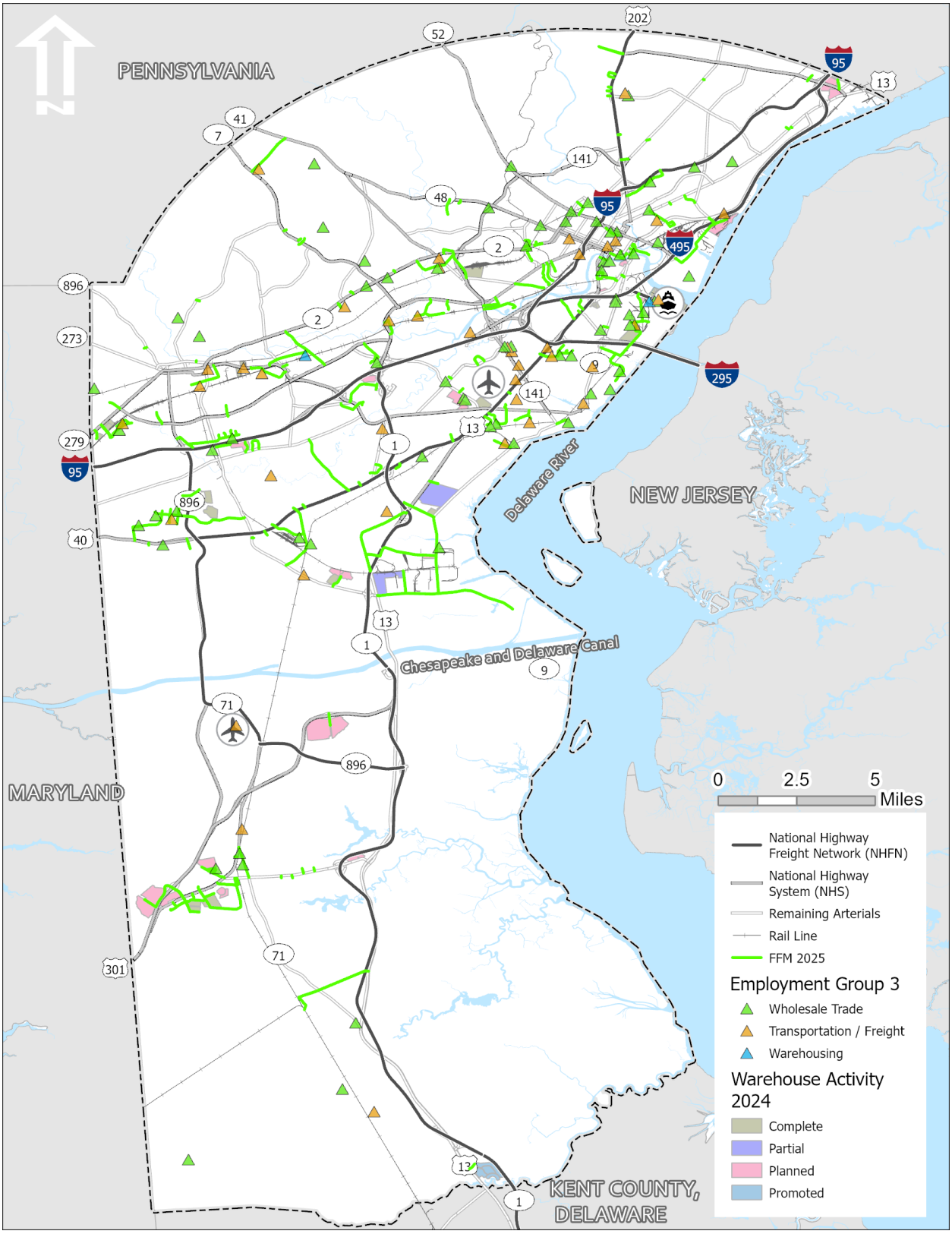
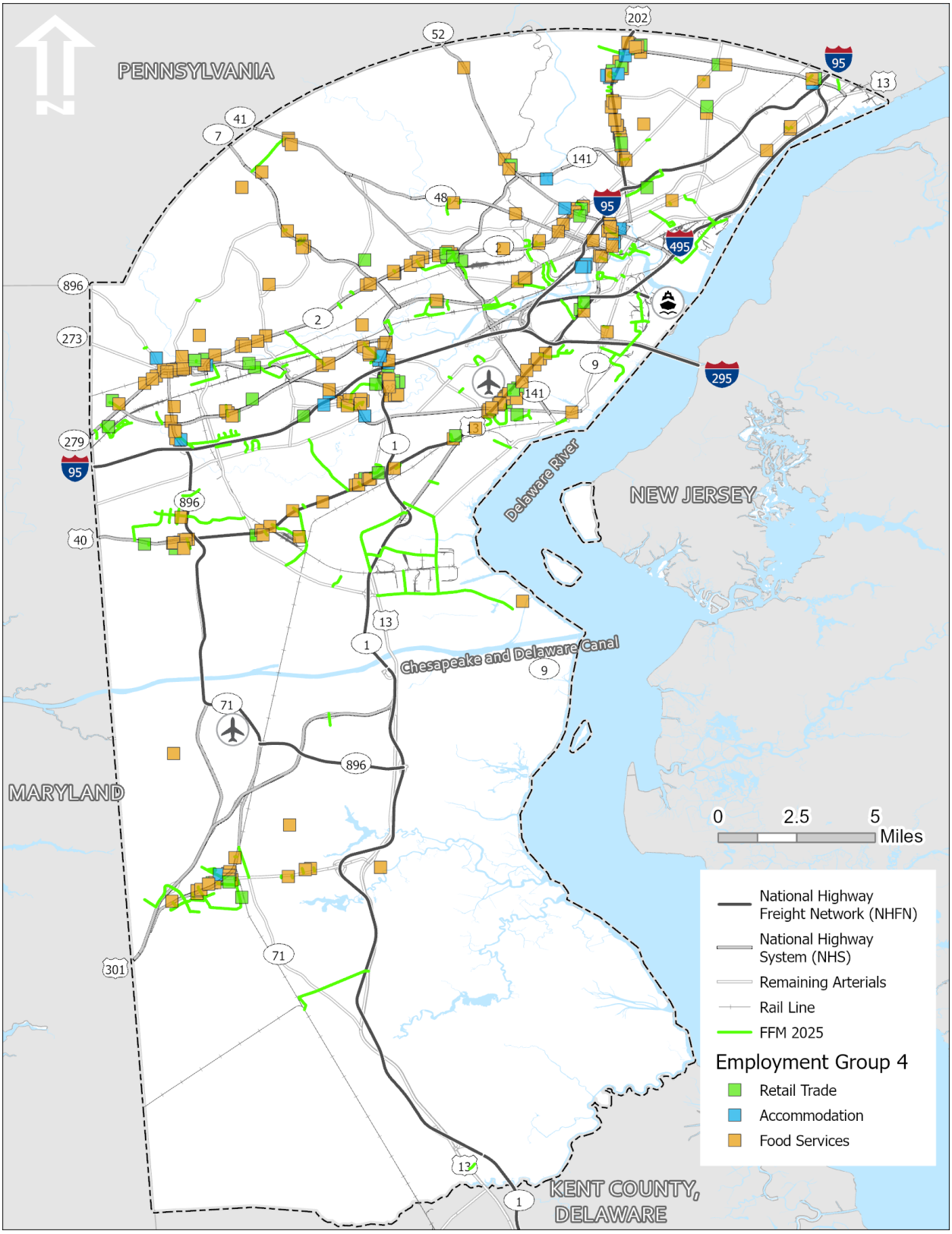


Exhibit B-6: New Castle County FIS Employment Map (Group 4)



First/Final Mile Freight Network Update: New Castle County, DE

APPENDIX C:

2025 First/Final Mile

Freight Network Inventory

ID	Route Name	Connected Area	Length (ft)	Length (mi)	# Lanes (Typ)	Functional Class (Typ)		Speed Limit (Typ) (mph)						Lane Width (Typ) (ft)					Left Shoulder Width (Typ) (ft)						Right Shoulder Width (Typ) (ft)						Sub-Area Plan Relevance
						Collector	Local	< 25	≥ 25 - 35	≥ 35 - 45	≥ 45 - 55	≥ 55	Proportion	< 10	≥ 10-11	≥ 11-12	≥ 12	Proportion	< 2	≥ 2 - 4	≥ 4 - 6	≥ 6 - 8	≥ 8	Proportion	< 2	≥ 2 - 4	≥ 4 - 6	≥ 6 - 8	≥ 8	Proportion	
Brandywine District (BW)																														
TIER 1																														
BW-101	**Hay Rd Connector** (incl. E 12th St, Edgemoor Rd, Lighthouse Rd)	I-495 and US 13 to Port Wilmington Edgemoor and surrounding industries	12,391	2.3	2	C					45		◑				12	◑		2			◑		2				◔	Governor Printz Boulevard Corridor Study
BW-102	**Edgemoor Rd**	US 13 Business to SR 3, Sellers Park and NE Wilmington area	2,017	0.4	2	C				35			●				12	◑				8	◕					8	◕	
BW-103	**N Broom St / Miller Rd** (incl. Talley Rd)	US 202 to Miller Rd Shopping Ctr	6,777	1.3	2	C			25				◕				12	◑			4		◑			4			◑	US 202 Study
TIER 2																														
BW-211	**Lighthouse Rd**	Hay Rd Connector to add'l Edgemoor sites and Fox Point State Park	848	0.2	2		L		25				●			11		●		2			◑					8	◕	Governor Printz Boulevard Corridor Study
BW-212	**E 40th St**	NE Wilmington	358	< 0.1	2		L		25				●				12	●					?						?	
BW-213	**Harvey Rd** (@ Bus. US 13)	US 13 Business to Town & Country Shopping Ctr	472	< 0.1	2	C				35			●				12	●				8	●						?	South Claymont Plan
BW-214	**Grubbs Landing Rd** (@ Bus. US 13)	US 13 Business to Grubbs Landing Plaza	165	< 0.1	2		L		25				●				12	●			4		●			4			●	South Claymont Plan
BW-215	**Peachtree Ln / Society Dr** (@ SR 92)	at SR 92 / Naamans Rd to Northtowne Plaza Shopping Center	1,082	0.2	2		L		25				●			11		◑	min				◑					8	◑	North Claymont Area Master Plan
BW-216	**Grubb Rd**	SR 261 / Foulk Rd to Stanley's Tavern and 7-Eleven	159	< 0.1	2	C				35			●				12	●				8	◑		2				◑	
BW-217	**Wilson Rd** (@ SR 261)	SR 261 / Foulk Rd to Wawa and Old Country Gardens	437	< 0.1	2	C				35			●		10			◑					?						?	US 202 Study
BW-218	**Weldin Rd**	SR 141, SR 261, US 202 to Independence Mall and Brandywine Office Plaza	898	0.2	2	C			25				●				12	◕			4		◕			4			◑	US 202 Study
BW-219	**Fairfax Blvd** (@ US 202)	US 202 to Fairfax Shopping Center	332	< 0.1	2		L		25				●				12	●					?						?	US 202 Study
BW-220	**Garden of Eden Rd** (@ US 202)	US 202 to commerical sites	405	< 0.1	2		L		25				●				12	◕				8	◑			4			◕	US 202 Study
BW-221	**Righter Pkwy** (@ US 202)	US 202 to office plaza and Concord Square	352	< 0.1	2		L		25				●				12	●				8	◑						?	US 202 Study
BW-222	**Rocky Run Blvd / Woodlawn Rd** (@ US 202)	US 202 to Brandywine Commons	2,155	0.4	2		L		25				◑				12	◑					?						?	US 202 Study
BW-223	**SR 92 / Beaver Valley Rd**	US 202 to Hy-Point Farms	4,851	0.9	2	C				35			●				12	◑				8	◔					8	◑	US 202 Study
BW-224	**Passmore Rd**	US 202 to Delaware Corporate Center	484	< 0.1	2		L		25				●				12	●					?						?	
TIER 3																														
BW-301	**SR 491 / Hickman St**	SR 92 to North Claymont area storage, business, and industrial park sites	1,588	0.3	2	C			25				●			11		◕					?						?	North Claymont Area Master Plan

ID	Route Name	Connected Area	Length (ft)	Length (mi)	# Lanes (Typ)	Functional Class (Typ)		Speed Limit (Typ) (mph)						Lane Width (Typ) (ft)					Left Shoulder Width (Typ) (ft)						Right Shoulder Width (Typ) (ft)						Sub-Area Plan Relevance
						Collector	Local	< 25	≥ 25 - 35	≥ 35 - 45	≥ 45 - 55	≥ 55	Proportion	< 10	≥ 10-11	≥ 11-12	≥ 12	Proportion	< 2	≥ 2 - 4	≥ 4 - 6	≥ 6 - 8	≥ 8	Proportion	< 2	≥ 2 - 4	≥ 4 - 6	≥ 6 - 8	≥ 8	Proportion	
Central Pencader District (CP)																														
TIER 1																														
CP-101	**Corporate Blvd / Pencader Dr / Pleasant Valley Rd**	US 40 and SR 896 to Pencader Industrial Park	10,756	2.0	2		L		25				◕				12	●					?						?	US 40 Study
CP-102	**GBC Dr**	SR 896 and SR 72 to Air Liquide Innovation Campus and distribution sites	8,210	1.6	?								?					?					?						?	US 40 Study
CP-103	**E Scotland Dr**	US 40 to National Railroad Passenger Corporation and Rocla Concrete Tie	4,263	0.8	2		L		25				●				12	●					?						?	US 40 Study
CP-104	**Porter Rd**	SR 72 and US 40 to Bear area business and industrial sites	10,522	2.0	2	C				35			●				12	◕					8	◑					8	◕	US 40 Study
CP-105	**Old Cooch's Bridge Rd**	SR 896 to First State Logistics Park	1,720	0.3	2		L			35			◑				12	◑			4			◑			4			◑	US 40 Study
TIER 2																														
CP-211A	**Corporate Blvd** (local stub)	Pencader Industrial Park (internal)	992	0.2	2		L		25				●				12	●					?						?	US 40 Study
CP-211B	**Pencader Dr** (local stub)	Pencader Industrial Park (internal)	530	0.1	2		L		25				●				12	●					?						?	US 40 Study
CP-211C	**Executive Dr**	Pencader Industrial Park (internal)	2,521	0.5	2		L		25				●				12	●					?						?	US 40 Study
CP-211D	**Lake Dr**	Pencader Industrial Park (internal)	2,288	0.4	2		L		25				●				12	●					?						?	US 40 Study
CP-212	**Perch Creek Dr** (@ US 40)	US 40 to Kohls Wawa	346	< 0.1	2		L		25				●				12	●					?						?	US 40 Study
CP-213	**Glasgow Ave** (@ US 40)	US 40 to People's Plaza	1,724	0.3	2	C			25				●				12	◑					8	◕			4			◑	Glasgow Ave Study; US 40 Study
CP-214	**Four Seasons Pkwy** (@ SR 896)	SR 896 to Four Seasons Plaza	851	0.2	2		L			35			◑				12	◑			4			◑			4			◑	US 40 Study
CP-215	**Rickey Blvd** (@ US 40)	US 40 to Fox Run Shopping Ctr	771	0.1	2		L		25				●				12	●					?						?	US 40 Study
CP-216	**Scotland Dr** (@ US 40)	US 40 to Sunset Station shopping plaza	500	< 0.1	2		L		25				●				12	●					8	◑					?	US 40 Study
CP-217	**Salem Church Rd** (@ US 40)	US 40 to Salem Center shopping plaza	595	0.1	2	C				35			●				12	●					8	◑					8	◑	US 40 Study
CP-218	**Rue Madora** (@ SR 72)	SR 72 to Fox Run Shopping Ctr	270	< 0.1																										
TIER 3																														
--					?								○					○						○						○	

ID	Route Name	Connected Area	Length (ft)	Length (mi)	# Lanes (Typ)	Functional Class (Typ)		Speed Limit (Typ) (mph)						Lane Width (Typ) (ft)					Left Shoulder Width (Typ) (ft)						Right Shoulder Width (Typ) (ft)						Sub-Area Plan Relevance
						Collector	Local	< 25	≥ 25 - 35	≥ 35 - 45	≥ 45 - 55	≥ 55	Proportion	< 10	≥ 10-11	≥ 11-12	≥ 12	Proportion	< 2	≥ 2 - 4	≥ 4 - 6	≥ 6 - 8	≥ 8	Proportion	< 2	≥ 2 - 4	≥ 4 - 6	≥ 6 - 8	≥ 8	Proportion	
Greater Newark District (GN)																															
TIER 1																															
GN-101	**Bala Rd / Old Ogletown Rd**	SR 273 to GFP Business Park	5,697	1.1	2	C			25				●				12	◕				8	◑					8	◑	Churchmans Crossing TID
GN-102	**Marrows Rd / Wyoming Rd**	SR 72 and SR 273 to The Grove	3,656	0.7	2	C				35			●				12	◕				8	◕					8	◕	Newark TID, Newark Transit Study
GN-103	**Marrows Rd** (@ SR 4)	SR 4 to Brookside Shopping Ctr	1,616	0.3	2	C			25				●				12	●				6	◑				6		◑	Newark TID, Newark Transit Study
GN-104	**Science Blvd**	SR 4 and SR 896 to STAR Campus	4,127	0.8	?								?					?					?						?	Newark Transit Study
GN-105	**Otts Chapel Rd / Sandy Dr**	SR 279 to Industrial Park	8,823	1.7	2	C				35			◑				12	●					?					8	◑	Newark Transit Study, Newark TID
GN-106	**Welsh Tract Rd / Old Coochs Bridge Rd / Bellevue Rd**	SR 896 to Diamond State Industrial Park	4,558	0.9	2		L		25				●				12	◕				6	◑				6		◑	Newark Transit Study, Newark TID
GN-107	**Dawson Dr**	S Chapel St to Delaware Industrial Park	3,459	0.7	2		L		25				●				12	●					?						?	
GN-108	**Albe Dr**	Old Baltimore Pike to Industrial Park	3,560	0.7	2		L		25				●				12	●					?						?	
TIER 2																															
GN-211	**Possum Park Rd** (@ SR 72)	Louviers	457	< 0.1	2	C					45		●				12	●					8	◕						?	Newark Area Transit Study, Kirkwood Highway Study
GN-212	**S Country Club Dr** (@ SR 896)	Fairfield Shopping Ctr	385	< 0.1	2		L		25				●				12	●					?						?	Newark Transit Study
GN-213	**Winner Blvd** (@ E Cleveland Ave)	Honda Dealership	227	< 0.1	2		L		25				●				12	●					?						?	Newark TID, Newark Transit Study
GN-215	**Wyoming Rd**	SR 72 to UD and Christina District Bus Yard	2,204	0.4	2	C				35			●				12	◕				8	◕					8	◕	Newark TID, Newark Transit Study
GN-216	**Hansen Ct / Marcus Ct**	Sandy Dr to Industrial Park (internal)	2,502	0.5	2		L		25				●				12	●				6	◕				6		◕	Newark TID, Newark Transit Study
GN-217	**McIntire Dr**	SR 279 to Valassis and Newark Charter School	1,458	0.3	2		L		25				●				12	●	min				●	min					●	Newark TID, Newark Transit Study
GN-218	**Marrows Rd Extension** (@ SR 4)	SR 4 to Chestnut Hill Plaza	254	< 0.1	2		L		25				●				12	●					?						?	
GN-220	**Old Coochs Bridge Rd** (local stub)	Diamond State Industrial Park (Sobieski Inc alternate entrance)	840	0.2	2		L		25				●	9				●		2				●		2				●	
GN-221	**Bellevue Rd**	SR 72 to Industrial Park	607	0.1	2		L		25				●				12	●				6		●			4			◕	Newark Transit Study
GN-222	**McMillan Way / Shea Way / Garfield Way / Tyler Way**	Delaware Industrial Park (internal)	3,139	0.6	?								?					?						?						?	
GN-223	**Brookhill Dr**	SR 72 to Industrial Park	1,938	0.4	?								?					?						?						?	
GN-224	**Suburban Dr**	Elkton Rd to Suburban Plaza and Home Depot	1,697	0.3	5		L	slow					●		11			●						?						?	
TIER 3																															
GN-301	**Future Warehouse Access**	Old Baltimore Pike to Future Warehouse	1,863	0.4	?								○					○						○						○	

ID	Route Name	Connected Area	Length (ft)	Length (mi)	# Lanes (Typ)	Functional Class (Typ)		Speed Limit (Typ) (mph)						Lane Width (Typ) (ft)					Left Shoulder Width (Typ) (ft)						Right Shoulder Width (Typ) (ft)						Sub-Area Plan Relevance
						Collector	Local	< 25	≥ 25 - 35	≥ 35 - 45	≥ 45 - 55	≥ 55	Proportion	< 10	≥ 10-11	≥ 11-12	≥ 12	Proportion	< 2	≥ 2 - 4	≥ 4 - 6	≥ 6 - 8	≥ 8	Proportion	< 2	≥ 2 - 4	≥ 4 - 6	≥ 6 - 8	≥ 8	Proportion	
Lower Christina District (LC)																														
TIER 1																														
LC-101	**First State Blvd**	SR 4 to First State Industrial Park	4,003	0.8	2		L			35			●				12	●				6		◑				6		◑	Newport Transportation Plan
LC-102	**Duncan Rd / Newport Rd**	SR 2 to Old Capitorl Trail / Marshallton	1,922	0.4	2	C			25				◕				12	◕		2				◑		2				◑	Kirkwood Highway Study
LC-103	**Old Capitol Trail**	Prices Corner area	1,836	0.3	2	C				35			●				12	◕					8	◔						?	Kirkwood Highway Study
LC-104	**Albertson Blvd / Centerville Rd / Greenbank Rd**	Prices Corner area	6,860	1.3	4	C				35			●				12	◕						?						?	Kirkwood Highway Study
LC-105	**E Ayre St / Larch Ave**	SR 141 / Newport area	3,091	0.6	2		L		25				●				12	◕		2				◑						?	Newport Transportation Plan
LC-106	**Water St / E Marsh Ln / Falco Dr**	SR 141 / Newport area	4,811	0.9	2		L		25				●				12	◑			4			◑			4			◑	Newport Transportation Plan
LC-107	**Brookside Dr / Meco Dr**	SR 4 to local business/industry sites	3,806	0.7	2		L		25				●				12	◑						?						?	
LC-108	**Germay Dr**	SR 4 to local business/industry sites	3,279	0.6	2		L		25				●				12	●						?						?	
TIER 2																														
LC-212	**Mac Arthur Dr**	SR 4 to Crowell Dr / Newport area	1,509	0.3	2		L		25				●				12	●						?						?	Newport Transportation Plan
LC-213	**Old Capitol Trail**	local business sites / Marshallton area	2,802	0.5	2	C				35			●			11		◕					8	◑			4			◑	
LC-214	**Middleboro Rd**	SR 4 to Banning Park / DMA / local business sites	3,804	0.7	2	C			25				●			11		◑						?		2				◑	Newport Transportation Plan
LC-215	**Boulevard Rd / North Colonial Ave / New Rd**	Elsmere	2,054	0.4	2		L	slow					◑				12	◕		2				◑		2				◑	Kirkwood Highway Study
LC-216	**Rodman Rd / New Rd / Prospect Rd**	Canby Park	2,095	0.4	1		L	slow					◑				12	◕						?						?	Kirkwood Highway Study
LC-217	**Old Dupont Rd / Hadco Rd**	Canby Park	2,357	0.4	2		L		25				◕				12	◕		2				◕						?	Kirkwood Highway Study
LC-218	**Robinson Ln**	SR 4 to Robinson Business Park	1,756	0.3	2		L		25				●				12	◕						?						?	
LC-219	**Centerville Rd**	SR 48 to CSC Headquarters	3,702	0.7	2	C					45		◕				12	●					8	◕					8	◑	
LC-220	**Little Falls Dr** (@ SR 48)	SR 48 to CSC Headquarters	587	0.1	2		L		25				●				12	◕						?						?	
TIER 3																														
LC-301	**Sears Blvd**	First State Industrial Park	2,583	0.5	2		L			35			●				12	●		2				◑			4			◕	Newport Transportation Plan

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						Collector	Local	< 25	≥ 25 - 35	≥ 35 - 45	≥ 45 - 55	≥ 55	Proportion	< 10	≥ 10-11	≥ 11-12	≥ 12	Proportion	< 2	≥ 2 - 4	≥ 4 - 6	≥ 6 - 8	≥ 8	Proportion	< 2	≥ 2 - 4	≥ 4 - 6	≥ 6 - 8	≥ 8	Proportion	
Middletown / Odessa / Townsend District (MOT)																														
TIER 1																														
MOT-101	**Levels Rd**	US 301 and SR 299 to business, industry, and distribution sites	9,361	1.8	2	C				35			●				12	◕					?						?	Southern New Castle County Master Plan, E- / W-town TID
MOT-102	**Patriot Dr / United Dr**	SR 299 and Levels Rd to business, indutry, and distribution sites	3,629	0.7	2		L		25				●				12	◕					?						?	Southern New Castle County Master Plan, E- / W-town TID
MOT-103	**Hedgelawn Way / Patriot Dr**	Clarios	3,796	0.7	2		L		25				●				12	◕					?						?	Southern New Castle County Master Plan, E- / W-town TID
MOT-104	**Industrial Dr / Merrimac Ave**	Amazon Fullfillment Center	12,151	2.3	2		L		25				●				12	◕					?						?	Southern New Castle County Master Plan, E- / W-town TID
MOT-105	**Diamond State Blvd**	at Main St / SR 299	2,545	0.5	2		L		25				●				12	●		2			●		2				◕	Southern New Castle County Master Plan, E- / W-town TID
MOT-106	**Haveg Rd**	at Main St / SR 299	1,371	0.3	2		L		25				●				12	◕		2			●		2				●	Southern New Castle County Master Plan, E- / W-town TID
MOT-107	**Bunker Hill Rd**	at Main St / SR 299	2,547	0.5	2	C				35			●			11		◕			4		◑				6		◑	Southern New Castle County Master Plan, E- / W-town TID
MOT-108	**N Broad St**	Middletown	5,247	1.0	2	C				35			◑				12	◑				8	◑					8	◑	Southern New Castle County Master Plan, E- / W-town TID
TIER 2																														
MOT-211	**Merrimac Ave**	at Levels Rd	1,186	0.2	2		L		25				●			11		●					?			4			◕	Southern New Castle County Master Plan, E- / W-town TID
MOT-212	**Merrimac Ave**	north of SR 299	735	0.1	4		L		25				●			11		◕					?					8	●	Southern New Castle County Master Plan, E- / W-town TID
MOT-213	**Classic Dr**	Amazon Fullfillment Center	1,423	0.3	2		L		25				●				12	●		2			●		2				●	Southern New Castle County Master Plan, E- / W-town TID
MOT-214	**Sleepy Hollow Dr**	Bunker Hill Center	2,268	0.4	2		L		25				●				12	●	min				●	min					●	Southern New Castle County Master Plan, E- / W-town TID
MOT-216	**Ash Blvd**	at Middletown Warwick Rd	307	< 0.1	2		L		25				●				12	●	min				●	min					●	Southern New Castle County Master Plan, E- / W-town TID
MOT-217	**Dickenson Blvd**	at SR 299	344	< 0.1	2		L		25				●			11		●	min				●					8	●	Southern New Castle County Master Plan, E- / W-town TID
MOT-218	**Silver Lake Rd**	at SR 299	475	< 0.1	2		L		25				●				12	●				6	●					8	●	Southern New Castle County Master Plan, E- / W-town TID
MOT-219	**Dove Run Blvd**	at SR 299	854	0.2	2		L		25				●				12	●			4		●	min					◕	Southern New Castle County Master Plan, E- / W-town TID
MOT-220	**Brick Mill Rd**	at SR 299	581	0.1	2	C				35			●		10			◑				8	◕			4			◑	Southern New Castle County Master Plan, E- / W-town TID
MOT-221	**Blackbird Landing Rd / Main St / Commerce St**	Townsend	12,535	2.4	2	C					45		◑				12	◕				6		◑				6		◑	Southern New Castle County Master Plan
TIER 3																														
MOT-301	**Middleneck Rd / Warwick Rd**	at SR 299	6,391	1.2	2	C				35			◕				12	◕				8	◕					8	◕	Southern New Castle County Master Plan
MOT-302	**Bunker Hill Rd (extension)**		946	0.2	2	C				35			●			11		◕				8	◑				6		◔	Southern New Castle County Master Plan
MOT-303	**Hyetts Corner Rd / Jamison Corner Rd**	at US 301	2,024	0.4	2	C			25				◑			11		◕				8	◕					8	◕	Southern New Castle County Master Plan, SNCC TID
MOT-304	**Paddock Rd**	Smyrna	1,045	0.2	2	C					45		●			11		◕				8	◕					8	◕	Southern New Castle County Master Plan

ID	Route Name	Connected Area	Length (ft)	Length (mi)	# Lanes (Typ)	Functional Class (Typ)		Speed Limit (Typ) (mph)						Lane Width (Typ) (ft)					Left Shoulder Width (Typ) (ft)						Right Shoulder Width (Typ) (ft)						Sub-Area Plan Relevance
						Collector	Local	< 25	≥ 25 - 35	≥ 35 - 45	≥ 45 - 55	≥ 55	Proportion	< 10	≥ 10-11	≥ 11-12	≥ 12	Proportion	< 2	≥ 2 - 4	≥ 4 - 6	≥ 6 - 8	≥ 8	Proportion	< 2	≥ 2 - 4	≥ 4 - 6	≥ 6 - 8	≥ 8	Proportion	
New Castle District (NC)																														
TIER 1																														
NC-101	**Bear Rd / Hamburg Rd**	at SR 1	4,550	0.9	2	C					45		●				12	◕					8	◑					8	◑	
NC-102	**Federal School Ln**	at US 13 / Amazon Fulfillment Center	1,187	0.2	2	C				35			●			11		◕		2				◕		2				●	
NC-103	**Quigley Blvd**	Airport Industrial Park	5,630	1.1	2		L		25				●				12	●						?						?	City of New Castle Transportation Plan
NC-104	**Centerpoint Blvd**	Centerpoint Business Complex	2,679	0.5	2		L		25				●				12	◕	min					●	min					●	City of New Castle Transportation Plan
NC-105	**Reads Way**		2,886	0.5	2		L		25				●				12	●						?		2				◕	
NC-106	**Boulden Blvd**	Boulden Interchange Park	2,169	0.4	2	C					45		◑				12	◕					8	◑					8	◑	City of New Castle Transportation Plan; Route 9 Master Plan
NC-107	**Cherry Ln / Lukens Dr**		8,910	1.7	?								?					?						?						?	City of New Castle Transportation Plan; Route 9 Master Plan
NC-108	**E Fern Dr**	Landfill	3,465	0.7	2		L	slow					◕				12	◕						?			4			◔	
NC-109	**Pigeon Point Rd**	Port Wilmington	4,713	0.9	2	C				35			●				12	●				6		◑					8	◑	Route 9 Master Plan
TIER 2																														
NC-211	**Glasgow Dr** (@ US 40)		540	0.1	2		L		25				●			11		◑		2				◔						?	
NC-212	**Quintilio Dr** (@ US 40)	Governor's Square Shopping Ctr	551	0.1	2		L		25				●				12	◕						?						?	
NC-213	**Sognsmith Dr** (@ SR 7)	Governor's Square Shopping Ctr	2,936	0.6	2		L		25				●			11		◔					9	◑					11	◑	
NC-214	**Buckley Blvd** (@ US 40)	at US 40	1,091	0.2	2		L		25				●				12	◕						?						?	
NC-215	**Wilton Blvd** (@ US 40)	Walmart	1,141	0.2	3	C				35			●			11		◑					8	◑					8	◕	
NC-216	**Grantham Ln**	at SR 9	2,435	0.5	2		L			35			●			11		◕		2				●		2				◕	
NC-217	**Lisa Dr**	Hares Corner	2,065	0.4	2		L		25				●				12	●						?						?	
NC-218	**Johnson Way**	Centerpoint Business Complex, Amazon Distribution Center	758	0.1	2		L		25				●				12	●	min					●	min					●	
NC-219	**Traders Ln**	Hares Corner	1,028	0.2	2		L		25				●			11		◕		2				◑		2				◑	
NC-220	**School Ln**	Hares Corner	285	< 0.1	2		L		25				●				12	●					8	◕					8	◕	
NC-221	**Road 339-A**		770	0.1	2		L		25				●				12	●					8	●					8	●	
NC-222	**Old Churchmans Rd**	at Commons Blvd	405	< 0.1	2		L			35			●		10			●		2				●		2				●	
NC-223	**West 7th St**	Old New Castle	1,332	0.3	2	C			25				●			11		◕			4			◕			4			◕	
NC-224	**Bacon Ave**	at Boulden Blvd / US 13	319	< 0.1	2		L		25				●			11		◑					8	◕						?	Route 9 Master Plan
NC-225	**Southgate Blvd / McCullough Dr / Industrial Blvd**	Southgate Center	4,655	0.9	2		L		25				●				12	●						?						?	Route 9 Master Plan
NC-226	**Morehouse Dr**	at SR 9	593	0.1	2		L		25				●				12	●					8	◑					8	◑	Route 9 Master Plan
NC-228	**Hazeldell Ave**	Minquadale	336	< 0.1	2		L		25				●				12	●						?						?	Route 9 Master Plan
NC-229	**Hessler Blvd**	Delaware DMV	1,763	0.3	2		L		25				●				12	◕						?						?	Route 9 Master Plan
NC-230	**Lambson Ln**	Simonds Garden	2,291	0.4	2	C			25				●				12	●					8	●					8	●	Route 9 Master Plan
TIER 3																														
NC-301	**Davidson Ln**	Simonds Garden	6,966	1.3	?								?					?						?						?	Route 9 Master Plan

ID	Route Name	Connected Area	Length (ft)	Length (mi)	# Lanes (Typ)	Functional Class (Typ)		Speed Limit (Typ) (mph)						Lane Width (Typ) (ft)					Left Shoulder Width (Typ) (ft)						Right Shoulder Width (Typ) (ft)						Sub-Area Plan Relevance
						Collector	Local	< 25	≥ 25 - 35	≥ 35 - 45	≥ 45 - 55	≥ 55	Proportion	< 10	≥ 10-11	≥ 11-12	≥ 12	Proportion	< 2	≥ 2 - 4	≥ 4 - 6	≥ 6 - 8	≥ 8	Proportion	< 2	≥ 2 - 4	≥ 4 - 6	≥ 6 - 8	≥ 8	Proportion	
Pike Creek District (PC)																														
TIER 1																														
--					?								○					○						○						○	
TIER 2																														
PC-211	**Ochletree Ln**	at SR 7	362	< 0.1	2		L		25				●				12	●					?						?	
PC-212	**Old Mermaid Stoney Batter Rd**	at SR 7	447	< 0.1	1		L		25				●				12	◑					?						?	
PC-213	**Stoney Batter Rd**	Goldey-Beacom College	799	0.2	2	C				35			●				12	●					8	◕					8	◕	
PC-214	**Skyline Dr**	Pike Creek Shopping Ctr	501	< 0.1	2		L		25				●				12	●					8	◑					8	●	
PC-215	**Delaware Park Dr / Old Capital Trail**		820	0.2	2		L		25				◑			11		◕					8	◑					8	◑	Churchmans Crossing TID; Kirkwood Highway Study
PC-216	**Woodmill Dr**	at SR 2	514	< 0.1	2		L		25				●				12	●					?						?	Churchmans Crossing TID; Kirkwood Highway Study
PC-217	**Farrand Dr**	at SR 2	309	< 0.1	2		L		25				●				12	●					?						?	Kirkwood Highway Study
TIER 3																														
--					?								○					○						○						○	

ID	Route Name	Connected Area	Length (ft)	Length (mi)	# Lanes (Typ)	Functional Class (Typ)		Speed Limit (Typ) (mph)						Lane Width (Typ) (ft)					Left Shoulder Width (Typ) (ft)						Right Shoulder Width (Typ) (ft)						Sub-Area Plan Relevance
						Collector	Local	< 25	≥ 25 - 35	≥ 35 - 45	≥ 45 - 55	≥ 55	Proportion	< 10	≥ 10-11	≥ 11-12	≥ 12	Proportion	< 2	≥ 2 - 4	≥ 4 - 6	≥ 6 - 8	≥ 8	Proportion	< 2	≥ 2 - 4	≥ 4 - 6	≥ 6 - 8	≥ 8	Proportion	
Piedmont District (PM)																														
TIER 1																														
PM-101	**Valley Rd** (plus Southwood Rd)		7,121	1.3	2	C				35			◑				12	◑					8	◕					8	◕	
TIER 2																														
--					?								○					○						○						○	
TIER 3																														
--					?								○					○						○						○	

ID	Route Name	Connected Area	Length (ft)	Length (mi)	# Lanes (Typ)	Functional Class (Typ)		Speed Limit (Typ) (mph)						Lane Width (Typ) (ft)					Left Shoulder Width (Typ) (ft)						Right Shoulder Width (Typ) (ft)						Sub-Area Plan Relevance
						Collector	Local	< 25	≥ 25 - 35	≥ 35 - 45	≥ 45 - 55	≥ 55	Proportion	< 10	≥ 10-11	≥ 11-12	≥ 12	Proportion	< 2	≥ 2 - 4	≥ 4 - 6	≥ 6 - 8	≥ 8	Proportion	< 2	≥ 2 - 4	≥ 4 - 6	≥ 6 - 8	≥ 8	Proportion	
Red Lion District (RL)																														
TIER 1																														
RL-101	**Wrangle Hill Rd**	Delaware City Refinery area	7,964	1.5	2	C					45		●				12	◕					8	◑				6		◑	
RL-103	**Governor Lea Rd / Lower Twin Ln**	Delaware City Refinery area	10,360	2.0	2		L				45		●			11		◕		2				◕		2				◕	
RL-104	**River Rd / SR 9**	Delaware City Refinery area	12,898	2.4	2	C					45		◕				12	●					8	◑					8	◕	
RL-105	**Bear Corbitt Rd / SR 71**		14,296	2.7	2	C				35			◕				12	◕					8	◑					8	◕	
TIER 2																														
RL-202	**School House Rd**	Delaware City Refinery area	3,600	0.7	2		L			35			●				12	◑					?			2				◑	
RL-211	**Fifth St / SR 9**	Delaware City	10,534	2.0	2	C					45		◑				12	◕					8	◔					8	◕	
RL-212	**American Blvd**	Stewart Rd to DOT Foods Inc.	2,051	0.4	2		L		25				●				12	●					?							?	
TIER 3																														
--					?								○					○						○						○	

ID	Route Name	Connected Area	Length (ft)	Length (mi)	# Lanes (Typ)	Functional Class (Typ)		Speed Limit (Typ) (mph)						Lane Width (Typ) (ft)					Left Shoulder Width (Typ) (ft)						Right Shoulder Width (Typ) (ft)						Sub-Area Plan Relevance
						Collector	Local	< 25	≥ 25 - 35	≥ 35 - 45	≥ 45 - 55	≥ 55	Proportion	< 10	≥ 10-11	≥ 11-12	≥ 12	Proportion	< 2	≥ 2 - 4	≥ 4 - 6	≥ 6 - 8	≥ 8	Proportion	< 2	≥ 2 - 4	≥ 4 - 6	≥ 6 - 8	≥ 8	Proportion	
Upper Christina District (UC)																														
TIER 1																														
UC-101	**Walther Rd**		10,231	1.9	2	C					45		◕				12	◕					8	◑					8	◕	
UC-102	**Eagle Run Rd / Old Baltimore Pike**	Christiana	6,798	1.3	2		L			35			●				12	◕						?						?	Churchmans Crossing TID
UC-103	**Continental Dr**		1,166	0.22	2		L		25				●				12	●						?						?	Churchmans Crossing TID
UC-104	**Churchmans Place / Old Churchmans Rd**	Centerpoint Plaza	3,400	0.64	2		L		25				◕				12	◕						?						?	Churchmans Crossing TID
UC-105	**Ruthar Dr**		5,790	1.10	2	C				35			●				12	◕						?						?	Churchmans Crossing TID
UC-106	**Harmony Rd**	SR 2 to SR 4	12,184	2.31	1	C			25				◑			11		◑					8	◑					8	◕	Churchmans Crossing TID
TIER 2																														
UC-211	**Mill Park Ct**	at Red Mill Rd	691	0.13	2		L		25				●				12	●						?						?	Churchmans Crossing TID
UC-212	**Lawrence Dr / Main St / Browns Ln**	Christiana Town Ctr	4,546	0.86	2		L		25				◑				12	◕			4			◑			4			◑	Churchmans Crossing TID
UC-213	**Old Baltimore Pike**	Eagle Run	269	< 0.1	2	C				35			●				12	●					8	●					8	●	Churchmans Crossing TID
UC-214	**Old Route 4 / Road 336-F**	Delaware Park	3,174	0.60	2		L				45		●			11		◑		2				◑		2				◑	Churchmans Crossing TID
TIER 3																														
--					?								○					○						○						○	

ID	Route Name	Connected Area	Length (ft)	Length (mi)	# Lanes (Typ)	Functional Class (Typ)		Speed Limit (Typ) (mph)						Lane Width (Typ) (ft)					Left Shoulder Width (Typ) (ft)						Right Shoulder Width (Typ) (ft)						Sub-Area Plan Relevance
						Collector	Local	< 25	≥ 25 - 35	≥ 35 - 45	≥ 45 - 55	≥ 55	Proportion	< 10	≥ 10-11	≥ 11-12	≥ 12	Proportion	< 2	≥ 2 - 4	≥ 4 - 6	≥ 6 - 8	≥ 8	Proportion	< 2	≥ 2 - 4	≥ 4 - 6	≥ 6 - 8	≥ 8	Proportion	
Wilmington District (WL)																														
TIER 1																														
WL-101	**Garasches Ln / New Sweden St**	Chase Fieldhouse	5,140	0.97	2		L		25				◕				12	◕			4			◑						?	Route 9 Master Plan
WL-102	**D St**	Southbridge	447	< 0.1	2		L		25				●				12	●						?						?	Route 9 Master Plan
WL-103	**Church St / E Front St**		2,792	0.53	2		L		25				●				12	●						?						?	Route 9 Master Plan
WL-105	**E 7th St / Swedes Landing Rd**		3,894	0.74	2		L		25				●				12	●						?						?	7th Street Peninsula Study
WL-106	**Delaware Ave / W. 10th St**	Downtown Wilmington	1,957	0.37	2		L		25				●				12	◕						?						?	
WL-108	**E 30th St / Todds Ln / Bellevue Ave** (plus Bowers St, Eastlawn Ave)	Riverside	5,548	1.05	2		L		25				●				12	●						?						?	Governor Printz Blvd Corridor Study
TIER 2																														
WL-212	**A St**	Christina Landing	975	0.18	2		L		25				●				12	●					8	●				6		◕	
WL-213	**N Pine St**	at 4th St	254	< 0.1	2		L		25				●				12	●						?						?	
WL-214	**E 9th St / Locust St / Taylor St**		1,014	0.19	2		L		25				●				12	●						?						?	
WL-221	**N Dupont St / Delaware Ave**	Trolley Square	2,548	0.48	2		L		25				●				12	●						?						?	
TIER 3																														
--					?								○					○						○						○	

First/Final Mile Freight Network Update: New Castle County, DE

APPENDIX D:

2025 First/Final Mile

Freight Network Screening Details

APPENDIX D:

2025 First/Final Mile Freight Network Screening Details

SCREENING CATEGORY 1 – INSTITUTIONAL CONFLICTS

Institutional needs/conflicts relate to coordination and communication challenges that may create difficulties coordinating freight investments across multiple levels of government, educating local partners on the importance of freight transportation, or data availability issues. In short, it focuses on characteristics that affect coordination and decision-making complexity. This perspective generally assumes that it will be more difficult to manage FFM freight conflicts in areas where there are simply more overall activities to conflict with (e.g., urban versus rural areas, higher population areas, higher freight activity areas) or where there are more jurisdictions to coordinate with (e.g., for routes that span more than one municipality, planning district, or ownership responsibility).

Screening Criteria

Screening criteria, thresholds, and mapped results are summarized in **Exhibits D-1/D-2**. Detailed charts for the number and percentage of routes rated low-to-high for each attribute are at the end of this Appendix.

LEAST INFLUENTIAL: Jurisdictional Coordination (1b), Road Maintenance Responsibility (1c)

- Respectively, these attributes show 99% and 94% of the FFM freight routes in New Castle County as having low to medium conflict, identifying no systemic concerns network wide.

MOST INFLUENTIAL: Area Type (1a), Truck Activity Level (1e)

- Most (96%) of the county's FFM freight routes are in urban areas or "intense" urban areas (e.g., the Lower Christina or Wilmington planning districts), and most (72%) logically connect to higher volume truck activity areas.
- The resulting mixture of urban/multimodal interests and truck/freight delivery needs creates a challenging environment in which to coordinate and manage often competing or conflicting interests across all user groups.

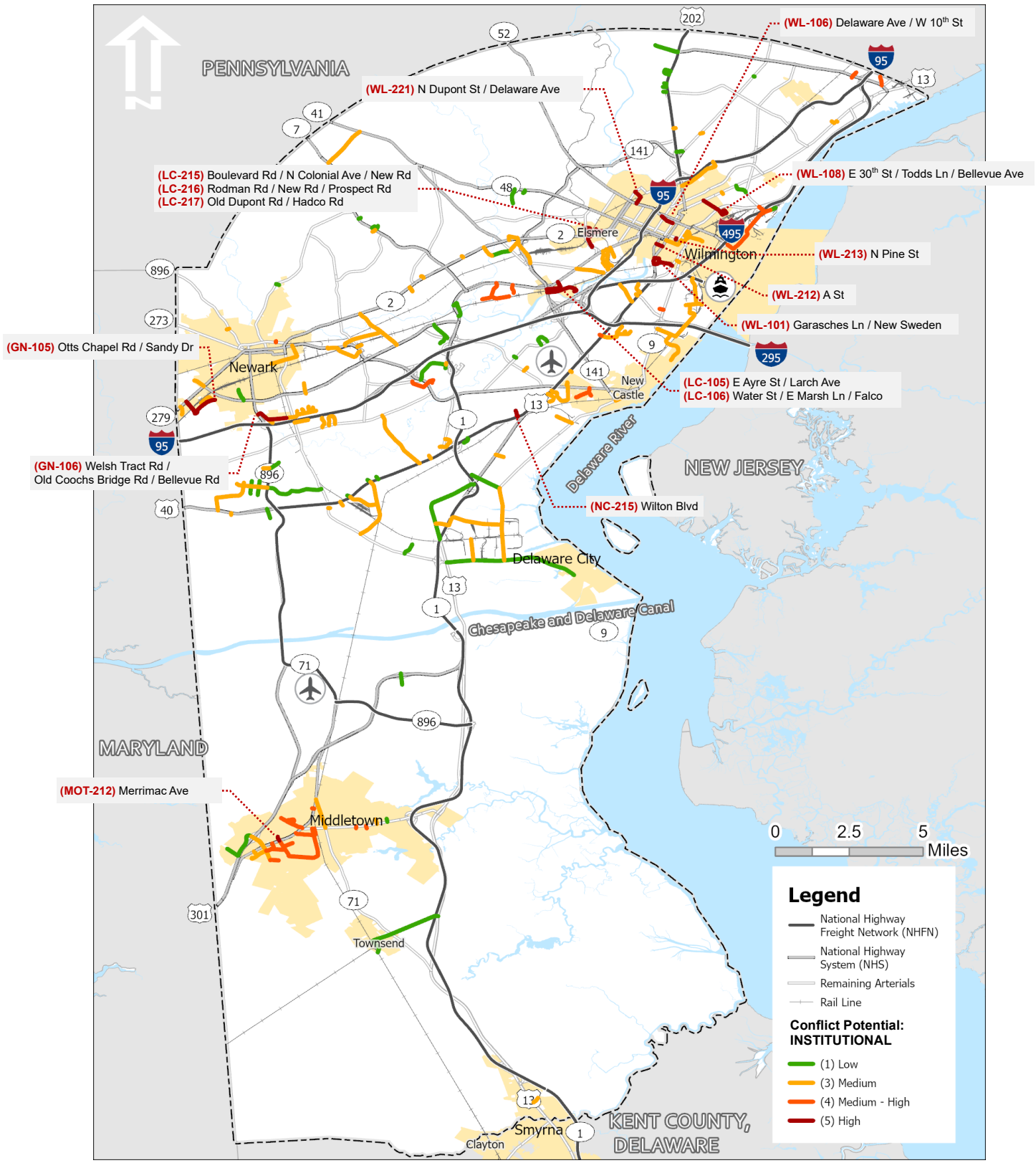
High Conflict Routes

Labeled per **Exhibit D-2**, 15 FFM freight routes were rated for high Institutional conflict potential, including 12% (7 routes) on the Tier 1 network and 9% (8 routes) on the Tier 2 network.

Exhibit D-1: Institutional Conflict Screening Criteria

ID	Category / Attribute	Basis	Potential Conflict Rating
1	**Institutional**		
1a	Area Type	Urban / Rural designation	1 (Low) Rural 2 (Med) Urban 3 (High) Intense Urban
1b	Jurisdictional Coordination	Primary jurisdictional influence	1 (Low) Primarily DelDOT / MPO / County 2 (Med) Municipal (or multi-municipal) influence 3 (High) Multi-agency or state boundary influence
1c	Road Maintenance Responsibility	Primary ownership	1 (Low) DelDOT 2 (Med) Municipal 3 (High) Multi-agency or other (private)
1d	Population Density	Population per acre	1 (Low) Density < 3 persons/acre 2 (Med) Density = 3 to 15 persons/acre 3 (High) Density > 15 persons/acre
1e	Truck Activity Level	Daily Truck Index by TAZ	1 (Low) Truck Index < 100 2 (Med) Truck Index = 100 to 5,000 3 (High) Truck Index = 5,000 or greater

Exhibit D-2: Institutional Conflict Screening Map



SCREENING CATEGORY 2 – LAND USE CONFLICTS

Land Use conflicts arise where freight routes pass through residential, mixed commercial, environmentally sensitive, or other areas where freight and non-freight activities intermingle. Such conditions often increase residential or environmental exposure to undesirable noise, vibration, and air emissions, as well as increased risk from any truck/freight-related incidents that may occur. This perspective generally assumes there will be more conflict potential wherever there are more residential or environmental factors to consider based on existing or future land use, environmentally sensitive areas (e.g., wetlands, natural protected area, floodplains), recreational land uses (e.g., byways, trails, pathways), environmental justice populations, or known air quality and emissions impacts.

Screening Criteria

Screening criteria, thresholds, and mapped results are summarized in **Exhibits D-3/D-4**. Detailed charts for the number and percentage of routes rated low-to-high for each attribute are at the end of this Appendix.

LEAST INFLUENTIAL: Recreational Land Use (2e), Planning Investment Level (2c), EJ (2f)

- Respectively, these attributes show 92%, 92%, and 93% of the FFM freight routes in New Castle County as having low conflict.
- Most routes do not overlap recreational areas, and they primarily serve existing built environments aligning with planned Investment Levels 1 and 2.
- Relative to EJ impacts, only 8 routes (5%) in the county overlap high impact areas, indicating this freight conflict to be only a limited site-specific issue.

MOST INFLUENTIAL: Air Quality (2g), Existing/Future Land Use (2a/2b)

- Approximately half of Tier 1 FFM freight routes and a third or more of Tier 2 routes are identified as having high conflict potential relative to high emissions impact areas and/or the surrounding existing/future land use.
- Such impacts reflect a potential need to ensure efficient/modern freight accessibility in a way that will manage or reduce truck emissions, and they generally imply that intermingling of freight versus non-freight needs are inevitable.

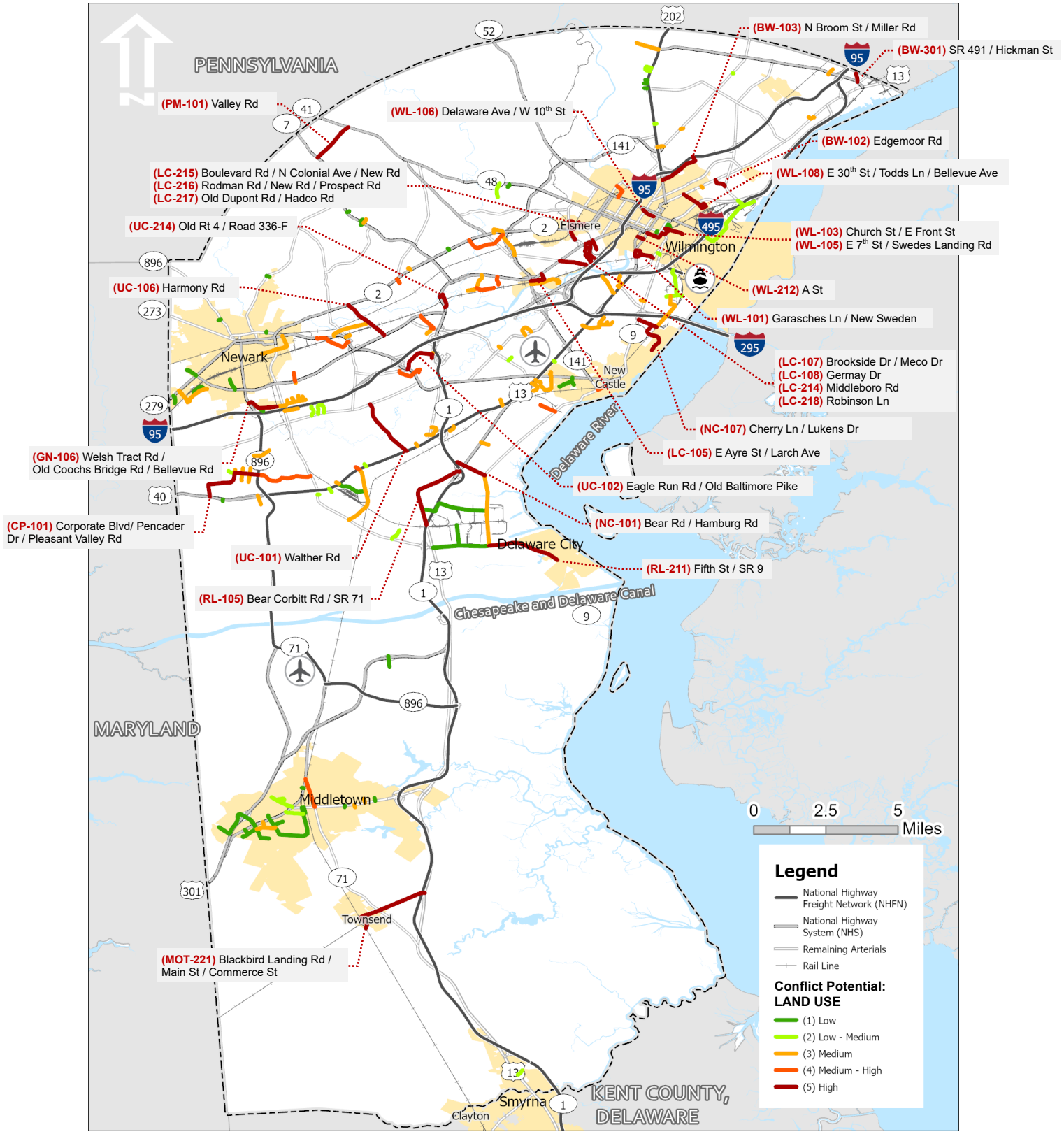
High Conflict Routes

Labeled per **Exhibit D-4**, 29 FFM freight routes were rated for high Land Use conflict potential, including 33% (19 routes) on the Tier 1 network and 10% (9 routes) on the Tier 2 network.

Exhibit D-3: Land Use Conflict Screening Criteria

ID	Category / Attribute	Basis	Potential Conflict Rating
2	**Land Use**		
2a	Existing Land Use	Average land use type by corridor *(adjusted for site-specific conditions or proportions where applicable)*	1 (Low) Industrial or freight-related, or primarily undeveloped areas 2 (Med) Agricultural or commercial / mixed-use (or similar) 3 (High) Residential (or related)
2b	Future Land Use	Average land use type by corridor	1 (Low) Manufacturing or freight-related 2 (Med) Business flex, commercial, employment corridor (or similar) 3 (High) Residential / preservation, community plan areas (or similar)
2c	Planning Investment Level	SSPS Investment Levels	1 (Low) Investment Levels (1)-(2) 2 (Med) Investment Levels (3)-(4) 3 (High) Investment Level (5) (Out of Play)
2d	Environmentally Sensitive Areas	Proximity to 4 sensitive area types *(wetlands, natural protected areas, wellhead protection areas, flood plains)*	1 (Low) No sensitive area within 100' (or 300' for wellhead protection) 2 (Med) 1-2 sensitive area types within proximity of corridor 3 (High) 3-4 sensitive area types within proximity of corridor
2e	Recreational Land Uses	Proximity to 3 recreational types *(byways, recreational land, recreational trails and pathways)*	1 (Low) No recreational use designations along corridor 2 (Med) 1-2 recreational use designation along corridor 3 (High) 3 recreational use designations along corridor
2f	Environmental Justice	EJ area impact level	1 (Low) None 2 (Med) Moderate 3 (High) Significant
2g	Air Quality	EJ Screening Tool Data	1 (Low) No air quality issues 2 (Med) Moderate air quality issues 3 (High) High "emissions" impact

Exhibit D-4: Land Use Conflict Screening Map



SCREENING CATEGORY 3 – MOBILITY CONFLICTS

Mobility conflicts occur where trucks encounter barriers to efficient freight transportation operations that introduce travel difficulties or direct routing impediments. Physical barriers may include low-clearance bridges, tight turns, narrow lanes/shoulders, or limited passing lanes. Other types of barriers may occur based on travel constraints due to at-grade railroad crossings, congestion, or other delay impacts. This perspective generally assumes that conflict potential will increase where conditions do not fully satisfy applicable design criteria (e.g., for lane/shoulder widths, vertical clearance, or bridge postings), where railroad crossing frequencies or blockages are more prevalent, or where field observations show evidence of tight turns based on geometry or corner obstructions.

Screening Criteria

Screening criteria, thresholds, and mapped results are summarized in **Exhibits D-5/D-6**. Detailed charts for the number and percentage of routes rated low-to-high for each attribute are at the end of this Appendix.

LEAST INFLUENTIAL: Rail Crossing (3c/3d), Bridge (3e/3f), Truck Turn Clearance (3g)

- Only a very limited number of FFM freight routes overlap rail crossings or bridges with known constraints based on rail delays/blockages, vertical clearance, or weight restrictions.
- Additionally, 91% of all routes were noted as low conflict relative to truck turn clearance. Spot issues for each of these criteria will be isolated and corridor specific.

MOST INFLUENTIAL: Right Shoulder Width (3b), Lane Width (3a)

- High conflict mobility concerns were most evident with 56% of all routes having large portions of the corridor with right shoulder widths less than 4', which is less than the recommended minimum (per DelDOT Road Design Manual, Section 3.4.3) for outside paved shoulders where there is no separate shared use path.
- For lane widths, most routes (74%) included 12' or greater travel lane widths for most of the corridor, and a smaller portion (18%) included 11' or greater widths.
- More notably, lane width details were not available for all routes, were often highly variable along any given routes, and may reveal improvement opportunities for Tier 3 future corridors.

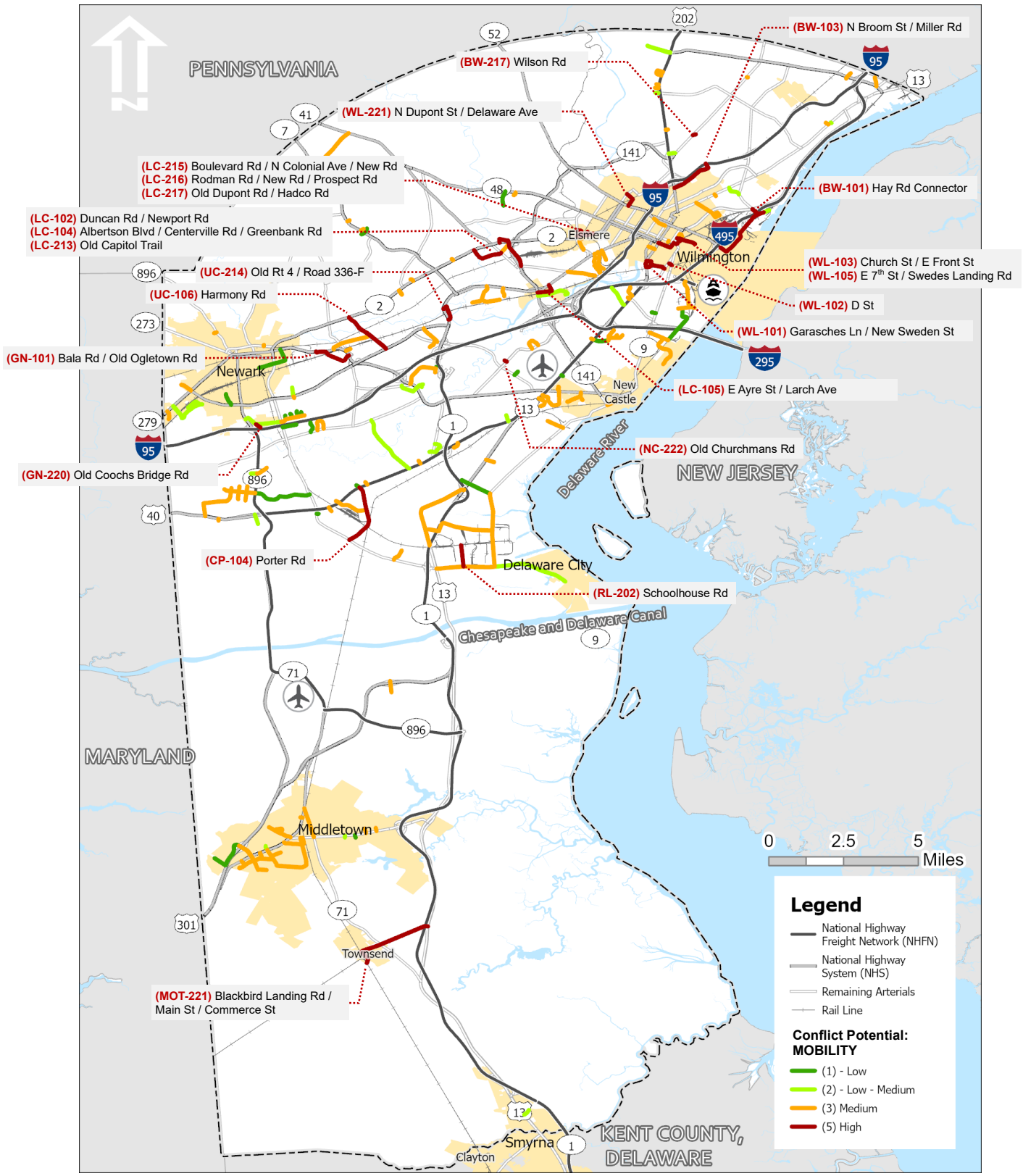
High Conflict Routes

Labeled per **Exhibit D-6**, 22 FFM freight routes were rated for high Mobility conflict potential, including 21% (12 routes) on the Tier 1 network and 11% (10 routes) on the Tier 2 network.

Exhibit D-5: Mobility Conflict Screening Criteria

ID	Category / Attribute	Basis	Potential Conflict Rating
3	**Mobility**		
3a	Lane Width	Typical lane width (ft) and "variability" based on proportion of route length with matching width	1 (Low) Width ≥ 12' (for at least 50% of route length) 2 (Med) Width ≥ 11'-12' or 12' (for less than 50% of route length) 3 (High) Width < 11'
3b	Right Shoulder Width	Typical right shoulder width (ft) and "variability" based on proportion of route length w/ matching width	1 (Low) Width ≥ 8' (for at least 50% of route length) 2 (Med) Width ≥ 4'-8' or 8' (for less than 50% of route length) 3 (High) Width < 4'
3c	RR At-Grade Crossing Train Frequency	Estimated number of daily train movements through the at-grade crossing	1 (Low) Total Daily > 0 and ≤ 5 trains 2 (Med) Total Daily > 5 and ≤ 10 trains 3 (High) Total Daily > 10 trains *or rated '0' (n/a) if no crossing*
3d	RR At-Grade Crossing Blockage Time	Maximum estimated blockage time for a single occurrence (in minutes)	1 (Low) Total duration > 0 and ≤ 15 minutes 2 (Med) Total duration > 15 and ≤ 30 minutes 3 (High) Total duration > 30 minutes *or rated '0' (n/a) if no crossing*
3e	Bridge Vertical Clearance Over Road	Vertical clearance (ft)	1 (Low) ≥ 16' 2 (Med) ≥ 14'-6" to 16' 3 (High) < 14'-6" *or rated '0' (n/a) if no bridge*
3f	Bridge Weight Restriction	Bridge postings	1 (Low) Bridge open / no restriction 2 (Med) reserved / TBD 3 (High) Bridge posted for load *or rated '0' (n/a) if no bridge*
3g	Truck Turn Clearance	Field/aerial review of turn radii and corner conflicts or impacts (e.g., bent poles, marred/broken curbing)	1 (Low) No apparent conflicts 2 (Med) Potential conflicts (isolated) 3 (High) Potential conflicts (multiple locations or significant)

Exhibit D-6: Mobility Conflict Screening Map



SCREENING CATEGORY 4 – SAFETY CONFLICTS

Safety conflicts along FFM freight routes consider barriers to safe transportation operations based on design characteristics, user behaviors, or field conditions that may influence the likelihood or severity of crashes. Barriers may include co-location of FFM freight routes with areas having a higher draw for multimodal activity evidenced by sidewalks, crosswalks, bike routes, schools, or surrounding residential access. They also include activities affecting truck travel space or maneuvering, such as on-street parking or railroad at-grade crossings along a route; and they can consider evidence of broader historic crash trends pertaining to truck-involved crash counts, severity, or intersection safety rankings. Higher concentrations of such elements lead to higher conflict potential along a given route.

Screening Criteria

Screening criteria, thresholds, and mapped results are summarized in **Exhibits D-7/D-8**. Detailed charts for the number and percentage of routes rated low-to-high for each attribute are at the end of this Appendix.

LEAST INFLUENTIAL: Railroad Crossings (4d), On-Street Parking (4i)

- Only a very limited number of FFM freight routes must navigate at-grade rail crossings, and most routes (74%) have no significant presence of on-street parking to generate substantial conflicts.
- Spot issues for each of these criteria will be isolated and corridor specific.

MOST INFLUENTIAL: all crash/safety criteria (4a-4c) and multimodal criteria (4e-4h)

- Several criteria in the Safety Conflicts category identify relevant insights. Truck involved crash trends and intersection safety rankings are most influential along Tier 1 corridors, although these findings are at least partly attributable to most Tier 1 corridors likely/typically carrying higher traffic volumes overall in comparison to the shorter Tier 2 FFM freight stubs.
- The presence of bike routes and schools reflect the highest proportions of safety conflict potential (36% and 32% or all routes, respectively), tentatively illustrating the challenges of multiple modes/users sharing the roadway space with frequent heavy truck traffic.

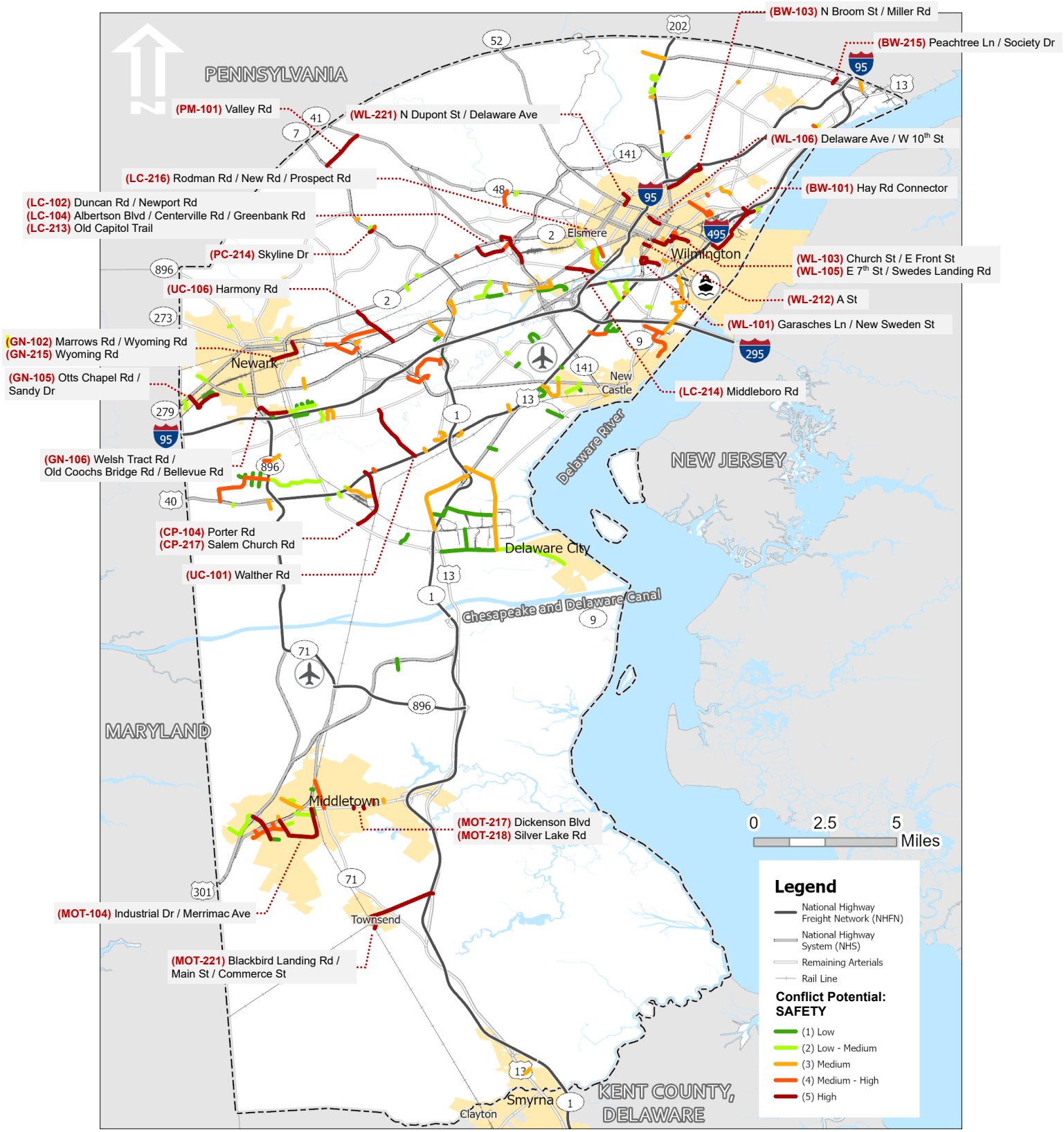
High Conflict Routes

Labeled per **Exhibit D-8**, 29 FFM freight routes were rated for high Safety conflict potential, including 29% (17 routes) on the Tier 1 network and 13% (12 routes) on the Tier 2 network.

Exhibit D-7: Safety Conflict Screening Criteria

ID	Category / Attribute	Basis	Potential Conflict Rating
4	**Safety**		
4a	Truck-Involved Crashes	5-year truck-involved crash count	1 (Low) No truck-involved crashes within 5 years 2 (Med) < 5 truck-involved crashes within 5 years 3 (High) ≥ 5 truck-involved crashes within 5 years
4b	Truck-Involved Crash Severity	5-year truck-involved crash count in terms of % injury/fatality crashes	1 (Low) No truck-involved injury/fatality crashes within 5 years 2 (Med) ≤ 33.33% truck-involved injury/fatality crashes within 5 years 3 (High) > 33.33% truck-involved injury/fatality crashes within 5 years
4c	Intersection Safety Rankings	Presence/ranking of intersections that overlap existing safety ranking programs (by others)	1 (Low) No "ranked" intersections on corridor 2 (Med) 1 or more intersections ranked > 100 3 (High) 1 or more intersections ranked ≤ 100
4d	RR At-Grade Crossings	Presence/number of at-grade railroad crossing(s) along corridor	1 (Low) = 1 at-grade crossing 2 (Med) = 2 at-grade crossings 3 (High) ≥ 3 at-grade crossings *or rated '0' (n/a) if no crossing*
4e	Bike Route	Presence of bike route along corridor	1 (Low) No bike route (and not residential) 2 (Med) No bike route (residential) or existing bike route (any area) 3 (High) Future bike route in development
4f	Sidewalks	Presence of sidewalk along corridor	1 (Low) No sidewalk (and not residential) 2 (Med) No sidewalk (residential) or partial sidewalk (any area) 3 (High) Full sidewalk coverage
4g	Crosswalks	Presence/number of crosswalks along corridor	1 (Low) No crosswalk locations 2 (Med) 1-5 crosswalk locations 3 (High) >5 crosswalk locations
4h	Schools	Presence/proximity of schools along corridor	1 (Low) No school within ~2,500' of corridor 2 (Med) Nearby school within ~ 1,200-2,500' of corridor 3 (High) School directly on or close to corridor within < 1,200'
4i	On-Street Parking	Field/aerial review of parking presence/locations	1 (Low) No significant on-street parking presence 2 (Med) Intermittent on-street parking and/or one side of road 3 (High) Significant on-street parking and/or both sides of road

Exhibit D-8: Safety Conflict Screening Map



SCREENING CATEGORY 5 – CONDITION CONFLICTS

Deteriorated or inadequate infrastructure can create direct conflicts with (or from) truck traffic based on several perspectives. The poor condition of pavement or bridges on FFM freight routes can affect travel efficiency, routing, noise, safety, or other considerations for truck traffic and access. Frequent and heavy truck traffic can also influence accelerated deterioration of these same infrastructure conditions along a route. Signing and pavement marking conditions may also often be considered as an area that can help to organize travel/routing expectations along a corridor; and broader influences such as the presence of Sea Level Rise impact zones, flooding, or other constraints can affect the resilience of the freight system and the potential for diverted impacts if issues occur.

Screening Criteria

Screening criteria, thresholds, and mapped results are summarized in **Exhibits D-9/D-10**. Detailed charts for the number and percentage of routes rated low-to-high for each attribute are at the end of this Appendix.

LEAST INFLUENTIAL: Bridge Conditions (5a), Signing Conditions (5d), Sea Level Rise (5e)

- Only a very limited number of FFM freight routes navigate bridges; and of the few bridges that are traversed, most are rated 'Good' condition (low conflict), and none are rated less than 'Fair' condition (medium conflict).
- For signing conditions and potential sea level rise impacts, most routes (92%) in both cases have no significant apparent needs. Spot issues will be isolated and corridor specific, which may include opportunities for additional routing or business destination signing, or additional resilience planning for the few (7) routes that were identified in a 3' sea level rise zone.

MOST INFLUENTIAL: Pavement Conditions (5b), Pavement Marking Conditions (5c)

- Approximately one-third of FFM freight routes were rated as having medium to high conflict potential in terms of pavement surface conditions or pavement marking conditions.
- Details included 36% of routes with 'Fair' pavement surface and 6% of routes with 'Poor' pavement surface, including 4 Tier 1 routes on D Street (WL-102), Dawson Drive (GN-107), Quigley Boulevard (NC-103) and East Fern Drive (NC-108).
- Pavement marking improvement opportunities were evidenced by 18% of routes rated as having high conflict potential.

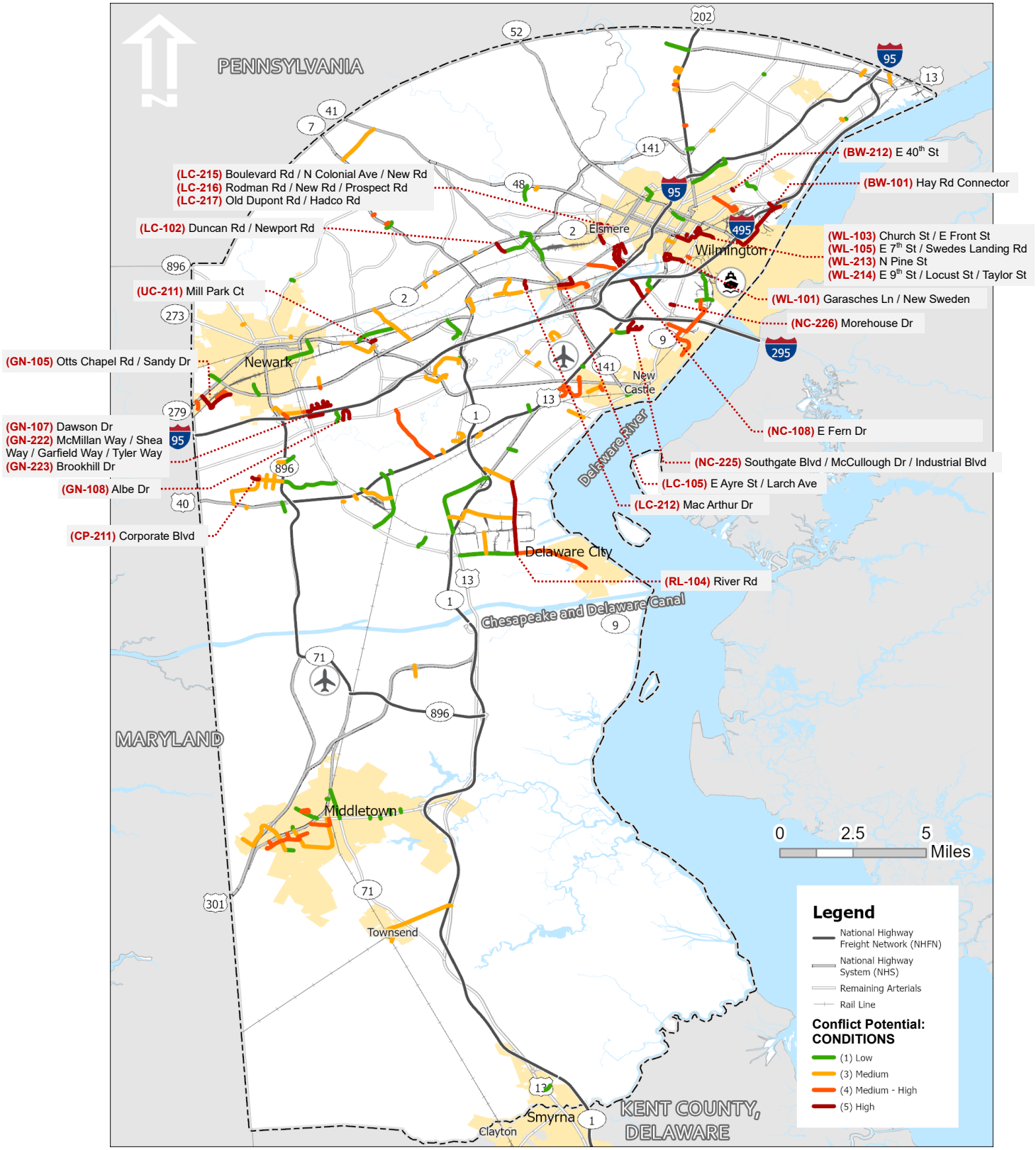
High Conflict Routes

Labeled per **Exhibit D-10**, 27 FFM freight routes were rated for high infrastructure condition conflict potential, including 22% (13 routes) on the Tier 1 network and 15% (14 routes) on the Tier 2 network.

Exhibit D-9: Infrastructure Condition Conflict Screening Criteria

ID	Category / Attribute	Basis	Potential Conflict Rating
5a	Bridge Conditions	Documented bridge condition ratings per FHWA National Bridge Inventory	1 (Low) Good (Deck rating ≥ 7) 2 (Med) Fair (Deck rating: 5 and 6) 3 (High) Poor (Deck rating < 5) *or rated '0' (n/a) if no bridge*
5b	Pavement Conditions	Overall Pavement Condition (OPC) ratings per DelDOT	1 (Low) Good (Surface condition rating ≥ 4)) 2 (Med) Fair (Surface condition rating: 2 and 3) 3 (High) Poor (Surface condition rating < 2)
5c	Pavement Marking Conditions	Field/aerial review of existing conditions (e.g., state of repair, supplemental interests, etc.)	1 (Low) Good; no apparent improvements needed 2 (Med) Fair; minor enhancement opportunities 3 (High) Poor; maintenance or upgrades needed
5d	Signing Conditions	Field/aerial review of existing conditions (e.g., state of repair, supplemental interests, etc.)	1 (Low) Good; no apparent improvements needed 2 (Med) Fair; minor enhancement opportunities 3 (High) Poor; maintenance or upgrades needed
5e	Sea Level Rise Impact	Anticipated SLR impact zone	1 (Low) 1' Rise zone or no impact 2 (Med) 2' Rise zone 3 (High) 3' Rise zone

Exhibit D10: Infrastructure Condition Conflict Screening Map



ADDITIONAL SCREENING DETAIL RESULTS

Detailed charts for the number and percentage of routes rated low-to-high for each of the five screening categories, the overall New Castle County FFM freight network, and for each screening attribute within each screening category are attached on the following pages.

For individual screening criteria results, ratings were assigned based on a 1-3 conflict rating scale per the applicable data and thresholds detailed previously in Exhibits D1, D3, D5, D7, and D9.

For the compiled screening results by category and for the overall countywide dataset, ratings were converted to a more fine-grained 1-5 conflict rating scale using a comparison to average and standard deviation (SD) data with threshold estimates per the following page and summarized below.

- **Rating 1** (Low) = more than 1 SD below Average
- **Rating 2** (Low-Medium) = within ½ to 1 SD below Average
- **Rating 3** (Medium) = within ½ SD below or above Average
- **Rating 4** (Medium-High) = within ½ to 1 SD above Average
- **Rating 5** (High) = more than 1 SD above Average

Specific threshold values were ultimately "locked" during final draft review/refinement of the FFM freight network update to avoid introducing constant/iterative network wide scoring and rating changes based solely on minor corridor additions/deletions made to the final network (which would otherwise affect the average and SD calculations used to establish the threshold dataset).

RATING THRESHOLD ESTIMATES BASED ON ASSIGNED PERFORMANCE CRITERIA

RATING RANGES AND STATS	RANGE (ACTUAL)	INST	LU	MOB	SAFE	COND	ALL
Statistic Calculations based on Final Rating Summations by Category and Overall	**MIN SCORE =**	5	7	1	8	4	**33**
	MAX SCORE =	12	17	15	24	10	**66**
	AVERAGE SCORE =	8.7	11.5	5.2	14.8	5.3	**45.1**
	MEDIAN SCORE =	9.0	11.0	5.0	14.0	5.0	**44.0**
	STANDARD DEVIATION =	1.5	2.2	1.8	3.5	1.2	**6.6**

RATING THRESHOLD PREP	STD DEV EST	INST	LU	MOB	SAFE	COND	ALL
Threshold Calculations based on Average (AVG) and Standard Deviation (SD) Data	**AVG - 1.0 SD =**	7.3	9.3	3.4	11.3	4.0	**38.5**
	AVG - 0.5 SD =	8.0	10.4	4.3	13.1	4.7	**41.8**
	AVG + 0.5 SD =	9.5	12.6	6.1	16.6	5.9	**48.4**
	AVG + 1.0 SD =	10.2	13.8	7.0	18.3	6.5	**51.7**

RATING THRESHOLDS BY CATEGORY		INST	LU	MOB	SAFE	COND	ALL
RATING 1 (LOW) *(more than 1 SD below Avg)*	from	below	below	below	below	below	below
	=	**7.3**	**9.3**	**3.4**	**11.3**	**4.0**	**38.5**
RATING 2 (LOW-MED) *(within 1/2 to 1 SD below Avg)*	>	7.3	9.3	3.4	11.3	4.0	38.8
	=	**8.0**	**10.4**	**4.3**	**13.1**	**4.7**	**41.8**
RATING 3 (MED) *(within 1/2 SD below or above Avg)*	>	8.0	10.4	4.3	13.1	4.7	42.2
	=	**9.5**	**12.6**	**6.1**	**16.6**	**5.9**	**48.4**
RATING 4 (MED-HIGH) *(within 1/2 to 1 SD above Avg)*	>	9.5	12.6	6.1	16.6	5.9	48.9
	=	**10.2**	**13.8**	**7.0**	**18.3**	**6.5**	**51.7**
RATING 5 (HIGH) *(more than 1 SD above Avg)*	>	10.2	13.8	7.0	18.3	6.5	52.2
	to	above	above	above	above	above	above

RATING COUNTS (%) BY CATEGORY		INST	LU	MOB	SAFE	COND	ALL
RATING 1 (LOW) *(more than 1 SD below Avg)*	COUNT	41	37	21	28	53	**25**
	%	26%	23%	13%	18%	33%	**16%**
RATING 2 (LOW-MED) *(within 1/2 to 1 SD below Avg)*	COUNT	0	23	23	39	0	**26**
	%	0%	14%	14%	25%	0%	**16%**
RATING 3 (MED) *(within 1/2 SD above/below Avg)*	COUNT	79	54	93	40	50	**63**
	%	50%	34%	58%	25%	31%	**40%**
RATING 4 (MED-HIGH) *(within 1/2 to 1 SD above Avg)*	COUNT	24	16	0	23	29	**16**
	%	15%	10%	0%	14%	18%	**10%**
RATING 5 (HIGH) *(more than 1 SD above Avg)*	COUNT	15	29	22	29	27	**29**
	%	9%	18%	14%	18%	17%	**18%**

Total Number of Corridors = **159**

FFM Freight Network Screening Summary : BY CONFLICT CATEGORY (1-5) AND OVERALL FFM FREIGHT NETWORK

 # FFM Routes by Rating by Tier *% FFM Route by Rating by Tier*

CAT 1 - Institutional Needs / Conflicts

Rating	Tier 1	Tier 2	Tier 3	NCC	Tier 1	Tier 2	Tier 3	NCC
LOW	11	28	2	41	19%	30%	25%	26%
LOW-MED	0	0	0	0	0%	0%	0%	0%
MED	32	44	3	79	55%	47%	38%	50%
MED-HIGH	8	13	3	24	14%	14%	38%	15%
HIGH	7	8	0	15	12%	9%	0%	9%

CAT 2 - Land Use Needs / Conflicts

Rating	Tier 1	Tier 2	Tier 3	NCC	Tier 1	Tier 2	Tier 3	NCC
LOW	9	26	2	37	16%	28%	25%	23%
LOW-MED	6	14	3	23	10%	15%	38%	14%
MED	17	36	1	54	29%	39%	13%	34%
MED-HIGH	7	8	1	16	12%	9%	13%	10%
HIGH	19	9	1	29	33%	10%	13%	18%

CAT 3 - Mobility Needs / Conflicts

Rating	Tier 1	Tier 2	Tier 3	NCC	Tier 1	Tier 2	Tier 3	NCC
LOW	5	13	3	21	9%	14%	38%	13%
LOW-MED	7	15	1	23	12%	16%	13%	14%
MED	34	55	4	93	59%	59%	50%	58%
MED-HIGH	0	0	0	0	0%	0%	0%	0%
HIGH	12	10	0	22	21%	11%	0%	14%

CAT 4 - Safety Needs / Conflicts

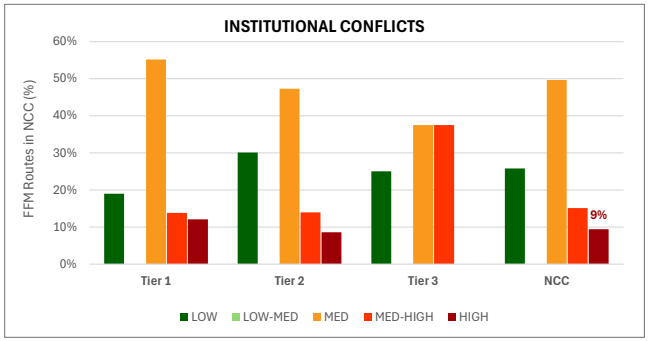
Rating	Tier 1	Tier 2	Tier 3	NCC	Tier 1	Tier 2	Tier 3	NCC
LOW	7	19	2	28	12%	20%	25%	18%
LOW-MED	8	29	2	39	14%	31%	25%	25%
MED	15	21	4	40	26%	23%	50%	25%
MED-HIGH	11	12	0	23	19%	13%	0%	14%
HIGH	17	12	0	29	29%	13%	0%	18%

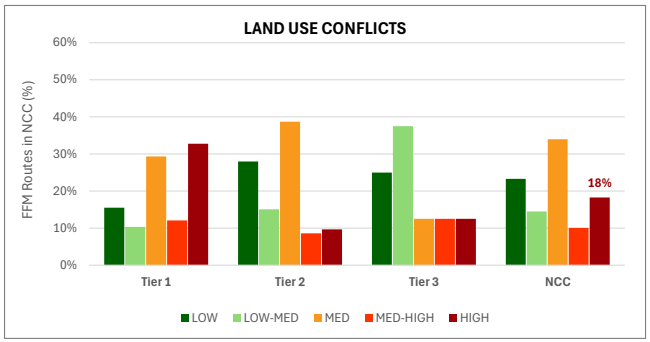
CAT 5 - Infrastructure Condition Needs / Conflicts

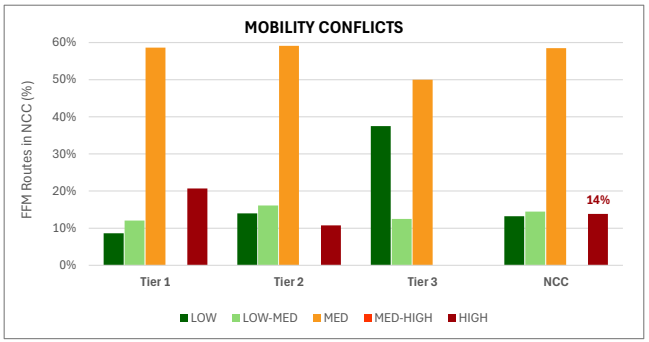
Rating	Tier 1	Tier 2	Tier 3	NCC	Tier 1	Tier 2	Tier 3	NCC
LOW	20	30	3	53	34%	32%	38%	33%
LOW-MED	0	0	0	0	0%	0%	0%	0%
MED	15	31	4	50	26%	33%	50%	31%
MED-HIGH	10	18	1	29	17%	19%	13%	18%
HIGH	13	14	0	27	22%	15%	0%	17%

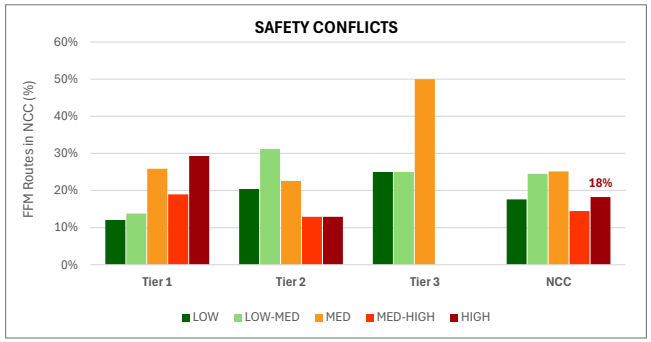
OVERALL NCC FFM FREIGHT NETWORK

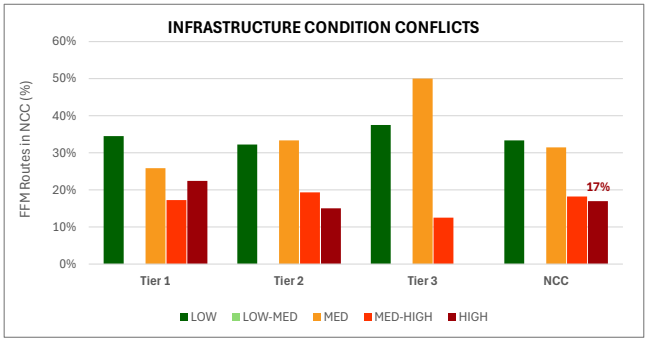
Rating	Tier 1	Tier 2	Tier 3	NCC	Tier 1	Tier 2	Tier 3	NCC
LOW	4	18	3	25	7%	19%	38%	16%
LOW-MED	6	19	1	26	10%	20%	13%	16%
MED	22	38	3	63	38%	41%	38%	40%
MED-HIGH	8	8	0	16	14%	9%	0%	10%
HIGH	18	10	1	29	31%	11%	13%	18%

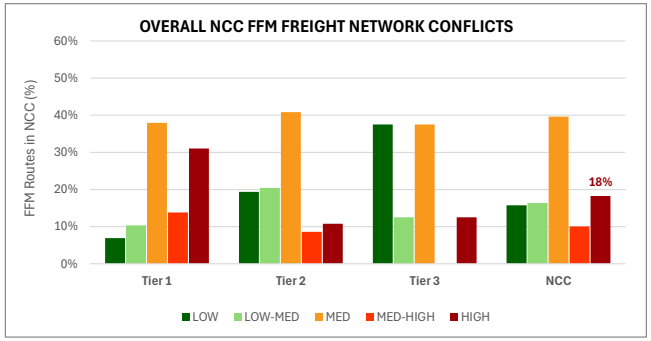












FFM Freight Network Screening Summary : CATEGORY 1 - INSTITUTIONAL NEEDS / CONFLICTS

 # FFM Routes by Rating by Tier *% FFM Route by Rating by Tier*

1a - Area Type

Rating	Tier 1	Tier 2	Tier 3	NCC	Tier 1	Tier 2	Tier 3	NCC
LOW	2	3	1	**6**	3%	3%	13%	**4%**
MED	38	62	6	**106**	66%	67%	75%	**67%**
HIGH	18	28	1	**47**	31%	30%	13%	**30%**

1b - Jurisdictional Coordination

Rating	Tier 1	Tier 2	Tier 3	NCC	Tier 1	Tier 2	Tier 3	NCC
LOW	34	64	4	**102**	59%	69%	50%	**64%**
MED	24	29	3	**56**	41%	31%	38%	**35%**
HIGH	0	0	1	**1**	0%	0%	13%	**1%**

1c - Road Maintenance Responsibility

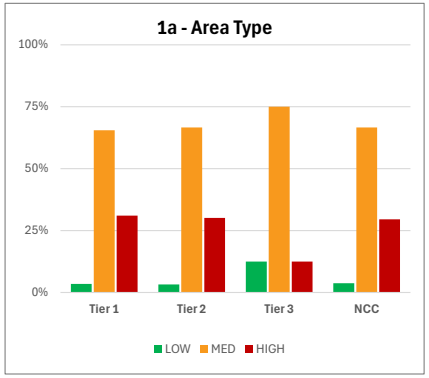
Rating	Tier 1	Tier 2	Tier 3	NCC	Tier 1	Tier 2	Tier 3	NCC
LOW	42	71	8	**121**	72%	76%	100%	**76%**
MED	10	18	0	**28**	17%	19%	0%	**18%**
HIGH	6	4	0	**10**	10%	4%	0%	**6%**

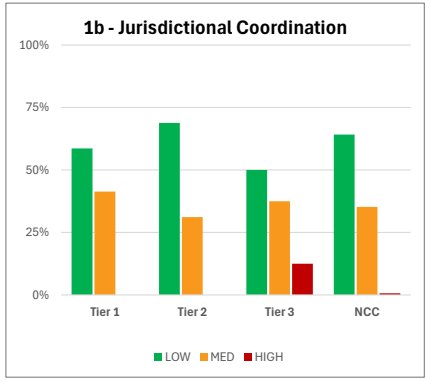
1d - Population Density

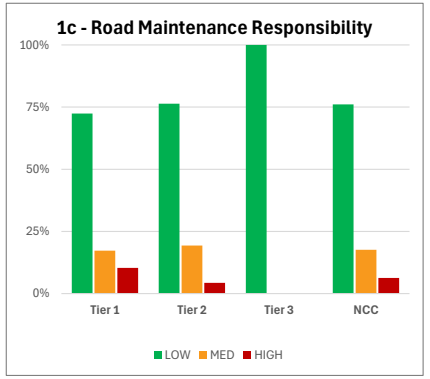
Rating	Tier 1	Tier 2	Tier 3	NCC	Tier 1	Tier 2	Tier 3	NCC
LOW	29	30	4	**63**	50%	32%	50%	**40%**
MED	27	55	4	**86**	47%	59%	50%	**54%**
HIGH	2	8	0	**10**	3%	9%	0%	**6%**

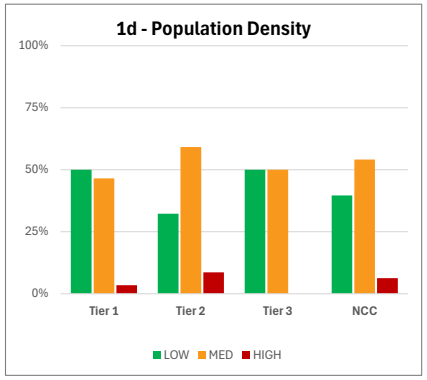
1e - Truck Activity Level

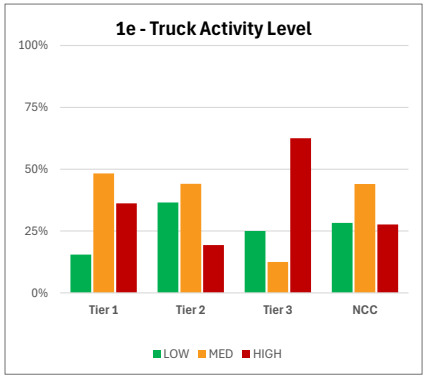
Rating	Tier 1	Tier 2	Tier 3	NCC	Tier 1	Tier 2	Tier 3	NCC
LOW	9	34	2	**45**	16%	37%	25%	**28%**
MED	28	41	1	**70**	48%	44%	13%	**44%**
HIGH	21	18	5	**44**	36%	19%	63%	**28%**











FFM Freight Network Screening Summary : CATEGORY 2 - LAND USE NEEDS / CONFLICTS

 # FFM Routes by Rating by Tier *% FFM Route by Rating by Tier*

2a - Existing Land Use								
Rating	Tier 1	Tier 2	Tier 3	NCC	Tier 1	Tier 2	Tier 3	NCC
LOW	14	18	4	**36**	24%	19%	50%	**23%**
MED	18	49	3	**70**	31%	53%	38%	**44%**
HIGH	26	26	1	**53**	45%	28%	13%	**33%**

2b - Future Land Use								
Rating	Tier 1	Tier 2	Tier 3	NCC	Tier 1	Tier 2	Tier 3	NCC
LOW	11	11	2	**24**	19%	12%	25%	**15%**
MED	19	54	5	**78**	33%	58%	63%	**49%**
HIGH	28	28	1	**57**	48%	30%	13%	**36%**

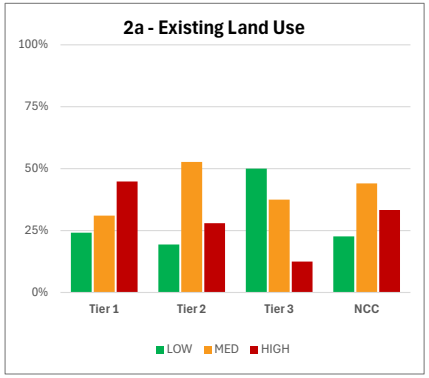
2c - Planning Investment Level								
Rating	Tier 1	Tier 2	Tier 3	NCC	Tier 1	Tier 2	Tier 3	NCC
LOW	53	88	6	**147**	91%	95%	75%	**92%**
MED	3	4	1	**8**	5%	4%	13%	**5%**
HIGH	2	1	1	**4**	3%	1%	13%	**3%**

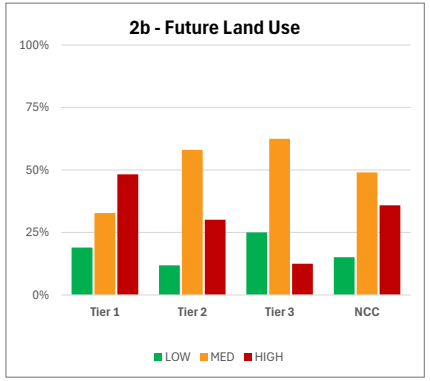
2d - Environmentally Sensitive Areas								
Rating	Tier 1	Tier 2	Tier 3	NCC	Tier 1	Tier 2	Tier 3	NCC
LOW	8	56	2	**66**	14%	60%	25%	**42%**
MED	38	32	4	**74**	66%	34%	50%	**47%**
HIGH	12	5	2	**19**	21%	5%	25%	**12%**

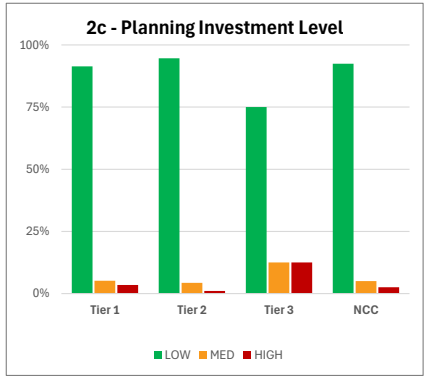
2e - Recreational Land Uses								
Rating	Tier 1	Tier 2	Tier 3	NCC	Tier 1	Tier 2	Tier 3	NCC
LOW	51	88	8	**147**	88%	95%	100%	**92%**
MED	7	5	0	**12**	12%	5%	0%	**8%**
HIGH	0	0	0	**0**	0%	0%	0%	**0%**

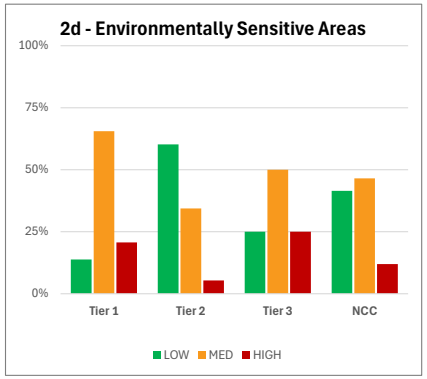
2f - Environmental Justice								
Rating	Tier 1	Tier 2	Tier 3	NCC	Tier 1	Tier 2	Tier 3	NCC
LOW	54	87	7	**148**	93%	94%	88%	**93%**
MED	2	1	0	**3**	3%	1%	0%	**2%**
HIGH	2	5	1	**8**	3%	5%	13%	**5%**

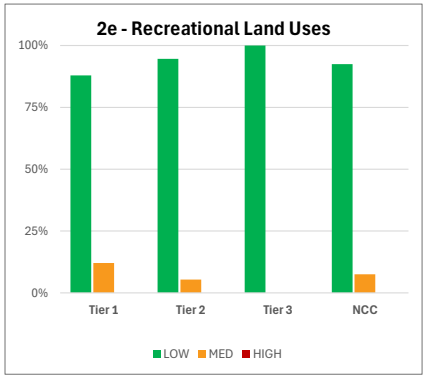
2g - Air Quality								
Rating	Tier 1	Tier 2	Tier 3	NCC	Tier 1	Tier 2	Tier 3	NCC
LOW	14	31	4	**49**	24%	33%	50%	**31%**
MED	18	27	2	**47**	31%	29%	25%	**30%**
HIGH	26	35	2	**63**	45%	38%	25%	**40%**

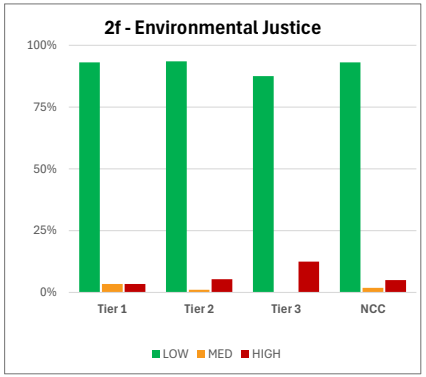


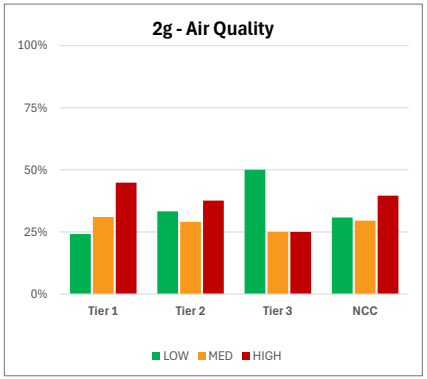












FFM Freight Network Screening Summary : CATEGORY 3 - MOBILITY NEEDS / CONFLICTS

 # FFM Routes by Rating by Tier *% FFM Route by Rating by Tier*

3a - Lane Width

Rating	Tier 1	Tier 2	Tier 3	NCC	Tier 1	Tier 2	Tier 3	NCC
LOW	48	68	2	**118**	83%	73%	25%	**74%**
MED	7	18	4	**29**	12%	19%	50%	**18%**
HIGH	0	4	0	**4**	0%	4%	0%	**3%**

3b - Right Shoulder Width

Rating	Tier 1	Tier 2	Tier 3	NCC	Tier 1	Tier 2	Tier 3	NCC
LOW	14	18	3	**35**	24%	19%	38%	**22%**
MED	9	16	2	**27**	16%	17%	25%	**17%**
HIGH	32	56	1	**89**	55%	60%	13%	**56%**

3c - RR At-Grade Crossing Train Frequency

Rating	Tier 1	Tier 2	Tier 3	NCC	Tier 1	Tier 2	Tier 3	NCC
LOW	2	3	0	**5**	3%	3%	0%	**3%**
MED	2	1	0	**3**	3%	1%	0%	**2%**
HIGH	5	1	0	**6**	9%	1%	0%	**4%**

3d - RR At-Grade Crossing Blockage Time

Rating	Tier 1	Tier 2	Tier 3	NCC	Tier 1	Tier 2	Tier 3	NCC
LOW	0	2	0	**2**	0%	2%	0%	**1%**
MED	1	0	0	**1**	2%	0%	0%	**1%**
HIGH	1	0	0	**1**	2%	0%	0%	**1%**

3e - Bridge Vertical Clearance Over Road

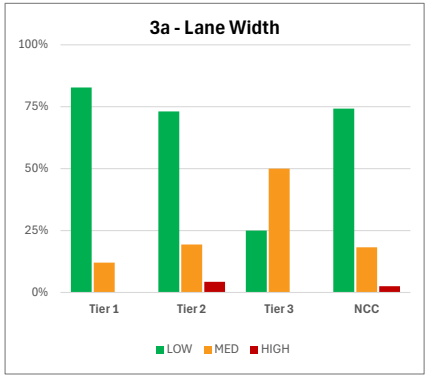
Rating	Tier 1	Tier 2	Tier 3	NCC	Tier 1	Tier 2	Tier 3	NCC
LOW	1	0	0	**1**	2%	0%	0%	**1%**
MED	3	1	0	**4**	5%	1%	0%	**3%**
HIGH	4	2	0	**6**	7%	2%	0%	**4%**

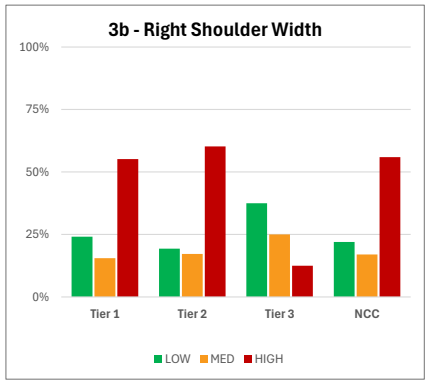
3f - Bridge Weight Restriction

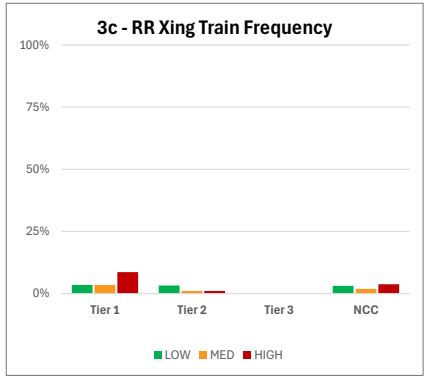
Rating	Tier 1	Tier 2	Tier 3	NCC	Tier 1	Tier 2	Tier 3	NCC
LOW	20	8	2	**30**	34%	9%	25%	**19%**
MED	0	0	1	**1**	0%	0%	13%	**1%**
HIGH	1	0	0	**1**	2%	0%	0%	**1%**

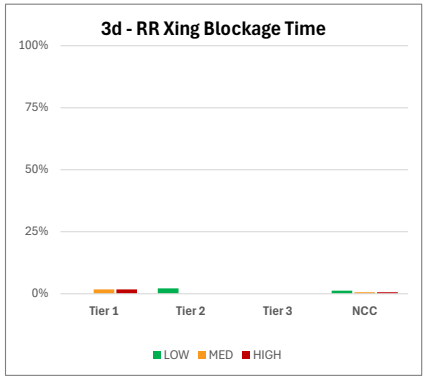
3g - Truck Turn Clearance

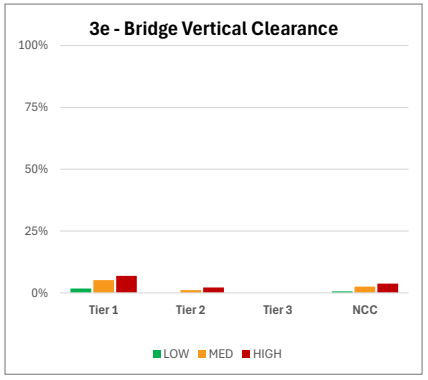
Rating	Tier 1	Tier 2	Tier 3	NCC	Tier 1	Tier 2	Tier 3	NCC
LOW	54	83	8	**145**	93%	89%	100%	**91%**
MED	4	9	0	**13**	7%	10%	0%	**8%**
HIGH	0	1	0	**1**	0%	1%	0%	**1%**

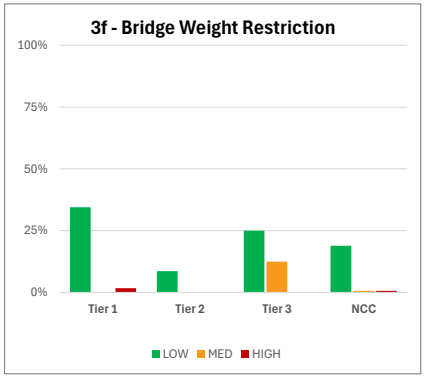


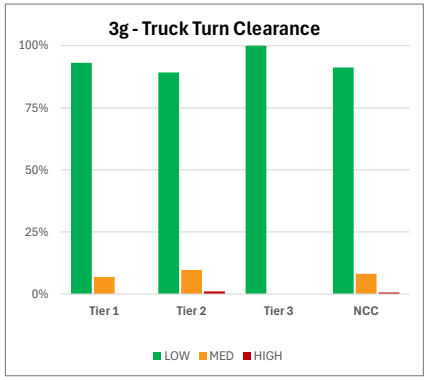












FFM Freight Network Screening Summary : CATEGORY 4 - SAFETY NEEDS / CONFLICTS

 # FFM Routes by Rating by Tier *% FFM Route by Rating by Tier*

4a - Truck-Involved Crashes

Rating	Tier 1	Tier 2	Tier 3	NCC	Tier 1	Tier 2	Tier 3	NCC
LOW	11	37	2	**50**	19%	40%	25%	**31%**
MED	20	48	5	**73**	34%	52%	63%	**46%**
HIGH	27	8	1	**36**	47%	9%	13%	**23%**

4b - Truck-Involved Crash Severity

Rating	Tier 1	Tier 2	Tier 3	NCC	Tier 1	Tier 2	Tier 3	NCC
LOW	29	71	3	**103**	50%	76%	38%	**65%**
MED	18	3	1	**22**	31%	3%	13%	**14%**
HIGH	11	19	4	**34**	19%	20%	50%	**21%**

4c - Intersection Safety Rankings

Rating	Tier 1	Tier 2	Tier 3	NCC	Tier 1	Tier 2	Tier 3	NCC
LOW	24	61	8	**93**	41%	66%	100%	**58%**
MED	22	23	0	**45**	38%	25%	0%	**28%**
HIGH	12	9	0	**21**	21%	10%	0%	**13%**

4d - RR At-Grade Crossings

Rating	Tier 1	Tier 2	Tier 3	NCC	Tier 1	Tier 2	Tier 3	NCC
LOW	10	8	0	**18**	17%	9%	0%	**11%**
MED	4	0	0	**4**	7%	0%	0%	**3%**
HIGH	2	0	0	**2**	3%	0%	0%	**1%**

4e - Bike Route

Rating	Tier 1	Tier 2	Tier 3	NCC	Tier 1	Tier 2	Tier 3	NCC
LOW	12	41	1	**54**	21%	44%	13%	**34%**
MED	20	25	3	**48**	34%	27%	38%	**30%**
HIGH	26	27	4	**57**	45%	29%	50%	**36%**

4f - Sidewalks

Rating	Tier 1	Tier 2	Tier 3	NCC	Tier 1	Tier 2	Tier 3	NCC
LOW	5	14	3	**22**	9%	15%	38%	**14%**
MED	50	50	5	**105**	86%	54%	63%	**66%**
HIGH	3	29	0	**32**	5%	31%	0%	**20%**

4g - Crosswalks

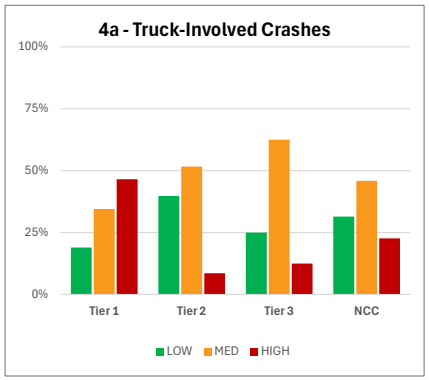
Rating	Tier 1	Tier 2	Tier 3	NCC	Tier 1	Tier 2	Tier 3	NCC
LOW	11	20	5	**36**	19%	22%	63%	**23%**
MED	25	49	3	**77**	43%	53%	38%	**48%**
HIGH	22	24	0	**46**	38%	26%	0%	**29%**

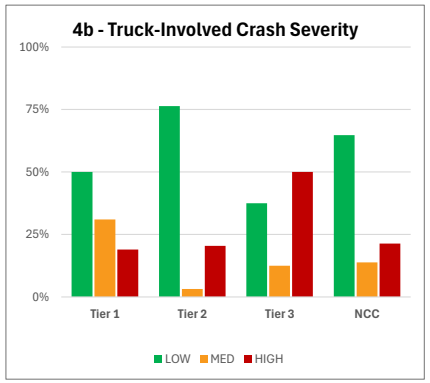
4h - Schools

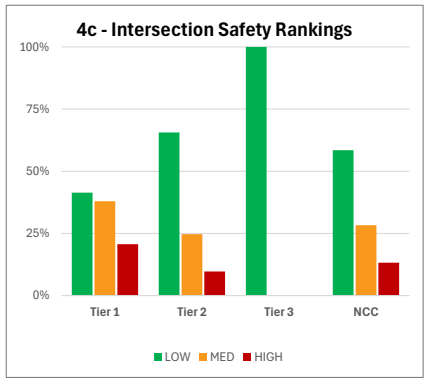
Rating	Tier 1	Tier 2	Tier 3	NCC	Tier 1	Tier 2	Tier 3	NCC
LOW	17	31	5	**53**	29%	33%	63%	**33%**
MED	19	35	1	**55**	33%	38%	13%	**35%**
HIGH	22	27	2	**51**	38%	29%	25%	**32%**

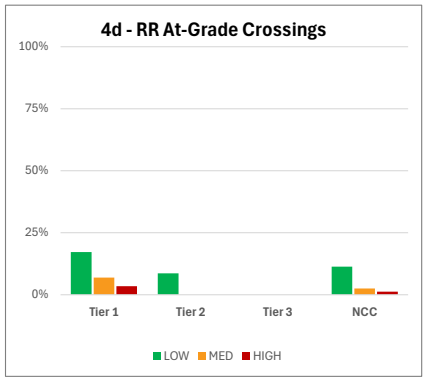
4i - On-Street Parking

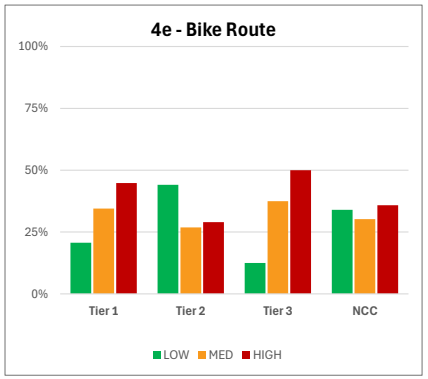
Rating	Tier 1	Tier 2	Tier 3	NCC	Tier 1	Tier 2	Tier 3	NCC
LOW	41	70	7	**118**	71%	75%	88%	**74%**
MED	9	13	0	**22**	16%	14%	0%	**14%**
HIGH	8	10	1	**19**	14%	11%	13%	**12%**

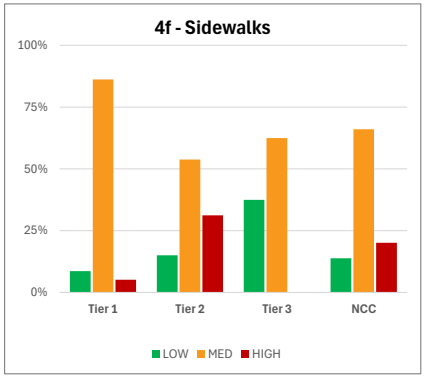


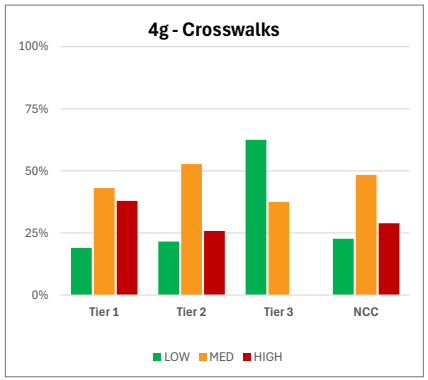


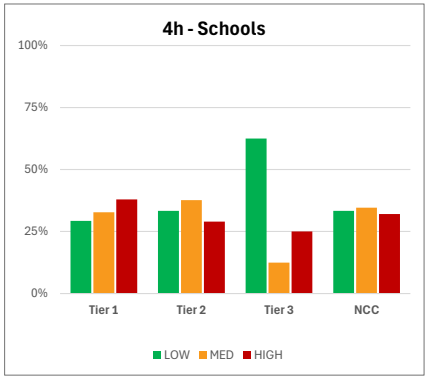


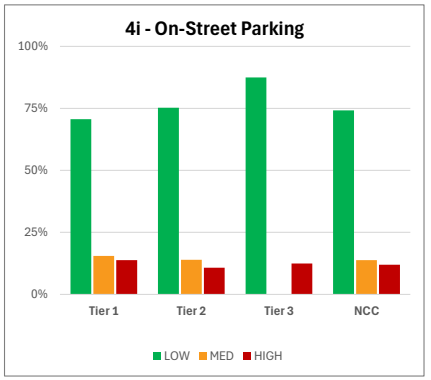












FFM Freight Network Screening Summary : CATEGORY 5 - INFRASTRUCTURE CONDITION NEEDS / CONFLICTS

 # FFM Routes by Rating by Tier *% FFM Route by Rating by Tier*

5a - Bridge Conditions

Rating	Tier 1	Tier 2	Tier 3	NCC	Tier 1	Tier 2	Tier 3	NCC
LOW	5	3	2	**10**	9%	3%	25%	**6%**
MED	3	0	0	**3**	5%	0%	0%	**2%**
HIGH	0	1	0	**1**	0%	1%	0%	**1%**

5b - Pavement Conditions

Rating	Tier 1	Tier 2	Tier 3	NCC	Tier 1	Tier 2	Tier 3	NCC
LOW	38	49	5	**92**	66%	53%	63%	**58%**
MED	16	38	3	**57**	28%	41%	38%	**36%**
HIGH	4	6	0	**10**	7%	6%	0%	**6%**

5c - Pavement Marking Conditions

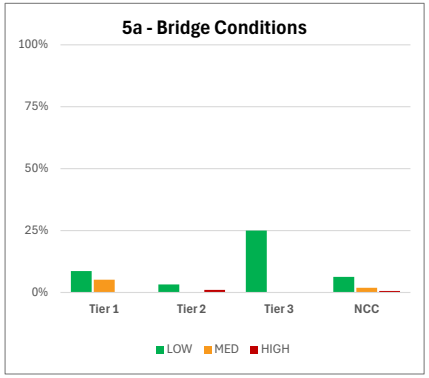
Rating	Tier 1	Tier 2	Tier 3	NCC	Tier 1	Tier 2	Tier 3	NCC
LOW	38	60	8	**106**	66%	65%	100%	**67%**
MED	9	15	0	**24**	16%	16%	0%	**15%**
HIGH	11	18	0	**29**	19%	19%	0%	**18%**

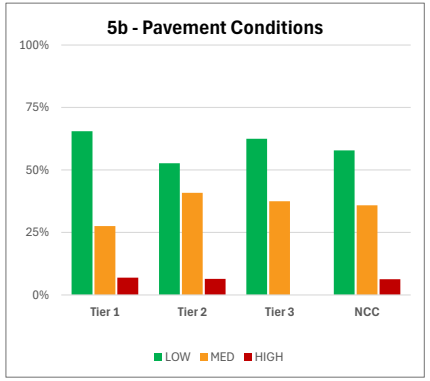
5d - Signing Conditions

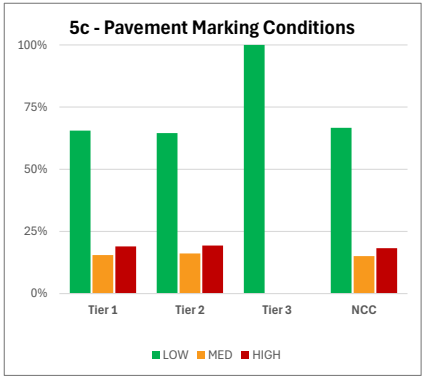
Rating	Tier 1	Tier 2	Tier 3	NCC	Tier 1	Tier 2	Tier 3	NCC
LOW	54	85	8	**147**	93%	91%	100%	**92%**
MED	4	6	0	**10**	7%	6%	0%	**6%**
HIGH	0	2	0	**2**	0%	2%	0%	**1%**

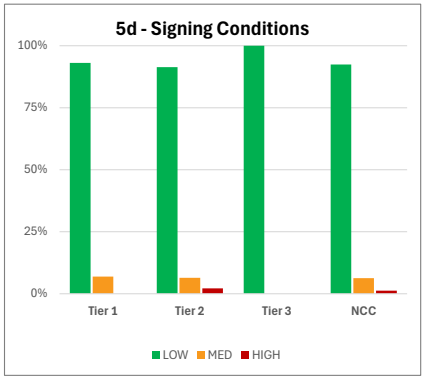
5e - Sea Level Rise Impact

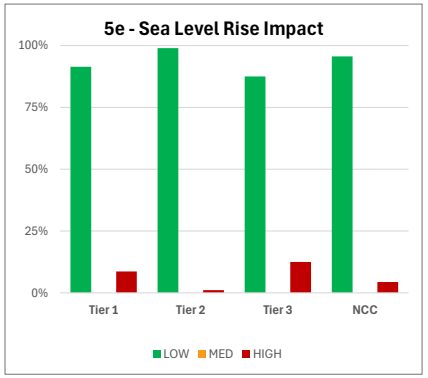
Rating	Tier 1	Tier 2	Tier 3	NCC	Tier 1	Tier 2	Tier 3	NCC
LOW	53	92	7	**152**	91%	99%	88%	**96%**
MED	0	0	0	**0**	0%	0%	0%	**0%**
HIGH	5	1	1	**7**	9%	1%	13%	**4%**











First/Final Mile Freight Network Update: New Castle County, DE

APPENDIX E:

2025 First/Final Mile

Freight Network Intersection Inventory

APPENDIX E:

2025 First/Final Mile Freight Network Intersection Inventory

Tables on the following pages list over 220 key intersections located along the 2025 First/Final Mile Freight Network in New Castle County, along with basic intersection characteristics that include the following:

- Intersection ID and Location
- Intersection Type
    - Signalized
    - Unsignalized
- Intersection Functional Classification
    - Class 5 – Principal Arterial vs. Principal Arterial
    - Class 4 – Principal Arterial vs. Minor Arterial
    - Class 3 – Minor Arterial vs. Minor Arterial
    - Class 2 – Principal Arterial vs. Local/Collector Road
    - Class 1 – Minor Arterial vs. Local/Collector Road
    - Class 0 – Collector/Local Roads
- Safety and Congestion Statistics (from other available DelDOT or WILMAPCO studies/resources)
    - Location relative to defined congestion “Hot Spot” (Yes or No)
    - Intersection Crash Ranking (2023, if available)
    - Intersection AM/PM Level-of-Service (LOS) based on current volumes (if available)
    - Reference year for intersection LOS volumes/counts
- Proximity to existing/ongoing WILMAPCO studies or monitoring areas

APPENDIX E: 2025 First/Final Mile Freight Network Intersection Inventory

ID	Intersection Location	Intersection Type	Intersection Classification	Located along a Congestion Hot Spot?	2023 Intersection Crash Ranking (if applicable)	WILMAPCO Study Monitoring Area (if applicable)	Current Volume LOS	Year of LOS Count
N101	US 202 & SR 92 Naamans Rd.	Signalized	Class 5: Principal Arterial vs. Principal Arterial	YES	33	US 202	AM peak: A / PM peak: C	2024
N153	SR 4 / Elkton Rd. & SR 896	Signalized	Class 5: Principal Arterial vs. Principal Arterial		N/A	Newark TID	AM peak: B / PM peak: B	2024
N627T	Front St. & Walnut St.	Signalized	Class 5: Principal Arterial vs. Principal Arterial		75	City of Wilmington	N / A	
N179	US 13 & Memorial Dr.	Signalized	Class 4: Principal Arterial vs. Minor Arterial	YES	21	Route 9	AM peak: B / PM peak: A	2011
N200	SR 4 (Maryland Ave.) & Boxwood Rd.	Signalized	Class 4: Principal Arterial vs. Minor Arterial	YES	216	Newport	AM peak: A / PM peak: D	2022
N367	SR 273 & Chapman Rd (Eagle Run)	Signalized	Class 4: Principal Arterial vs. Minor Arterial	YES	51	Churchmans TID	AM peak: B / PM peak: D	2024
N556	SR 301 &SR 299 (W. Main St.)	Signalized	Class 4: Principal Arterial vs. Minor Arterial	YES	134	Westown	AM peak: C / PM peak: C	2023
N590	SR 273 & Old Ogletown Rd./Red Mill Rd.	Signalized	Class 4: Principal Arterial vs. Minor Arterial		172	Churchmans Study	AM peak: D / PM peak: F	2016
N193	SR 72 (Wrangle Hill Rd) & US 13 (Dupont Hwy)	Signalized	Class 3: Minor Arterial vs. Minor Arterial		N/A		AM peak: A / PM peak: A	2019
N456T	SR 299 (Broad St.) & Main St.	Signalized	Class 3: Minor Arterial vs. Minor Arterial	YES	N/A	Eastown	AM peak: B / PM peak: C	2018
N484	Gov. Printz Blvd. & Edgemoor Rd.	Signalized	Class 3: Minor Arterial vs. Minor Arterial		260	Gov. Printz	AM peak: C / PM peak: C	2019
N664	SR 141 & SR 9	Signalized	Class 3: Minor Arterial vs. Minor Arterial		N/A	City of New Castle	N / A	
N690T	4th Street & Church St.	Signalized	Class 3: Minor Arterial vs. Minor Arterial		N/A		N / A	
N008P	US 13 & School Lane (Airport)	Signalized	Class 2: Principal Arterial vs. Local/Collector	YES	37		AM peak: B / PM peak: B	2013
N036P	SR 7 & Songsmith Dr. (South)	Signalized	Class 2: Principal Arterial vs. Local/Collector		200	US 40	N / A	
N089P	SR 273 & Centerpointe Blvd.	Signalized	Class 2: Principal Arterial vs. Local/Collector	YES	N/A	City of New Castle	AM peak: A / PM peak: A	2023
N102	US 202 (SB) & Garden of Eden Rd.	Signalized	Class 2: Principal Arterial vs. Local/Collector	YES	N/A	US 202	AM peak: A / PM peak: D	2023
N108	US 202 & Fairfax Blvd.	Signalized	Class 2: Principal Arterial vs. Local/Collector	YES	252	US 202	AM peak: B / PM peak: D	2024
N136	SR 896 & Four Seasons Parkway	Signalized	Class 2: Principal Arterial vs. Local/Collector	YES	143	US 40	AM peak: A / PM peak: C	2017
N159	SR 41 & Yorklyn Rd.	Signalized	Class 2: Principal Arterial vs. Local/Collector		114		AM peak: A / PM peak: C	2023
N169	SR 141 & Centerville Rd.	Signalized	Class 2: Principal Arterial vs. Local/Collector		N/A	Newport	N / A	
N171	SR 7 & Old Stanton Rd.	Signalized	Class 2: Principal Arterial vs. Local/Collector	YES	N/A	Churchmans TID	AM peak: B / PM peak: B	2019
N181	SR 2 & Otts Chapel Rd	Signalized	Class 2: Principal Arterial vs. Local/Collector		117	Newark TID	AM peak: A / PM peak: A	2024
N186	SR 2 & Delaware Park Ent.	Signalized	Class 2: Principal Arterial vs. Local/Collector	YES	196	Kirkwood Highway	AM peak: A / PM peak: A	2025
N187	US 40 & Glasgow Ave. South	Signalized	Class 2: Principal Arterial vs. Local/Collector	YES	179	US 40	AM peak: A / PM peak: B	2019
N187	US 40 & Glasgow Ave. North	Signalized	Class 2: Principal Arterial vs. Local/Collector	YES	179	US 40	AM peak: A / PM peak: A	2019
N194	SR 4 & Brookside Dr.	Signalized	Class 2: Principal Arterial vs. Local/Collector	YES	N/A		AM peak: A / PM peak: A	2018
N204	SR 4 & Latimer St.	Signalized	Class 2: Principal Arterial vs. Local/Collector	YES	N/A	Newport	AM peak: A / PM peak: A	2018
N215	US 301 & SR71	Signalized	Class 2: Principal Arterial vs. Local/Collector		150	Eastown	AM peak: A / PM peak: C	2024
N217	US 13 & Bacon Ave/Boulden Blvd.	Signalized	Class 2: Principal Arterial vs. Local/Collector	YES	3	Route 9	AM peak: C / PM peak: E	2022

APPENDIX E: 2025 First/Final Mile Freight Network Intersection Inventory

ID	Intersection Location	Intersection Type	Intersection Classification	Located along a Congestion Hot Spot?	2023 Intersection Crash Ranking (if applicable)	WILMAPCO Study Monitoring Area (if applicable)	Current Volume LOS	Year of LOS Count
N231	SR 273 & Browns Lane	Signalized	Class 2: Principal Arterial vs. Local/Collector	YES	105	Churchmans TID	AM peak: B / PM peak: C	2024
N247	SR 273 & Marrows Rd.	Signalized	Class 2: Principal Arterial vs. Local/Collector		N/A	Newark TID	AM peak: B / PM peak: C	2015
N252	SR 2 & Duncan Rd.	Signalized	Class 2: Principal Arterial vs. Local/Collector	YES	44	Kirkwood Highway	AM peak: B / PM peak: C	2022
N255	SR 4 & Marrows Rd.	Signalized	Class 2: Principal Arterial vs. Local/Collector		109		AM peak: A / PM peak: A	2024
N261	SR 7 & Skyline Dr.	Signalized	Class 2: Principal Arterial vs. Local/Collector		74		AM peak: D / PM peak: E	2023
N285	SR 2 & Farrand Dr	Signalized	Class 2: Principal Arterial vs. Local/Collector	YES	119	Kirkwood Highway	AM peak: A / PM peak: C	2017
N296	Foulk Rd. & Weldin Rd.	Signalized	Class 2: Principal Arterial vs. Local/Collector		N/A	US 202	N / A	
N297	SR 48 & Centerville Rd.	Signalized	Class 2: Principal Arterial vs. Local/Collector		250		AM peak: B / PM peak: B	2021
N301	SR 2 (Kirkwood Hwy) & Harmony Rd.	Signalized	Class 2: Principal Arterial vs. Local/Collector	YES	78	Kirkwood Highway	AM peak: A / PM peak: B	2024
N312	SR 4 & Harmony Rd.	Signalized	Class 2: Principal Arterial vs. Local/Collector	YES	43	Churchmans TID	AM peak: C / PM peak: C	2024
N326	SR 92 / Naamans Rd. & Peachtree Dr.	Signalized	Class 2: Principal Arterial vs. Local/Collector	YES	89	Claymont	AM peak: A / PM peak: A	2022
N332	US 40 & Scotland Dr.	Signalized	Class 2: Principal Arterial vs. Local/Collector	YES	31	US 40	AM peak: A / PM peak: A	2019
N357	SR 4 & McArthur Dr.	Signalized	Class 2: Principal Arterial vs. Local/Collector	YES	N/A	Newport	AM peak: A / PM peak: A	2012
N358	SR 2 & Albertson Blvd..	Signalized	Class 2: Principal Arterial vs. Local/Collector	YES	178	Kirkwood Highway	AM peak: A / PM peak: C	2022
N372	SR 4 & Germay Dr.	Signalized	Class 2: Principal Arterial vs. Local/Collector	YES	N/A		AM peak: A / PM peak: A	2018
N393	US 40 & Porter Rd.	Signalized	Class 2: Principal Arterial vs. Local/Collector	YES	36	US 40	AM peak: C / PM peak: C	2019
N407	SR 7 & Valley Rd.	Signalized	Class 2: Principal Arterial vs. Local/Collector		118		AM peak: A / PM peak: C	2017
N409	US 13 & Hamburg Rd	Signalized	Class 2: Principal Arterial vs. Local/Collector		71	US 40	AM peak: D / PM peak: D	2017
N434T	SR 896 & Welsh Tract Rd.	Signalized	Class 2: Principal Arterial vs. Local/Collector		49	Newark TID	AM peak: B / PM peak: C	2016
N441T	SR 4 & Park Dr.	Signalized	Class 2: Principal Arterial vs. Local/Collector		N/A	Newark TID	N / A	
N477	SR 4 & Robinson Ln.	Signalized	Class 2: Principal Arterial vs. Local/Collector		N/A		AM peak: A / PM peak: A	2018
N479	Concord Pike (US 202) & Rocky Run Pkwy	Signalized	Class 2: Principal Arterial vs. Local/Collector	YES	153	US 202	AM peak: A / PM peak: A	2024
N481	US 202 & Righter Parkway	Signalized	Class 2: Principal Arterial vs. Local/Collector	YES	270	US 202	AM peak: A / PM peak: B	2019
N486	US 40 & Pleasant Valley Rd.	Signalized	Class 2: Principal Arterial vs. Local/Collector	YES	64	US 40	AM peak: B / PM peak: C	2019
N489	SR 896 (S. College Ave.) & Corporate Blvd. (GBC DR)	Signalized	Class 2: Principal Arterial vs. Local/Collector	YES	183	US 40	AM peak: B / PM peak: C	2022
N501	SR 273 & Quigley Blvd.	Signalized	Class 2: Principal Arterial vs. Local/Collector	YES	112	City of New Castle	AM peak: A / PM peak: A	2023
N514	US 40 & Wilton Blvd.	Signalized	Class 2: Principal Arterial vs. Local/Collector	YES	92	US 40	AM peak: B / PM peak: B	2019
N517	US 40 & Walther Rd.	Signalized	Class 2: Principal Arterial vs. Local/Collector	YES	136	US 40	AM peak: B / PM peak: B	2019
N530	US 13 & Widel Ave.	Signalized	Class 2: Principal Arterial vs. Local/Collector	YES	170	Route 9	AM peak: A / PM peak: A	2014
N564	SR 7 & Ochletree Ln.	Signalized	Class 2: Principal Arterial vs. Local/Collector		N/A		AM peak: A / PM peak: B	2012

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ID	Intersection Location	Intersection Type	Intersection Classification	Located along a Congestion Hot Spot?	2023 Intersection Crash Ranking (if applicable)	WILMAPCO Study Monitoring Area (if applicable)	Current Volume LOS	Year of LOS Count
N566	SR 4 & Rothwell Dr.	Signalized	Class 2: Principal Arterial vs. Local/Collector	YES	N/A	Newport	AM peak: A / PM peak: B	2023
N574	US 13 & SR 71	Signalized	Class 2: Principal Arterial vs. Local/Collector		N/A	US 40	AM peak: D / PM peak: C	2016
N587	SR 273 & Lowes Entrance	Signalized	Class 2: Principal Arterial vs. Local/Collector		N/A	Churchmans Study	AM peak: A / PM peak: A	2015
N588	SR 273 & Avon Entrance	Signalized	Class 2: Principal Arterial vs. Local/Collector		185	Churchmans Study	AM peak: A / PM peak: A	2012
N589	SR 273 & Ruthar Dr.	Signalized	Class 2: Principal Arterial vs. Local/Collector		185	Churchmans Study	AM peak: A / PM peak: B	2023
N625	US 13 & Hessler Blvd.	Signalized	Class 2: Principal Arterial vs. Local/Collector	YES	235	Route 9	N / A	
N626	US 40 & Perch Creek Dr.	Signalized	Class 2: Principal Arterial vs. Local/Collector	YES	272	US 40	AM peak: A / PM peak: A	2019
N633	US 40 & Buckley Blvd.	Signalized	Class 2: Principal Arterial vs. Local/Collector	YES	N/A	US 40	AM peak: A / PM peak: B	2019
N634	Concord Ave. & Broom St.	Signalized	Class 2: Principal Arterial vs. Local/Collector		176		AM peak: D / PM peak: E	2014
N643	SR 2 & McIntire Dr.	Signalized	Class 2: Principal Arterial vs. Local/Collector		N/A	Newark TID	AM peak: A / PM peak: A	2024
N658	SR 7 & Stanton-Christiana Rd.	Signalized	Class 2: Principal Arterial vs. Local/Collector	YES	N/A	Churchmans TID	AM peak: B / PM peak: C	2019
N697T	S. Walnut St. & A St.	Signalized	Class 2: Principal Arterial vs. Local/Collector		126	Southbridge	N / A	
N701	SR 41 & Valley Rd.	Signalized	Class 2: Principal Arterial vs. Local/Collector		N/A		AM peak: C / PM peak: C	2016
N705	US 301 & Diamond State Blvd	Signalized	Class 2: Principal Arterial vs. Local/Collector		N/A	Westown	AM peak: A / PM peak: B	2023
N706	SR 4 & Old Churchman's Rd.	Signalized	Class 2: Principal Arterial vs. Local/Collector	YES	N/A	Churchmans TID	AM peak: A / PM peak: A	2024
N715	US 301 & Merrimac Av.	Signalized	Class 2: Principal Arterial vs. Local/Collector		88	Westown	AM peak: A / PM peak: B	2023
N726	US 301 & Levels Rd. (SR 15)	Signalized	Class 2: Principal Arterial vs. Local/Collector		N/A	Westown	AM peak: A / PM peak: A	2015
N741	US 40 & Glasgow Dr.	Signalized	Class 2: Principal Arterial vs. Local/Collector	YES	132	S 40	AM peak: A / PM peak: B	2019
N778	A St. & S. Market St.	Signalized	Class 2: Principal Arterial vs. Local/Collector		N/A	Southbridge	N / A	
N793	S. Market & New Sweden	Signalized	Class 2: Principal Arterial vs. Local/Collector		N/A	Southbridge	N / A	
N915	US 40 & Rickey Blvd.	Signalized	Class 2: Principal Arterial vs. Local/Collector	YES	N/A	US 40	N / A	
UN104	SR 48 SB & Little Falls Dr.	Unsignalized	Class 2: Principal Arterial vs. Local/Collector		N/A		N / A	
UN106	SR 7 NB & Old Mermaid Stony Batter Rd.	Unsignalized	Class 2: Principal Arterial vs. Local/Collector		N/A		N / A	
UN14	Pigeon Point Rd. & Terminal Ave.	Unsignalized	Class 2: Principal Arterial vs. Local/Collector		N/A	Route 9	N / A	
UN19	UN13 NB @ Quigley Blcd.	Unsignalized	Class 2: Principal Arterial vs. Local/Collector	YES	N/A		N / A	
UN20	UN13 NB & Lisa Dr.	Unsignalized	Class 2: Principal Arterial vs. Local/Collector	YES	N/A		N / A	
UN22	US 13 & Federal School Ln.	Unsignalized	Class 2: Principal Arterial vs. Local/Collector		N/A	US 40	N / A	
UN29	US 301 & Jamison Corner Ramp South	Unsignalized	Class 2: Principal Arterial vs. Local/Collector		N/A	SNCC TID	N / A	
UN30	US 301 & Jamison Corner Ramp North	Unsignalized	Class 2: Principal Arterial vs. Local/Collector		N/A	SNCC TID	N / A	
UN33	Warwick & United Dr.	Unsignalized	Class 2: Principal Arterial vs. Local/Collector		N/A	Westown	N / A	

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UN36	Warwick Rd. & VIntage Ave.	Unsignalized	Class 2: Principal Arterial vs. Local/Collector		N/A	Westown	N / A	
UN38	Middletown Rd. & Ash Blvd.	Unsignalized	Class 2: Principal Arterial vs. Local/Collector		N/A	Westown	N / A	
UN4	Us 202 SB & Passmore Rd.	Unsignalized	Class 2: Principal Arterial vs. Local/Collector	YES	N/A	US 202	N / A	
UN57	SR 7 & Songsmith Dr. (North)	Unsignalized	Class 2: Principal Arterial vs. Local/Collector		N/A	US 40	N / A	
UN81	I-495 NS Ramp	Unsignalized	Class 2: Principal Arterial vs. Local/Collector		N/A		N / A	
UN99	US 40 WB & Quintillio Dr.	Unsignalized	Class 2: Principal Arterial vs. Local/Collector	YES	N/A	US 40	N / A	
W565	SR 2 & Prospect Park Road	Signalized	Class 2: Principal Arterial vs. Local/Collector		N/A		N / A	
	Washington St. & Delaware Ave.	Signalized	Class 2: Principal Arterial vs. Local/Collector		N/A	City of Wilmington	N / A	
	King St. & 10th St.	Signalized	Class 2: Principal Arterial vs. Local/Collector		N/A	City of Wilmington	N / A	
N014P	Commons Blvd. & Reads Way	Signalized	Class 1: Minor Arterial vs. Local/Collector		N/A		AM peak: A / PM peak: B	2015
N044P	Cleveland Ave. & Winner Blvd.	Signalized	Class 1: Minor Arterial vs. Local/Collector	YES	N/A	Newark TID	AM peak: A / PM peak: A	2012
N059P	Marrows Rd. & Wyoming Rd.	Signalized	Class 1: Minor Arterial vs. Local/Collector		N/A	Newark TID	N / A	
N120	Philadelphia Pike & Harvey Rd.	Signalized	Class 1: Minor Arterial vs. Local/Collector		66		AM peak: A / PM peak: A	2019
N127	Philadelphia Pike & Edgemoor Rd.	Signalized	Class 1: Minor Arterial vs. Local/Collector		N/A		AM peak: A / PM peak: A	2017
N164	SR 41 & Old Capitol Trail	Signalized	Class 1: Minor Arterial vs. Local/Collector		158	Kirkwood Highway	N / A	
N168	Centerville Rd. & Boxwood Rd.	Signalized	Class 1: Minor Arterial vs. Local/Collector		103	Newport	AM peak: B / PM peak: C	2022
N227	40th St. & Market St.	Signalized	Class 1: Minor Arterial vs. Local/Collector		N/A		AM peak: A / PM peak: A	2019
N236	Foulk Rd. & Murphy Rd.	Signalized	Class 1: Minor Arterial vs. Local/Collector		215	US 202	AM peak: C / PM peak: C	2019
N243	SR 71 & Pine Tree Rd.	Signalized	Class 1: Minor Arterial vs. Local/Collector		229		AM peak: A / PM peak: A	2022
N267	Edgemoor Rd. & Marsh Rd.	Signalized	Class 1: Minor Arterial vs. Local/Collector		N/A		AM peak: A / PM peak: A	2015
N286	Foulk Rd. & Grubb Rd.	Signalized	Class 1: Minor Arterial vs. Local/Collector		N/A		AM peak: A / PM peak: B	2015
N313	New Castle Ave. & Cherry Lane	Signalized	Class 1: Minor Arterial vs. Local/Collector		190	Route 9	AM peak: A / PM peak: A	2018
N361	SR 100 (Du Pont Rd). & New Rd.	Signalized	Class 1: Minor Arterial vs. Local/Collector		N/A	Kirkwood Highway	N / A	
N362	SR 72 & Possum Park Rd.	Signalized	Class 1: Minor Arterial vs. Local/Collector		110	Kirkwood Highway	AM peak: A / PM peak: B	2023
N380	N. DuPont Rd. &Howard St.	Signalized	Class 1: Minor Arterial vs. Local/Collector		N/A		N / A	
N384	SR 9 & Hillview Ave.	Signalized	Class 1: Minor Arterial vs. Local/Collector		N/A	Route 9	AM peak: A / PM peak: A	2018
N390	Red Mill Rd. & Ruthar Dr.	Signalized	Class 1: Minor Arterial vs. Local/Collector		N/A	Churchmans Study	AM peak: B / PM peak: C	2015
N408	SR 58 (Churchmans Rd.) & Continental Dr.	Signalized	Class 1: Minor Arterial vs. Local/Collector	YES	102	Churchmans TID	AM peak: A / PM peak: B	2023
N410	SR 72 & Bellvue/Daswon Dr.	Signalized	Class 1: Minor Arterial vs. Local/Collector		N/A		AM peak: A / PM peak: C	2018
N425T	SR 72 & Wyoming Rd.	Signalized	Class 1: Minor Arterial vs. Local/Collector		83	Newark TID	AM peak: B / PM peak: D	2015

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N440T	SR 896 & Country Club Dr.	Signalized	Class 1: Minor Arterial vs. Local/Collector		N/A	Newark TID	AM peak: A / PM peak: A	2017
N453	US 13 & Paddock Rd.	Signalized	Class 1: Minor Arterial vs. Local/Collector		N/A		N / A	
N492	Chapman Rd. & Lawrence Dr.	Signalized	Class 1: Minor Arterial vs. Local/Collector		N/A	Churchmans Study	AM peak: A / PM peak: A	2014
N506	SR 72 & Porter Rd	Signalized	Class 1: Minor Arterial vs. Local/Collector	YES	142	US 40	AM peak: A / PM peak: C	2023
N523	SR 72 & Fox Run Circle	Signalized	Class 1: Minor Arterial vs. Local/Collector	YES	212	US 40	AM peak: A / PM peak: A	2023
N527	Old Baltimore Pk. & Walther Rd.	Signalized	Class 1: Minor Arterial vs. Local/Collector		218	Churchmans Study	AM peak: C / PM peak: C	2023
N533	SR 7 & Road A	Signalized	Class 1: Minor Arterial vs. Local/Collector		N/A	Churchmans TID	AM peak: A / PM peak: A	2009
N553	Old Baltimore Pk. & Albe Dr.	Signalized	Class 1: Minor Arterial vs. Local/Collector		N/A	US 40	AM peak: A / PM peak: A	2017
N585	US 13 & Pine Tree Corner Rd.	Signalized	Class 1: Minor Arterial vs. Local/Collector		N/A		AM peak: A / PM peak: A	2022
N594	SR 299 & Silver Lake Rd.	Signalized	Class 1: Minor Arterial vs. Local/Collector	YES	246	Eastown	AM peak: D / PM peak: D	2017
N606	SR 9 & Hamburg Rd.	Signalized	Class 1: Minor Arterial vs. Local/Collector		N/A		N / A	
N645	Airport Rd. & Old Churchmans Rd.	Signalized	Class 1: Minor Arterial vs. Local/Collector		N/A		N / A	
N659	SR 299 & Brick Mill Rd.	Signalized	Class 1: Minor Arterial vs. Local/Collector	YES	N/A	Eastown	AM peak: C / PM peak: C	2017
N670T	SR 299 & Cleaver Farm Rd.	Signalized	Class 1: Minor Arterial vs. Local/Collector	YES	149	Eastown	AM peak: A / PM peak: A	2018
N696T	S Heald St. & D St.	Signalized	Class 1: Minor Arterial vs. Local/Collector		N/A	Southbridge	N / A	
N703T	SR 299 & Industrial Dr.	Signalized	Class 1: Minor Arterial vs. Local/Collector	YES	168	Westown	AM peak: / PM peak: C	2023
N767	299 & Dove Run	Signalized	Class 1: Minor Arterial vs. Local/Collector	YES	N/A	Eastown	AM peak: B / PM peak: C	2018
N779	4th St. & Swedes Landing Rd.	Signalized	Class 1: Minor Arterial vs. Local/Collector		N/A	7th Street	N / A	
N845	SR 71 & American Blvd.	Signalized	Class 1: Minor Arterial vs. Local/Collector	YES	N/A		N / A	
UN103	SR 72 & Brookhill Drive	Unsignalized	Class 1: Minor Arterial vs. Local/Collector		N/A		N / A	
UN109	Red Mill Rd. & Mill Partk Court	Unsignalized	Class 1: Minor Arterial vs. Local/Collector		N/A	Churchmans Study	N / A	
UN11	N. Market & 30th Street	Unsignalized	Class 1: Minor Arterial vs. Local/Collector		N/A		N / A	
UN17	S. Heald St. & Garashes Ln.	Unsignalized	Class 1: Minor Arterial vs. Local/Collector		N/A	Southbridge	N / A	
UN2	SR 92 & Hickman Rd.	Unsignalized	Class 1: Minor Arterial vs. Local/Collector	YES	N/A	Claymont	N / A	
UN21	SR 9 & Grantham Lane	Unsignalized	Class 1: Minor Arterial vs. Local/Collector		N/A		N / A	
UN3	Philadephia Pike & Grubbs Landing	Unsignalized	Class 1: Minor Arterial vs. Local/Collector		N/A		N / A	
UN45	SR 72 & Dusk Run Rd.	Unsignalized	Class 1: Minor Arterial vs. Local/Collector		N/A	US 40	N / A	
UN55	Old Baltimore Pike & Woodland Park Drive	Unsignalized	Class 1: Minor Arterial vs. Local/Collector		N/A	US 40	N / A	
UN56	Old Baltimore Pike & Albe Dr. (Unsignalized)	Unsignalized	Class 1: Minor Arterial vs. Local/Collector		N/A	US 40	N / A	
UN62	Churchman's Rd. & Rd 339	Unignalized	Class 1: Minor Arterial vs. Local/Collector		N/A		N / A	

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UN66	SR 100 & Boulevard Rd.	Unsignalized	Class 1: Minor Arterial vs. Local/Collector		N/A	Kirkwood Highway	N / A	
UN71	Commons Blvd. & Reads Way (Unsignalized)	Unsignalized	Class 1: Minor Arterial vs. Local/Collector		N/A		N / A	
UN9	Northeast Blvd. & 30th St.	Unsignalized	Class 1: Minor Arterial vs. Local/Collector		N/A		N / A	
	Delaware Ave. & Washington St.	Signalized	Class 1: Minor Arterial vs. Local/Collector		N/A	City of Wilmington	N / A	
	7th St. & Church St.	Signalized	Class 1: Minor Arterial vs. Local/Collector		N/A	7th Street	N / A	
N020P	Old Capitol Tr. & Del Park Entrance	Signalized	Class 0: Collectors/Locals		N/A	Kirkwood Highway	N / A	
N031P	Boulden Blvd. & Southgate Blvd.	Signalized	Class 0: Collectors/Locals		N/A	Route 9	N / A	
N090P	Wilton Blvd. & Old Forge Rd.	Signalized	Class 0: Collectors/Locals		N/A	US 40	N / A	
N097P	SR 71 & Green Lawn Dr.	Signalized	Class 0: Collectors/Locals		N/A	Eastown	N / A	
N137	SR 7 & SR 71/Bear Corbit Rd.	Signalized	Class 0: Collectors/Locals		N/A	US 40	N / A	
N189	Marrows Rd. & Brookside Blvd.	Signalized	Class 0: Collectors/Locals		N/A		N / A	
N221	N Harmony Rd. & Greenridge Rd.	Signalized	Class 0: Collectors/Locals		N/A	Churchmans TID	N / A	
N275	Fifth St. & Clinton St.	Signalized	Class 0: Collectors/Locals		N/A		AM peak: A / PM peak: A	2016
N282	Centerville Rd. & Old Capitol Trail	Signalized	Class 0: Collectors/Locals		154	Kirkwood Highway	N / A	
N316	Duncan Rd. & Old Capitol Trail	Signalized	Class 0: Collectors/Locals		N/A	Kirkwood Highway	N / A	
N359	Greenbank Rd. & Alberson Blvd.	Signalized	Class 0: Collectors/Locals		N/A	Kirkwood Highway	N / A	
N382	Centerville Rd. & Greenbank Rd.	Signalized	Class 0: Collectors/Locals	YES	N/A	Kirkwood Highway	N / A	
N385	Harmony Rd. & Ruthar Dr.	Signalized	Class 0: Collectors/Locals		N/A	Churchmans TID	AM peak: / PM peak:	2019
N500T	SR 71 & Lake St.	Signalized	Class 0: Collectors/Locals		N/A	Eastown	N / A	
N505	SR 72 (Wrangle Hill Rd) & SR 9 (River Rd.)	Signalized	Class 0: Collectors/Locals		N/A		N / A	
N628	Walther Rd. &Barrett Run Dr.	Signalized	Class 0: Collectors/Locals		N/A	US 40	N / A	
N653P	Marrows Rd. & Campbell Dr.	Signalized	Class 0: Collectors/Locals		N/A	Newark TID	AM peak: A / PM peak: A	2017
N718	Valley Rd. & Lantana Dr.	Signalized	Class 0: Collectors/Locals		N/A		N / A	
N725T	Merrimac Ave @ Walmart Ent.	Signalized	Class 0: Collectors/Locals		N/A	Westown	N / A	
N734	Porter Rd. & Joan Dr.	Signalized	Class 0: Collectors/Locals		N/A	US 40	N / A	
N805	Pleasant Valley Rd. & Pencader Dr.	Signalized	Class 0: Collectors/Locals		N/A	US 40	AM peak: B / PM peak: A	2017
N809	Centerville Rd. & CSX RR Grade Crossing	Signalized	Class 0: Collectors/Locals		N/A	Kirkwood Highway	N / A	
N814	Centerville Rd & Red Clay Dr	Signalized	Class 0: Collectors/Locals		N/A		N / A	
N819	Eagle Run Rd & Delmarva Power	Signalized	Class 0: Collectors/Locals		N/A	Churchmans TID	N / A	
N899	Levels Rd. @ Patroit Dr.	Signalized	Class 0: Collectors/Locals		N/A	Westown	N / A	

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UN102	Welsh Tract Dr. & Old Cooch's Bridge Rd.	Unsignalized	Class 0: Collectors/Locals		N/A	Newark TID	N / A	
UN107	Skyline Dr. & Pike Creek Shopping Cntr.	Unsignalized	Class 0: Collectors/Locals		N/A		N / A	
UN108	Ocheltree Ln. & Shopping Center Ent.	Unsignalized	Class 0: Collectors/Locals		N/A		N / A	
UN12	Edgemoor Rd. & Hay Rd.	Unsignalized	Class 0: Collectors/Locals		N/A		N / A	
UN13	Hay Rd. & Locke Rd.	Unsignalized	Class 0: Collectors/Locals		N/A		N / A	
UN15	Pigeon Point Rd. & Lambson Ln.	Unsignalized	Class 0: Collectors/Locals		N/A	Route 9	N / A	
UN16	Lambson Ln. & Davidson Ln.	Unsignalized	Class 0: Collectors/Locals		N/A	Route 9	N / A	
UN18	Cherry Ln. & Lukens Dr.	Unsignalized	Class 0: Collectors/Locals		N/A	Route 9	N / A	
UN23	River & Governor Lea Rd.	Unsignalized	Class 0: Collectors/Locals		N/A		N / A	
UN24	School House & Wrangle Hill Rd.	Unsignalized	Class 0: Collectors/Locals		N/A		N / A	
UN25	Governor Lea Rd. & School House Rd.	Unsignalized	Class 0: Collectors/Locals		N/A		N / A	
UN26	Bear Corbrtt Rd. & Twin Lane Rd.	Unsignalized	Class 0: Collectors/Locals		N/A		N / A	
UN28	Porter Rd. & Scotland Dr.	Unsignalized	Class 0: Collectors/Locals		N/A	US 40	N / A	
UN31	Warwick & Middleneck Rd.	Unsignalized	Class 0: Collectors/Locals		N/A		N / A	
UN32	United & Patriot Dr.	Unsignalized	Class 0: Collectors/Locals		N/A	Westown	N / A	
UN34	Levels Rd. & Merrimac Ave.	Unsignalized	Class 0: Collectors/Locals		N/A	Westown	N / A	
UN35	Patriot & Industrial Dr.	Unsignalized	Class 0: Collectors/Locals		N/A	Westown	N / A	
UN37	Diamond State Blvd. & Industrial Dr.	Unsignalized	Class 0: Collectors/Locals		N/A	Westown	N / A	
UN39	Main St. & South St. (Townsend)	Unsignalized	Class 0: Collectors/Locals		N/A		N / A	
UN40	Pine Tree Rd. & Harris Rd.	Unsignalized	Class 0: Collectors/Locals		N/A		N / A	
UN43	Bunker Hill Rd. & Merrimac Ave.	Unsignalized	Class 0: Collectors/Locals		N/A	Westown	N / A	
UN44	Bunker Hill Rd. & Sand Hill Dr.	Unsignalized	Class 0: Collectors/Locals		N/A	Westown	N / A	
UN46	Corporate & Pencader Dr.	Unsignalized	Class 0: Collectors/Locals		N/A	US 40	N / A	
UN47	Corporate Dr. & Lake Dr.	Unsignalized	Class 0: Collectors/Locals		N/A	US 40	N / A	
UN48	Corporate Blvd. & Executive Dr.	Unsignalized	Class 0: Collectors/Locals		N/A	US 40	N / A	
UN49	Four Seasons Pkwy & Plaza Dr.	Unsignalized	Class 0: Collectors/Locals		N/A	US 40	N / A	
UN5	Rockwood & Talley Rd.	Unsignalized	Class 0: Collectors/Locals		N/A		N / A	
UN50	Old Cooch's Bridge Rd. & Bellevue Rd.	Unsignalized	Class 0: Collectors/Locals		N/A	Newark TID	N / A	
UN51	Otts Chapel Rd & Sandy Drive	Unsignalized	Class 0: Collectors/Locals		N/A	Newark TID	N / A	
UN58	Stanton - Christiana Rd. & Eagle Run Rd.	Unsignalized	Class 0: Collectors/Locals		N/A	Churchmans TID	N / A	

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UN6	Miller Rd. & West Lea Blvd.	Unsignalized	Class 0: Collectors/Locals		N/A		N / A	
UN60	Old DuPont Rd.& Scarboro Park Dr.	Unsignalized	Class 0: Collectors/Locals		N/A	Kirkwood Highway	N / A	
UN61	Old Dupont Rd. & B&O Lane	Unsignalized	Class 0: Collectors/Locals		N/A	Kirkwood Highway	N / A	
UN68	7th St. & Swedes Landing Rd.	Unsignalized	Class 0: Collectors/Locals		N/A	7th Street	N / A	
UN7	Broom St. & Baynard Blvd.	Unsignalized	Class 0: Collectors/Locals		N/A		N / A	
UN72	South St. & West 7th Street.	Unsignalized	Class 0: Collectors/Locals		N/A	City of New Castle	N / A	
-	West St. & Delaware Ave.	Signalized	Class 0: Collectors/Locals		N/A	City of Wilmington	N / A	
-	Tatnall St. & Delaware Ave.	Signalized	Class 0: Collectors/Locals		N/A	City of Wilmington	N / A	
-	Orange St. & 10th St.	Signalized	Class 0: Collectors/Locals		N/A	City of Wilmington	N / A	
-	Market St. & 10th St.	Signalized	Class 0: Collectors/Locals		N/A	City of Wilmington	N / A	
-	Fire Signal	Signalized	Class 0: Collectors/Locals		N/A		N / A	
-	Delaware Ave. & DuPont St.	Signalized	Class 0: Collectors/Locals		N/A		N / A	
-	-	Signalized	Class 0: Collectors/Locals		N/A	US 202	N / A	

First/Final Mile Freight Network Update: New Castle County, DE

APPENDIX F:

2025 First/Final Mile Freight Network Strategy Review for High Conflict Routes

APPENDIX F - 2025 First/Final Mile Freight Network Strategy Review for High Conflict Routes

ID	Route Name	PMA Framework Assignment	Conflict Scores					Strategies													Sub-Area Plan Relevance	Special considerations
								POL				PAR			PRJ				PRG			
			Institutional	Land Use	Mobility	Safety	Condition	POL 1 - Knowledge Sharing	POL 2 - First/Final Mile Plan Checks	POL 3 - Data Management	POL 4 - Truck Routing & Restrictions	PAR 1 - Stakeholder Coordination	PAR 2 - Truck Safety Education	PAR 3 - Public Outreach & Engagement	PRJ 1 - Intersection Improvements	PRJ 2 - Roadway Improvements	PRJ 3 - Operational Improvements	PRJ 4 - Multimodal Conflict Reduction	PRG 1 - Federal Funding Programs	PRG 2 - State Funding Programs	PRG 3 - MPO Funding Programs		
Brandywine District (BW)																						
TIER 1																						
BW-101	**Hay Rd Connector** (incl. E 12th St, Edgemoor Rd, Lighthouse Rd)	P	4	2	5	5	5	✓	✓			!	✓		✓	!	!	✓	✓	✓	✓	Governor Printz Blvd Corridor Study	Existing freight needs and use will growth with planned port expansion. Consider needs for truck parking and other needs and amenities. Be aware of potential conflict associated with Fox Point State Park access.
BW-103	**N Broom St / Miller Rd** (incl. Talley Rd)	M	3	5	5	5	1		✓		✓	✓	!	✓	✓	!	✓	!				US 202 Study	This urban corridor serves a wide variety of local land use, including residential and commercial, and mix of travel modes, including bikes and pedestrians.
TIER 3																						
BW-301	**SR 491 / Hickman St**	M	4	5	3	3	3		!	✓		!	✓	✓			✓	✓				North Claymont Area Master Plan	Freight-related development activity happening in this area. Data updates/tracking and stakeholder awareness are important areas of emphasis.
Central Pencader District (CP)																						
N/A																						
Greater Newark District (GN)																						
TIER 1																						
GN-105	**Otts Chapel Rd / Sandy Dr**	M	5	3	2	5	5	!	✓				✓	✓		✓	!	!	✓	✓	✓	Newark Transit Study, Newark TID	Link is located on the border of New Castle County and the City of Newark, and coincides partially with the Newark TID. Coordination across levels of government, education, and public outreach could be helpful in this area that serves area residents and the University of DE community, in additon to freight transport. Recently completed Elkton Road improvements support freight access.
GN-106	**Welsh Tract Rd / Old Coochs Bridge Rd / Bellevue Rd**	M	5	5	2	5	3	!	✓	✓			✓	!	!	✓	✓	!				Newark Transit Study, Newark TID	Link is located on the border of New Castle County and the City of Newark, and coincides partially with the Newark TID. Coordination across levels of government, education, and public outreach could be helpful in this area that serves area residents and the University of DE community, in additon to freight transport. Consider monitoring freight movements on completion of I-95/SR896 interchange.
Lower Christina District (LC)																						
TIER 1																						
LC-102	**Duncan Rd / Newport Rd**	M	3	4	5	5	5		✓		✓		!	✓	✓		!	!				Kirkwood Highway Study	Link traverses and connects to historic village and infrastructure, including tighter spaces and mix of uses (e.g., residential) along the corridor. Balance freight with other user needs. Context sensitivity and routing signage may be areas of extra emphasis.
LC-104	**Albertson Blvd / Centerville Rd / Greenbank Rd**	M	3	3	5	5	1		✓	✓		✓	!	✓	✓	✓	!	✓				Kirkwood Highway Study	This link is long, connects several significant freight-related land uses, and coincides with transit routes and major transit hub. A closer look and monitoring of actual routing may be helpful for developing improvements and action. Safety outreach for corridor users should be considered, given the transit route and the amount of surrouding freight-related land use.
LC-105	**E Ayre St / Larch Ave**	A	5	5	5	3	5	✓	✓		✓	!	✓	!	!	✓	!	!	✓	✓	✓	Newport Transportation Plan	Located on the border of New Castle County and Town of Newport, the link traverses wide range of land uses, including a heavily residential area and streets with physical constraints. Newport Transporation Plan calls for enhanced bike / ped conditions in vicinity. Coordinate actions and engagement through Newport Transportation Plan Monitoring committee.
TIER 2																						
LC-214	**Middleboro Rd**	A	3	5	3	5	4	✓	✓		✓	!	✓	✓		!	✓	!				Newport Transportation Plan	Link is in the Newport Transportation Plan study area and passes through predominantly residential area with a regional park and schools adjacent. Focus on enhancing safety of non-motorized users and managing freight impacts; or explore alternate connection to Meco Drive (**see FFM Update Ch. 5.4**)
LC-215	**Boulevard Rd / North Colonial Ave / New Rd**	M	5	5	5	3	5	✓	✓		✓		✓	!	✓	✓	!	!				Kirkwood Highway Study	Link is located in Town of Elsmere, just of Kirkwood Highway, and a segment is surrounded by residential land use. No parking signage along the residential seen during field visit indicated a level of "managing" for freight taking place. Roadway conditions and geometries an area of need/opportunity.
LC-216	**Rodman Rd / New Rd / Prospect Rd**	A	5	5	5	5	5	✓	✓	✓	!	!	✓	!	!	✓	!	!	✓	✓	✓	Kirkwood Highway Study	Link may be one of the most complex and constrained from among the FFM network, scoring high in all conflict areas. Surrounding land uses and physical constraints are highly variable. The link is located at the boundaries of Elsmere, City of Wilmington, and New Castle County.
LC-217	**Old Dupont Rd / Hadco Rd**	M	5	5	3	2	5							!	!	✓	!	!				Kirkwood Highway Study	Link serves both freight and residential uses and is a cul-de-sac, thus serving as entrance and exit. Upgrades to condition are a primary opportunity, including spot improvements to pavement markings, intersections, curb cuts, and pedestrian/crosswalk facilities (**see FFM Update Ch. 5.4**)
LC-218	**Robinson Ln**	A	3	5	3	4	5				✓	✓	✓	!		✓	!	!	✓	✓	✓		Located in urban area with significant residential development with on-street parking located along this link. Community involvement, context sensitive actions are important to further action. (**see FFM Update Ch. 5.4**)
Middletown / Odessa / Townsend District (MOT)																						
TIER 2																						
MOT-221	**Blackbird Landing Rd / Main St / Commerce St**	A	1	5	5	5	3	✓	✓		✓	✓	!	✓	✓	✓	!	!				Southern New Castle County Master Plan	Link coincides with a main route into the Town of Townsend. Residences and commercial uses are located along the corridor, especially on Commerce Street. Mitigation of associated conflicts will be important, as well as coordination with the local planning stakeholders and public.

APPENDIX F - 2025 First/Final Mile Freight Network Strategy Review for High Conflict Routes

ID	Route Name	PMA Framework Assignment	Conflict Scores					Strategies													Sub-Area Plan Relevance	Special considerations
								POL				PAR			PRJ				PRG			
			Institutional	Land Use	Mobility	Safety	Condition	POL 1 - Knowledge Sharing	POL 2 - First/Final Mile Plan Checks	POL 3 - Data Management	POL 4 - Truck Routing & Restrictions	PAR 1 - Stakeholder Coordination	PAR 2 - Truck Safety Education	PAR 3 - Public Outreach & Engagement	PRJ 1 - Intersection Improvements	PRJ 2 - Roadway Improvements	PRJ 3 - Operational Improvements	PRJ 4 - Multimodal Conflict Reduction	PRG 1 - Federal Funding Programs	PRG 2 - State Funding Programs	PRG 3 - MPO Funding Programs		
New Castle District (NC)																						
TIER 1																						
NC-107	**Cherry Ln / Lukens Dr**	P	3	5	3	4	4	✓		✓	✓	!	✓	✓			!		✓	✓	✓	City of New Castle Transportation Plan; Route 9 Master Plan	Link serves a significant amount of freight-related land use and is located adjacent to a dense residential neighborhood and the Delaware River. Coordination with the City of New Castle, New Castle County, and the Route 9 Monitoring Committee will be important to actions. Coordinate also with possible future extension of Pigeon Point Road from Davidson Lane to Cherry Lane (**see FFM link NC-301 and FFM Update Ch. 5.4**).
Pike Creek District (PC)																						
N/A																						
Piedmont District (PM)																						
N/A																						
Red Lion District (RL)																						
N/A																						
Upper Christina District (UC)																						
TIER 1																						
UC-101	**Walther Rd**	M	3	5	2	5	4		!	✓		✓	!	✓			✓	!					This corridor serves as a connection between two arterials with varied uses, suburban development, and developable land along its length. Acknowledgement of the potential for new freight-oriented uses should be a consideration in future action.
UC-106	**Harmony Rd**	M	3	5	5	5	3		!		✓	✓	!	✓	!	✓	✓	!				Churchmans Crossing TID	This corridor serves as a connection between two arterials with varied uses and suburban development patterns along it. Coordinate with Churchmans Crossing Monitoring Committee. Pursue intersection improvements for multimodal conflict reduction (**see FFM Update Ch. 5.4**).
Wilmington District (WL)																						
TIER 1																						
WL-101	**Garasches Ln / New Sweden St**	P	5	5	5	5	5	✓	!	✓	✓	!		✓	✓	✓	!	✓	✓	✓	✓	Route 9 Master Plan	Link located in historically industrial, urban area seeing redevelopment activity. Area is at confluence of City of Wilmington and New Castle County boundary. Coordination across levels of government and with community and the public should be a focus. The Southbridge Truck Bypass Study (in progress as of Spring 2025) should be consulted. Coordinate with City of Wilmington.
WL-103	**Church St / E Front St**	P	3	5	5	5	5	✓	✓	✓	✓			✓	✓	!	!	✓	✓	✓	✓		Link located in highly urban area of the City of Wilmington with significant physical constraints. Focus on enhancements in line with "Protect". Coordinate with City of Wilmington.
WL-105	**E 7th St / Swedes Landing Rd**	M	3	5	5	5	5		✓		✓	!	✓	✓	✓	✓	!	✓	✓	✓	✓	7th Street Peninsula Study	Link located in highly urban area of the City of Wilmington with significant physical constraints. Focus on enhancements in line with "Manage". Coordinate with City of Wilmington and 7th Street Peninsula Study stakeholder committee.
WL-106	**Delaware Ave / W. 10th St**	M	5	5	3	5	1	✓			!	!	✓	✓				!					Link located in highly urban area of the City of Wilmington with significant physical constraints. Focus on enhancements in line with "Accommodate". Coordinate with City of Wilmington.
WL-108	**E 30th St / Todds Ln / Bellevue Ave** (plus Bowers St, Eastlawn Ave)	M	5	5	3	4	4		✓	✓		!	✓	✓	!	✓	!	!				Governor Printz Blvd Corridor Study	Link located in highly urban area of the City of Wilmington with significant physical constraints. Focus on enhancements in line with "Manage". Coordinate with City of Wilmington and Governor Printz Corridor Study stakeholder committee.
TIER 2																						
WL-212	**A St**	M	5	5	3	5	3		✓	✓		!	✓	✓	✓	✓	!	!				Route 9 Master Plan	Link located in highly urban area of the City of Wilmington with significant physical constraints. Focus on enhancements in line with "Manage". The Southbridge Truck Bypass Study (in progress as of Spring 2025) should be consulted. Coordinate with City of Wilmington.
WL-221	**N Dupont St / Delaware Ave**	A	5	4	5	5	1	✓	✓		✓	✓	✓	!			!	!					Link located in highly urban area of the City of Wilmington with significant physical constraints. Focus on enhancements in line with "Accommodate". Coordinate with City of Wilmington.

! = **Primary** / exceptionally applicable strategy

✓ = **Secondary** / applicable strategy

First/Final Mile Freight Network Update: New Castle County, DE

APPENDIX G:

Freight and Land Use Planning Considerations Checklist

Freight and Land Use Planning Considerations Checklist

INSTRUCTIONS: *Complete this checklist to review an initial list of freight/truck-relevant considerations as part of the development and land use planning processes for communities that are planning for freight-related developments.*

Date:	
County / Municipality:	
Facility Location / Description:	
Route to Nearest Major Highway:	
References or Attachments:	

YES	NO	N/A	Local Freight Planning Considerations
			Freight Network Designation: Is the facility adjacent to an existing freight route identified on Delaware's current highway freight network or First/Final Mile freight network? If not, what is the likely route trucks will take to reach major highway corridors?
			Truck Route Obstructions: Do the likely truck routes have sharp turns, low clearance restrictions, or other truck obstructions?
			Truck Route Roadway/Bridge Conditions: Do the likely truck routes have adequate roadway/pavement conditions, shoulder conditions, bridge weight limits, or existing/potential deterioration due to heavy vehicles?
			Truck Route Community Conflicts: Do the likely truck routes run through residential areas, or other sensitive areas such as school zones?
			Truck Route Bicycle/Pedestrian Conflicts: Are the likely truck routes designated as bicycle or pedestrian routes?
			Truck Route Congestion: Are there existing congestion problems on the likely truck routes?
			Truck Route Improvement Funding: If infrastructure improvements are needed for the truck route, will the freight facility developer or tenant help fund these improvements?
			Freight Facility Truck Parking: Is truck parking available nearby, or will the developer provide parking?
			Freight Facility Conflicts: Is the facility located adjacent or near to existing or planned residential development, or other sensitive land uses such as schools?

Prepared by (Signature)	*Name / Title*	*Date*
Reviewed and Approved by (Signature)	*Name / Title*	*Date*
Reviewed and Approved by (Signature)	*Name / Title*	*Date*