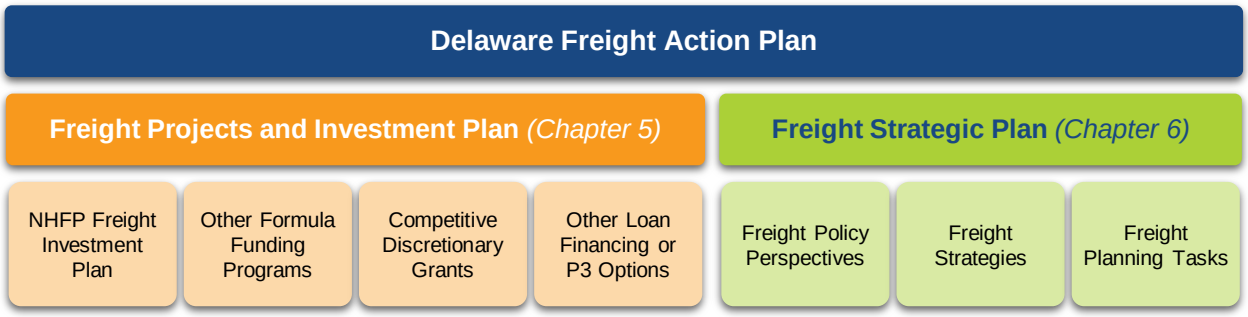
6 Freight Strategic Plan

Delaware's overall freight strategic plan moves beyond the project-specific focus of the freight investment plan to also encompass a broader set of freight policy perspectives and strategies, as well as detailed task lists that will guide the ongoing, procedural, and short-term/long-term freight planning actions to be prioritized by DelDOT and their MPO planning partners.



6.1 FREIGHT POLICY PERSPECTIVES

Freight policy perspectives include the high-level vision, goals, and values or guiding principles that support the advancement of freight related activities in Delaware in a consistent strategic direction. These perspectives include maintaining consistency with current and overlapping freight relevant guidance that may also be found across other plans and programs at the state level, notably including Delaware's Long Range Transportation Plan (*Innovation in Motion)*.

VISION / GOALS

Coordinating with freight partners across the Delmarva Peninsula, Delaware can achieve a safer, more efficient multimodal freight system that will strengthen the regional economy and create new jobs.

- Safety and Security
- Economic Vitality
- Freight Connectivity, Accessibility, and Mobility
- System Management, Operations, and Maintenance
- Resilience, Sustainability, and Environmental Stewardship

VALUES / GUIDING PRINCIPLES

In parallel with Delaware's freight vision and goals, key values or guiding principles within the state's overall policy perspectives on freight and freight planning include an emphasis as follows:

VALUE | Strategic Growth

Providing a well-planned multimodal freight system with efficient and reliable connections to major markets helps to stimulate local and regional economies by creating opportunities for companies to locate and grow in intentionally planned regions throughout Delaware, consistent with established Delaware Strategies for Policies and Spending. This pattern of growth includes leveraging appropriately located intermodal facilities and logistics centers where lower operating and transportation costs can be achieved outside of major urban areas, while also protecting Delawares' communities and rural areas.[65]

VALUE | Freight Intensive Sector Planning

Ongoing planning efforts and decision-making should include an emphasis on understanding and enhancing the key Freight Intensive Sectors (FIS) that contribute to high-density freight generating clusters throughout Delaware.

VALUE | Multimodal Efficiency

As freight activity continues to increase, it is important to consider the role of all modes of transport, including roads, rail lines, ports and navigable waterways, and airports. Prioritizing investments across all modes will make the system more efficient.

VALUE | Rail Partnerships and Opportunities

Delaware's freight rail system is considered an environmentally friendly "green" mode of transportation as it reduces highway congestion, improves safety, and uses less energy per ton-mile than other modes. Rail corridors have historically been economic drivers for communities large and small throughout the state. Maintaining, improving, and revitalizing Delaware's rail network should continue to provide new opportunities for industrial and agricultural market growth. To advance the improvements needed for continued success, state partnerships with key rail stakeholders and others are critical.[66]

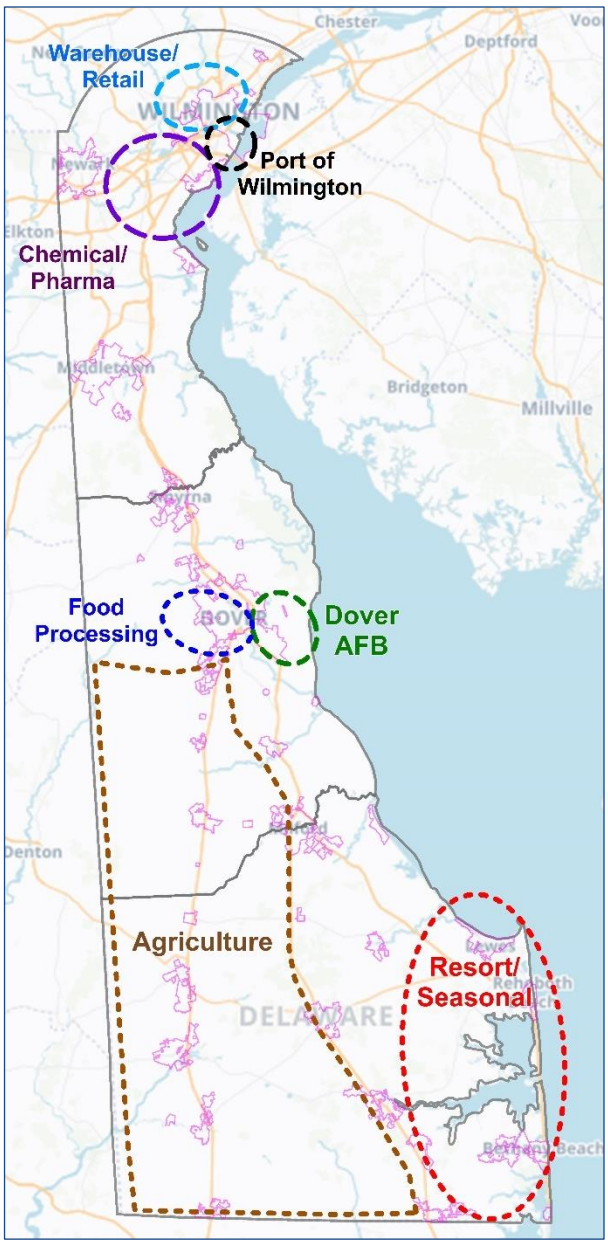
VALUE | Innovation and Technology

The freight industry is transforming how information and communication technologies are applied to optimize global supply chains, placing a premium on the reliability of transportation services. Emerging technological advances in data analysis systems, automatic vehicle and container identification systems, and satellite navigational systems will improve the efficiency of freight movement. Freight automation will have the potential to revolutionize the freight industry and improve the safety and efficiency of freight. In turn, this will increase demand for advanced mechanical and data analysis employees, demanding higher skills and higher pay than traditional freight work.[67] Newer technologies that are also expected to play an increasingly important role in freight transportation include CAV influences, traffic monitoring and enforcement systems, and final mile alternative delivery modes.

VALUE | Regionally Relevant Planning

Freight planning and considerations throughout Delaware must balance statewide priorities alongside regionally relevant freight and industry needs that vary across the state and the broader Delmarva Peninsula. This approach will help to account for the different types of industry and employment trends, supply chain activities, freight types and volumes, and critical freight modes that all contribute to different parts of the state's overall economy. Though not mutually exclusive, vastly different freight pattern influences occur in New Castle County with a heavy presence of chemical and pharmaceutical industries, warehousing and retail trade, and international port activity in New Castle County; versus Kent and Sussex counties with a significant shift to food processing and agriculture, as well as the seasonal influence of resort areas located along Delaware's coastline (**Exhibit 6-1**).

Exhibit 6-1: Regional Freight Variability in Delaware



VALUE | Regional Coordination

While freight transportation system planning will always benefit from effective coordination across jurisdictional boundaries, this fact is exceptionally true in Delaware. The state plays a critical role given its geographic location relative to the broader Delmarva Peninsula, the I-95 corridor and Northeast (rail) corridor, and connections to major metropolitan areas in the surrounding region. Freight interests and challenges also span a wide-ranging set of customers and needs that vary across the agriculture industry, tourism, international port operations, military freight for DAFB, specialty freight for space operations, and many others.

To this end, DelDOT and their MPO planning partners will continue a successful track record of frequent and direct coordination with regional partners via state-sponsored activities such as the Delmarva Freight Working Group, annual Delaware Freight Summits, and annual winter freight forums; as well as out-of-state involvement via the Maryland State Freight Advisory Committee, DVRPC executive committees and freight workshops, Baltimore Metropolitan Council (BMC) freight working group membership, and The Eastern Transportation Coalition (TETC), among others.

6.2 FREIGHT STRATEGIES

Freight strategies in this chapter begin defining the general plan of action required to move Delaware toward its freight vision and goals (per **Chapter 6.1**) and, in turn, will be supported or implemented by way of the more specific planning tasks outlined later (per **Chapter 6.3**). These strategies are organized below (**Exhibit 6-2**) and on the following pages in relation to Delaware's five freight planning goal categories.

Exhibit 6-2: Delaware Freight Planning Strategies Summary

Safety and Security	Economic Vitality	Freight Connectivity, Accessibility, and Mobility
Crash Prevention	Regional and Multi-Jurisdictional Collaboration	Freight Network Refinements
Truck Parking Enhancements	Delaware Market Expansion Support	Multimodal Improvement Priorities
OS/OW Vehicle Enforcement	Regional Supply Chain Studies	Multimodal Expansion and Connectivity
Incident Management Planning	Multimodal Freight Transportation Options	Congestion Management
Hazardous Materials Planning	Air Cargo Opportunities	Highway-Rail Crossing Upgrades
Homeland Security Planning	Freight Land Use Preservation	Marine Highway Opportunities
	Freight and Community Impact Planning	

System Management, Operations, and Maintenance	Resilience, Sustainability, and Environmental Stewardship
Truck Data Monitoring	Public Outreach and Education
Freight Infrastructure Maintenance	Community, Equity, and Quality of Life Planning
Freight Network Improvements	Freight System Reliability, Redundancy, and Recovery
Periodic Signal Optimization	First/Final Mile Route Resilience
Truck Traffic Management during Construction	Extreme Weather and Natural Disaster Planning
Dredged Material Management	Wildlife Habitat Protection
Freight Relevant Technology Systems	Air Quality Improvement Opportunities
Connected and Automated Vehicle Monitoring	Climate Action Plan Support

6.2.1 Safety and Security

Goal: *Ensure the safe and secure movement of people and goods while limiting the potential for incidents that may cause harm or disrupt the network operations.*

STRATEGY | Crash Prevention

Monitor safety records and crash statistics to identify locations with safety concerns within the freight network and prioritize traffic safety improvements.

STRATEGY | Truck Parking Enhancements

Identify and promote the use of overnight truck parking facilities and invest in enhancements to accommodate drivers, while also advancing specific truck parking facilities per DelDOT's 2021 *Delaware Statewide Truck Parking Study*.

STRATEGY | OS/OW Vehicle Enforcement

Continue to foster agency partnerships and leverage technology applications to ensure effective monitoring, management, permitting, and enforcement of oversize/overweight (OS/OW) trucks.

STRATEGY | Incident Management Planning

Continue planning and collaboration through DelDOT's Integrated Transportation Management Program, the DelDOT Transportation Management Center (TMC), and countywide Transportation Management Teams (TMT) to support the development and implementation of incident response plans, including consideration of truck traffic accommodations (e.g., real-time information, temporary truck staging areas, emergency truck parking areas, temporary truck detour/diversion routes) during incidents when needed.

STRATEGY | Hazardous Materials Planning

Foster partnerships to anticipate, screen, monitor and track the safe and secure movement of hazardous materials, and to have contingency plans in place for addressing emergency situations.

STRATEGY | Homeland Security Planning

Continue interagency coordination for managing border (seaport) security, cargo screening and tracking, protecting assets and developing contingency plans, including Transportation Homeland Security details per DelDOT's 2017 *Integrated Transportation Management Strategic Plan*, as well as broader coordination with the Delaware Emergency Management Agency (DEMA) and DEMA resources.[68] Include a focus on the ability to restore access and reliability with respect to freight transportation.

6.2.2 Economic Vitality

Goal: *Promote and strengthen the economic vitality of Delaware with an excellent multimodal freight transportation network that meets the needs of a diverse and growing economy.*

STRATEGY | Regional and Multi-Jurisdictional Collaboration

Continue regional and multi-jurisdictional collaboration to better understand (and potentially influence) the evolution of transportation policies, regulations, logistics needs, multimodal freight activities, and other public/private freight trends with a goal of supporting local, regional, national, and import/export freight related economic opportunities.

STRATEGY | Delaware Market Expansion Support

Support broader market and trade opportunities via collaboration with the Delaware Prosperity Partnership (DPP), regional port systems and operators, and the U.S. Foreign Trade Zone (FTZ) program for Delaware (FTZ No. 99).[69]

STRATEGY | Regional Supply Chain Studies

Emphasize efforts to understand and enable efficient supply chain activities and related system operations that contribute to freight-related economic growth statewide, notably including Delaware's Freight Intensive Sector (FIS) industries and potential specific interests in supply chains related to pharmaceuticals, e-commerce, renewable energy, or other high-growth areas.

STRATEGY | Multimodal Freight Transportation Options

Preserve and enhance multimodal freight transportation opportunities and capabilities throughout Delaware, including related infrastructure, accessibility, and connectivity to support economic growth.

STRATEGY | Air Cargo Opportunities

Continue to invest in the growth of the Civil Air Terminal (CAT) at Dover Air Force Base (DAFB), the future Central Delaware Aviation Complex (CDAC), due to increased flexibility of the Joint Use Agreement and in conjunction with studies via the ongoing (2023) *DAFB Compatible Use Study*.

STRATEGY | Freight Land Use Preservation

Coordinate with and educate the region's planning officials on the importance of preserving critical infrastructure and freight-oriented land uses in key freight or rail corridors and industrial areas. Planning and decision-making should aim to minimize residential encroachments while also managing real and perceived conflicts or expectations between the residential and freight communities.

STRATEGY | Freight and Community Impact Planning

Implement a proactive approach to assessing and balancing freight impacts, community needs, and competing interests much earlier in the planning process, including the use of tools such as the Protect-Manage-Accommodate framework for contextualizing freight conflicts (**Exhibit 6-3**) and the local freight planning considerations checklist for freight facilities and truck routes (**Exhibit 6-4**).

State/MPO Support for Local Planning

Collaborative discussions, information-sharing, and related planning support from DelDOT and their MPO planning partners can provide valuable input for local/municipal planners and developers throughout Delaware and support the success of key freight strategies related to "Freight Land Use Preservation", "Freight and Community Impact Planning", and others listed above.

Dover Kent MPO, for example, is proactively involved in Preliminary Land Use Service (PLUS) reviews in Kent County and for the City of Dover and their Development Advisory Committee. MPO staff also provide support to identify plans and upcoming activities that will impact individual development sites, and periodically share available study information with developers when relevant to proposals or sites being considered. Such partnerships are an important collaborative element to successful freight planning from the ground up.

Planning Considerations for Freight-Related Development

How can Delaware "think" about balancing freight with other community needs? Policymakers and agencies must carefully balance a range of competing interests when conflicts emerge and make decisions in the best interest of all of their constituents. In such a context, absolutes are rarely helpful or productive.

On the one hand, freight facilities may not be able to operate on a competitive commercial basis if heavy restrictions or impedances are imposed to assuage non-freight interests. Over time, such facilities may relocate or invest out-of-state or in other jurisdictions, potentially removing a valuable source of employment, tax revenues, and spin-off economic activity that would otherwise benefit the local community and the state.

On the other hand, a community's full economic potential and maximum quality of life may not be achieved if freight impacts such as noise, traffic, emissions, and safety go unaddressed.

Protect-Manage-Accommodate (PMA) Framework: A strategic lens, such as the PMA framework can help agencies contextualize and prioritize which freight conflicts they wish to address (**Exhibit 6-3**).

Freight Planning Considerations Checklist: Early and proactive planning for local freight facilities and truck routes using a checklist review of typical needs and potential conflicts can also support a balanced approach to managing the needs of all users while fostering conditions for positive economic growth. (**Exhibit 6-4**)

Exhibit 6-3: Protect-Manage-Accommodate Framework for Contextualizing Freight Conflicts [70]

Framework	"Protect"	"Manage"	"Accommodate"
Definition	**Protect** freight industries from unreasonable conflicts	**Manage** conflicts in tactical and targeted ways	**Accommodate** freight needs to prevent major issues
Context	Areas where freight industries are dominant; also freight facilities of high importance	Areas where freight and non-freight activities are both significant land uses	Areas where non-freight businesses and/or residential communities are dominant
Examples	Freight clusters Ports, airports, intermodal terminals	Mixed-use areas Freight clusters transitioning to mixed use	Central business districts or small-town downtowns "Stranded" freight facilities (legacy facilities enveloped by communities)

Exhibit 6-4: Planning Considerations Checklist for Freight Facilities and Truck Routes [71]

YES	NO	N/A	Local Freight Planning Consideration
			Freight Network Designation: Is the facility adjacent to an existing freight route identified on Delaware's current highway freight network[(a)] or First/Final Mile[(b)] 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:[(c)] 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?

Table Notes:

(a) Refer to the 2022 *Delaware State Freight Plan* (**Exhibit 3-1**) for Delaware's highway freight network, which may be considered as including the state's portion of the National Highway Freight Network (NHFN) consisting of the Primary Highway Freight System (PHFS) plus state-designated Critical Urban Freight Corridors (CUFC) and Critical Rural Freight Corridors (CRFC); plus remaining MAP-21 National Highway System (NHS) routes.

(b) Refer to the 2022 *Delaware State Freight Plan* (**Exhibit 3-2**) for Delaware's First/Final Mile Freight Network, or details per the *Delaware First/Final Mile Freight Network Development Final Report* (August 12, 2021).

(c) The consideration of "Truck Route Pavement/Bridge Conditions" is an additional element that has been appended (per this freight plan) to the original checklist sourced from **Endnote 71**.

(d) It is important to note that this checklist is not intended to be a comprehensive planning resource; rather, it should be incorporated as an initial list of typical considerations as part of the land use planning process for communities that are planning for freight-related developments.

6.2.3 Freight Connectivity, Accessibility, and Mobility

Goal: *Improve freight network connections, accessibility, and mobility to increase options for the movement of freight and enhance the integration of the state's multimodal transportation systems.*

STRATEGY | Freight Network Refinements

Periodically reassess and refine the formally designated freight networks throughout Delaware to match evolving conditions and network allowances. Significant networks include the NHFN and state/MPO-designated CUFC/CRFC; the NMFN and state/MPO-designated multimodal CRFF; the Delaware FFM network; and overall freight mapping or inventories related to the NHS, STRAHNET, rail networks, port locations, and air cargo.

STRATEGY | Multimodal Improvement Priorities

Integrate freight-relevant project screening and prioritization insights from the Delaware State Freight Plan and other applicable sources into broader transportation planning/programming efforts to emphasize multimodal improvements (truck/highway, rail, port, barge/inland waterway, airport).

STRATEGY | Multimodal Expansion and Connectivity

Coordinate with mode-specific plans to expand multimodal/intermodal opportunities and improve freight relevant access, connectivity, and supporting facilities (e.g., truck parking/staging areas) at strategic locations throughout Delaware. Examples include expansion for the Port of Wilmington's planned container facility at Edgemoor, the Harrington truck-rail intermodal yard, the Seaford barge-to-rail intermodal facility, the Central Delaware Aviation Complex at DAFB, and Maryland's Port of Salisbury.

STRATEGY | Congestion Management

Support comprehensive transportation improvements that alleviate traffic congestion in general, and notably along key freight corridors, at identified truck bottleneck locations, in the vicinity of major freight hubs, and during peak season travel conditions. Include operational improvements such as traffic signal optimization or Intelligent Transportation Systems (ITS) where appropriate.

STRATEGY | Highway-Rail Crossing Upgrades

Leverage annual programs and/or grant opportunities to continue monitoring at-grade highway-rail grade crossings and conditions throughout Delaware to develop/prioritize improvements at critical locations.

STRATEGY | Inland Waterway and Marine Highway Opportunities

Explore potential inland waterway and river/barge transportation and freight transfer opportunities, including connectivity to broader marine highway or short-sea shipping opportunities, particularly related to the M-95 Marine Highway and potential MARAD grant programs, and in light of increasing congestion levels along the I-95 corridor and throughout east coast metropolitan areas.

6.2.4 System Management, Operations, and Maintenance

Goal: *Preserve and enhance the state's multimodal freight transportation systems to support freight travel and commerce while adapting to the future's changing needs and integrating innovative strategies and technology that increase efficiency and safety during both normal and emergency situations.*

STRATEGY | Truck Data Monitoring

Monitor and leverage truck traffic data and trends to support decision-making relevant to pavement design/management programs, bridge maintenance programs, or congestion relief strategies, particularly for critical portions of the freight network. Data may include changes in truck traffic volumes, truck traffic patterns, congestion levels via Truck Travel Time Reliability (TTTR) Index reporting, or similar metrics.

STRATEGY | Freight Infrastructure Maintenance

Maintain a state-of-good repair throughout the overall freight network, including critical NHFN routes/segments, critical NHS routes, and first/final mile network routes, as well as special emphasis areas that may be subject to roadway deterioration due to heavy vehicles/cargo related to mining, agricultural, energy cargo/equipment, or timber. Roadway and bridge conditions are important factors to keep freight movement operations reliable and efficient. Degraded conditions can result in longer detours on community streets or a relocation of freight-dependent businesses.

STRATEGY | Freight Network Improvements

Prioritize improvements on the freight network within DelDOT right-of-way, including critical routes as well as secondary roads and bridges critical to motor freight access throughout the Delmarva Peninsula.

STRATEGY | Periodic Signal Optimization

Conduct periodic traffic signal re-timing and optimization (every three to five years, or as needed) along key freight corridors, at identified truck bottlenecks, or in the vicinity of FIS industry clusters or major freight generators.

STRATEGY | Truck Traffic Management during Construction

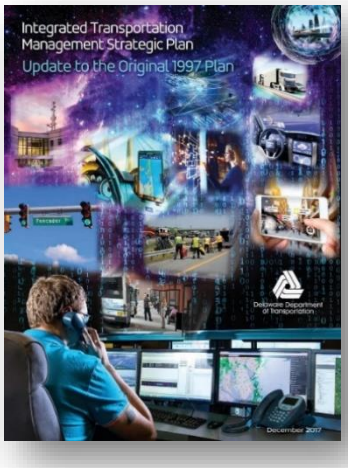
Consider truck traffic needs, impacts, or work zone information system benefits during roadway maintenance and construction activities, recognizing potential freight impacts related to permitting, OS/OW trucks, temporary truck restrictions, route restrictions, rural truck traffic access, or similar.

STRATEGY | Dredged Material Management

Manage and identify new placement sites/capacity and beneficial or innovative use opportunities for dredged material disposal to ensure Delaware's ports and waterways remain open and secure.

STRATEGY | Freight Relevant Technology Systems

Continue monitoring, testing, planning, implementation, and/or operation of new or advanced freight relevant technology systems when and where applicable throughout Delaware (see text box details below).



STRATEGY | Connected and Automated Vehicle Monitoring

The trucking industry is already testing connected and automated vehicle (CAV) technology to increase the efficiency of moving goods. Delaware will continue to monitor these advancements and will implement new technology when and where applicable.

Freight Relevant Advanced Technology Systems

Technology systems in Delaware may include coordination through DelDOT's Integrated Transportation Management Program, the DelDOT Transportation Management Center (TMC), the 2017 Integrated Transportation Management Strategic Plan, as well as other public/private agency partners or in coordination with academia. Technology systems that are currently operating or being tested in Delaware, or that may be considered by DelDOT when and where applicable, include (but are not limited to) the following:

General Transportation Technology Systems

- Intelligent Transportation Systems (ITS)
- Work zone information systems
- Real-time traveler information systems
- Computerized and/or adaptive traffic signal systems
- Transportation weather and flood monitoring and warning systems
- Congestion and mobility management systems
- Incident and event management systems
- Open road or all electronic tolling (ORT/AET)
- Electric Vehicle (EV) technologies

Freight Specific Technology Systems

- Weigh-in-motion (WIM) devices and deployments
- Truck parking information systems (testing/pilot programs and deployments)
- Commercial Vehicle Information Systems Network (CVISN) technologies
- Freight/cargo screening and security systems
- Truck stop electrification and truck EV technologies

Future Disruptive Technologies

- Connected and automated vehicle (CAV) technologies (in general)
- Truck-specific CAV technologies / truck platooning
- Unmanned Aircraft System (UAS) technologies
- Advanced package delivery systems / personal delivery devices (PDD)

6.2.5 Resilience, Sustainability, and Environmental Stewardship

Goal: *Provide resilient and reliable freight transportation systems while protecting and enhancing the environment through sustainable best practices, integration of environmental considerations into planning and design, and responsible energy consumption.*

STRATEGY | Public Outreach and Education

Ensure that freight is a "good neighbor" to communities by continuous education and public outreach.

STRATEGY | Community, Equity, and Quality of Life Planning

Develop guidance and policy to balance the needs of freight-dependent businesses alongside community, equity, and quality of life considerations. Include efforts to protect disadvantaged communities and reverse any disproportionate freight impacts on such communities, including coordination with Federal Justice40 initiatives. Include coordination with the overlapping "Freight and Community Impact Planning" strategy listed under the Economic Vitality goal, as well as beneficial use of freight planning tools such as the Protect-Manage Accommodate framework for contextualizing freight conflicts (previous **Exhibit 6-3**).

STRATEGY | Freight System Reliability, Redundancy, and Recovery

Implement strategies and planning actions to enhance overall freight transportation system reliability, redundancy (where applicable), and the ability to rapidly restore access and reliability with respect to freight transportation. Include implementation of overlapping freight strategies throughout Section 6.2 of this freight plan, as well as broader coordination with the Delaware Emergency Management Agency (DEMA), DEMA Strategic Plan, and State of Delaware All-Hazard Mitigation Plan.[72]

STRATEGY | First/Final Mile Route Resilience

Review and assess Delaware's First/Final Mile Freight Network in relation to other applicable strategies related to freight and network refinements, truck data monitoring, freight and community impact planning, and flooding/sea-level rise vulnerability assessments, and related needs that may influence overall network resilience. Include an overlapping reference to the local freight planning considerations checklist for freight facilities and truck routes (previous **Exhibit 6-4**).

STRATEGY | Extreme Weather and Natural Disaster Planning

Implement strategic planning and freight network/infrastructure improvement priorities to reduce the severity of impacts of extreme weather, natural disasters, flooding, sea-level rise (SLR), or related circumstances on freight mobility. Include an inventory and assessment of vulnerable freight infrastructure that may be impacted by flooding and SLR, and prioritize these locations for flood-protection and abatement measures. Portions of the freight network are vulnerable to flooding and SLR. DelDOT's overall asset management and hazard mitigation planning must include considerations for freight accommodations and resilience.

STRATEGY | Wildlife Habit Protection

Reduce the impacts of freight movement on wildlife habitat loss by coordinating freight planning and related system improvements, priorities, and mitigations with broader DelDOT efforts that focus on overall environmental stewardship, including planning to avoid and minimize impacts to wetlands and waters of the United States, state-regulated tidal wetlands, rare, threatened and endangered species, trees, and Essential Fish Habitat; and to perform work where feasible to benefit pollinators (see **Appendix D.10.5**).

STRATEGY | Air Quality Improvement Opportunities

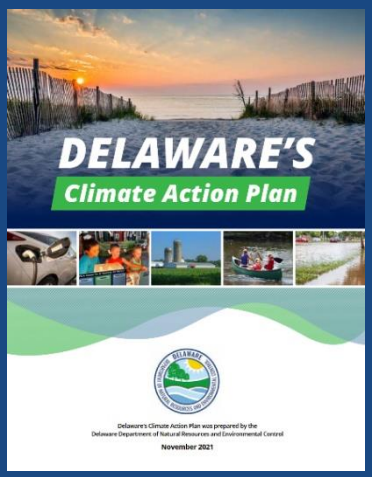
Study, promote, and implement opportunities to improve air quality and reduce greenhouse gas (GHG) emissions due to freight movements that contribute to mobile source air pollution. Opportunities may include reducing roadway congestion; integrating fuel-efficiency technology, idling restrictions, or truck stop electrification; and supporting the use of cleaner/alternative fuels for freight vehicles.

STRATEGY | Climate Action Plan Support

Support advancements and implementation of key strategies identified in *Delaware's Climate Action Plan*, notably including the expansion of freight best practices and regulatory actions with an emphasis on reducing the metric tons of carbon dioxide equivalent (MT CO_2e) (see text box details below).[73]

Freight Related Climate Action Planning

Detailed strategies and freight actions from *Delaware's Climate Action Plan* (November 2021) that potentially have a strong influence on freight operations include (but are not limited to) the following:



- Strengthen Delaware's **renewable energy portfolio standards**, which from a freight context may influence freight traffic and access for the construction/expansion of renewable energy sources.
- Ensure that Delaware is prepared for **offshore wind energy opportunities**, which from a freight context may influence the multimodal freight infrastructure needed to support construction, development, and specialty freight movement capabilities to develop offshore wind capacity.
- Improve the **efficiency of freight delivery**, building on existing programs and developing incentives for freight route optimization, last-mile solutions, and mode switching; and to improve marketing of existing and underused incentive programs for fuel switching to accelerate the transition of medium- and heavy-duty vehicles to emission-free technology.
- Promote increased vehicle **fuel efficiency** to support emissions reductions, including adoption of the California Advanced Clean Trucks Program* addressing technology and emissions standards for medium- and heavy-duty vehicles for model years 2024 to 2035.
- Include consideration of freight infrastructure when updating or creating management plans to incorporate **future climate projections**, including long-term infrastructure management plans that include options to protect, retreat, or abandon structures under future climate conditions.

* California Air Resources Board: Advanced Clean Trucks, https://ww2.arb.ca.gov/our-work/programs/advanced-clean-trucks.

6.3 FREIGHT PLANNING AND IMPLEMENTATION TASKS

Building from the vision, goals, values, and general strategies summarized previously, the details outlined in this section present a set of specific freight planning and implementation tasks that are critical to the state's ongoing freight planning initiatives. These tasks can essentially be viewed as the priority "to-do lists" for DelDOT and their MPO planning partners to focus on as they continue to implement and advance freight-relevant actions beyond the completion of the freight plan itself.

Organizationally, the freight planning and implementation tasks summarized on the following pages have been grouped in terms of:

- **Ongoing** tasks that typically require annual or intermittent updates or monitoring (**Exhibit 6-5**).
- **Procedural** tasks that may require formal agency/stakeholder coordination (**Exhibit 6-6**).
- **Short-Term** tasks that may be prioritized for completion within the next four years (**Exhibit 6-7**).
- **Long-Term** tasks that may be deferred to beyond the next four years (**Exhibit 6-8**).

Exhibit 6-5: Delaware Freight Planning Tasks (Ongoing)

#	ONGOING TASKS *(annual or intermittent updates)*	S&S	Econ	CMA	O&M	RSE
1	**Annual Programs – Truck Traffic Trend Analysis** Utilize Wavetronix data to develop supplemental performance measures and report annual truck volume changes at key locations.			●	●	
2	**Annual Programs – Rail Preservation and Safety** Continue rail corridor preservation, safety improvement, and public education efforts using annual rail program and safety funds.	●		●	●	
3	**Project Planning/Programming Coordination** Reference and incorporate freight-related project planning insights from the Delaware State Freight Plan into broader transportation project planning and programming coordination across DelDOT and their MPO planning partners (CTP/TIP/RTP/MTP). Detailed project/planning reference sources may include the freight plan's project candidate lists and related screening efforts, multimodal project sources, and truck bottleneck projects, as well as reference to the Delaware Statewide Truck Parking Study, Delaware First/Final Mile Network Study, Dover/Kent County rail/land use studies, and other efforts cited throughout the freight plan.	●	●	●	●	●
4	**Funding and Discretionary Grant Pursuits** Continue freight project screening, eligibility, and cost compatibility reviews to identify and pursue suitable freight relevant project funding/programming opportunities, as well as applications for appropriate IIJA discretionary grant programs.	●	●	●	●	●
5	**Inter-Agency Coordination and Communications** Coordinate inter-agency meetings, training, and mock exercises to optimize communications and data-sharing between jurisdictions within the Delmarva Peninsula.	●	●	●	●	

Legend: ● = **primary** goal influence, relative to the overall freight plan goals that include:

S&S = Safety & Security; **Econ** = Economic Vitality; **CMA** = Freight Connectivity, Accessibility, and Mobility; **O&M** = Systems Mgmt., Operations, and Maintenance; **RSE** = Resilience, Sustainability, and Environmental Stewardship

Exhibit 6-6: Delaware Freight Planning Tasks (Procedural)

#	**PROCEDURAL TASKS** (formal agency/stakeholder/program coordination)	S&S	Econ	CMA	O&M	RSE
6	**DelDOT CTP Enhanced Prioritization Criteria Updates** Coordinate within DelDOT to update terminology and scoring details in DelDOT's Enhanced Project Prioritization Process for the CTP. Specifically, refinements should focus on the "Freight Corridor" criteria, which currently includes an outdated network reference to projects that reside on a "primary or secondary freight corridor". Revisions should consider replacing these references to be consistent with the latest freight network definitions based on the NHFN (including the PHFS, CUFC, and CRFC) and the First/Final Mile Freight Network.			●	●	
7	**Network Refinements – CUFC/CRFC Expansion** Coordinate across DelDOT and MPO planning partners to identify and designate new critical urban/rural freight corridors (CUFC/CRFC) using the new mileage allowances that were doubled under IIJA.		●	●	●	
8	**Network Refinements – NHS and STRAHNET Updates** Coordinate with FHWA to review and formally update applicable federal roadway networks and related mapping to align consistently with the current roadway networks/connections in Delaware. Include reflecting the current alignment of US 301 under the National Highway System (NHS) and Strategic Highway Network (STRAHNET) designations.	●			●	
9	**Network Refinements – National Network Updates** Coordinate with FHWA to review and formally update applicable federal roadway networks and related mapping to align consistently with the most current roadway networks/connections in Delaware. Include formal designation on the National Network relative to roadway modifications and the current limits of US 113.	●			●	
10	**Network Refinements – NMFN and CRFF Updates** Coordinate with FHWA for any updates to Delaware infrastructure identified on the National Multimodal Freight Network (NMFN). Consider state-specific candidates for formal designation as Multimodal Critical Rural Freight Facilities (CRFF) in line with state input and eligibility requirements detailed under 49 U.S.C. §70103(b)(4).	●			●	

Legend: ● = **primary** goal influence, relative to the overall freight plan goals that include:

S&S = Safety & Security; **Econ** = Economic Vitality; **CMA** = Freight Connectivity, Accessibility, and Mobility; **O&M** = Systems Mgmt., Operations, and Maintenance; **RSE** = Resilience, Sustainability, and Environmental Stewardship

Exhibit 6-7: Delaware Freight Planning Tasks (Short-Term)

#	SHORT-TERM TASKS (within 1-4 years)	S&S	Econ	CMA	O&M	RSE
11	**Delaware Freight Restrictions Database** Continue the creation of a freight restrictions database that details the Delaware freight and roadway network inventories by adding/mapping technical data such as road widths, bridge loads, weight limits, height restrictions, operating restrictions, and other details for all freight routes and in a readily accessible format that can be referenced by or distributed to a broad audience.	●		●	●	●
12	**Truck Parking Information Systems** Review outcomes of the Truck Parking Information System pilot at Smyrna Rest Stop to gauge the system's effectiveness and potential applicability at other locations in Delaware, or related next steps.	●		●	●	
13	**Truck Parking Data Updates** Repurchase and update truck parking data in 2024 to re-assess usage trends of existing parking locations and concentrations of non-designated parking in comparison to the 2021 Truck Parking Study.	●		●	●	
14	**Freight/Supply Chain Study – FIS Industry Clusters** Conduct a detailed commodity/industry-specific study to examine key Freight Intensive Sector (FIS) industry clusters and related connections between freight generators and freight destinations.		●	●		●
15	**Freight/Supply Chain Study – Pharmaceuticals** Conduct a detailed commodity/industry-specific study to examine pharmaceuticals as a critical high-value cargo reflecting a significant percentage of Delaware's freight output.		●	●		●
16	**Freight/Supply Chain Study – E-Commerce** Conduct a detailed commodity/industry-specific study to further explore e-commerce and the land use, transportation, and economic impacts and policy implications of related freight activities.		●	●		●
17	**Freight/Supply Chain Study – Renewable Energy** Conduct a detailed commodity/industry-specific study to explore renewable or alternative energy sources relative to their primary manufacturing locations, generation sites, and freight implications.		●	●		●

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Exhibit 6-7: Delaware Freight Planning Tasks (Short-Term) (Continued)

#	SHORT-TERM TASKS (within 1-4 years)	S&S	Econ	CMA	O&M	RSE
18	**Land Use Agency Coordination** Work with land use agencies to better account for first/final mile freight network considerations during plan review, including integration of the planning checklists developed in the Statewide First/Final Mile Network Study (also **Exhibit 6-3** and **Exhibit 6-4** in the State Freight Plan), and including special attention for large-scale warehouse/distribution plans.	●	●	●	●	●
19	**Local Freight Planning Support** Leverage DelDOT municipal assistance tasks available within statewide planning contracts, as well as similar MPO or academia resources within the state, to provide local freight relevant planning support to municipalities throughout the Delaware.	●	●	●	●	●
20	**Truck Parking Facilities** Advance/implement truck parking facility recommendations from the 2021 Delaware Statewide Truck Parking Study, including further exploration and development of detailed location assessments and cost estimates, notably including: • Development of protected roadside/shoulder parking near toll plazas and rest areas. • Development of non-state owned/informal truck parking locations and capacity. • Use of existing state-owned facilities for new truck parking capacity (i.e., Park & Rides).	●			●	
21	**First/Final Mile Freight Network Update** Use criteria from the 2021 First/Final Mile Freight Network study to review and re-assess the network and related GIS data in 2024 to meet changing demographic, policy, or traffic conditions. Consider coupling updates with larger data collection efforts by purchasing GPS data for detailed origin-destination analyses and/or including Reference USA employment data updates simultaneously.			●	●	●
22	**System Resilience Planning** Continue coordination across DelDOT and MPO planning partners to provide further exploration and details related to sea-level rise (SLR) impacts and related freight network or resilience concerns, as well as reference to FHWA's *State of the Practice Scan: Freight Resilience Planning in the Face of Climate-Related Disruption* (June 2022).	●		●		●

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Exhibit 6-8: Delaware Freight Planning Tasks (Long-Term)

#	LONG-TERM TASKS (beyond 4-years out)	S&S	Econ	CMA	O&M	RSE
23	**Traffic Incident Management (TIM) Best Practices** Coordinate across DelDOT and applicable traffic incident management groups, emergency services partners, or regional stakeholders to further explore best practices, improvements, or training opportunities related to truck traffic management during incidents (e.g., emergency truck parking areas or truck re-routing options during unanticipated road closures/diversions due to weather, crashes, etc.).	●			●	●
24	**Freight/Supply Chain Study – Coal and Petroleum Products** Conduct a detailed commodity/industry-specific study to explore potential evolving trends, impacts, or opportunities related to coal and petroleum products, global energy market or supply chain transitions/disruptions, and their implications for key assets in Delaware (e.g., applicable rail, port, barge, and/or refinery operations).		●	●		●
25	**Feasibility Studies – DE Senate Resolution 10** [(a)] Pending further guidance from the General Assembly and additional bi-state (DE/PA) working group coordination, identify and conduct feasibility studies as follow-up to recommendations from DE Senate Resolution 10, including the following potential concepts: i. Bypass between US 1 and I-95. ii. Dedicated freight rail line along the Northeast Corridor between Perryville (MD) and Newark (DE). iii. Passenger and freight rail spur from Wilmington that parallels the SR 41 corridor, including impacts to SR 7, SR 41, and SR 48. iv. SR 896 corridor improvements and alternate/ parallel route to encourage trucks to use I-95 to SR 896.	●		●		●

Legend: ● = **primary** goal influence, relative to the overall freight plan goals that include:

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(a) These studies were identified in *DE Senate Resolution 10: Special Committee to Study and Make Recommendations Regarding Truck Traffic & Freight Movements Along SR 41, SR 48 & SR 7*. Given the size, scope, and bi-state nature of these studies, it would be premature to begin work without explicit direction from the General Assembly, and a formal recommendation from a bi-state working group such as was recommended in Item 23 of the final report.

Exhibit 6-8: Delaware Freight Planning Tasks (Long-Term) (Continued)

#	**LONG-TERM TASKS** (beyond 4-years out)	S&S	Econ	CMA	O&M	RSE
26	**Regional Truck Crash Dataset** Establish a standardized method to track truck-related crash data to efficiently compile and compare crash datasets from Delaware, Maryland, and Virginia.	●			●	
27	**Freight Influence on Pavement Management** Create a system to monitor and inventory changes in heavy vehicle traffic patterns to inform pavement design and maintenance programs/projects.				●	
28	**Freight CAV Pilot Programs** Implement pilot studies to test connected and automated vehicles for freight operations on Delaware roads.	●			●	
29	**Statewide Freight Regulations Review** Conduct a full review of agency regulations and identify opportunities to streamline those that hinder freight business operations without increasing risks to public health and safety and environmental sustainability.	●	●			●

Legend: ● = **primary** goal influence, relative to the overall freight plan goals that include:

S&S = Safety & Security; **Econ** = Economic Vitality; **CMA** = Freight Connectivity, Accessibility, and Mobility; **O&M** = Systems Mgmt., Operations, and Maintenance; **RSE** = Resilience, Sustainability, and Environmental Stewardship

6.4 FUTURE PLAN UPDATES

This update to the 2022 Delaware State Freight Plan summarizes the relevant background information (Chapters 1-3), trends and needs (Chapter 4), and action planning components (Chapters 5-6) necessary to lay out a course for Delaware's ongoing freight planning activities over the next several years. This plan, however, reflects only a snapshot in time; and freight and economic conditions are far from static. It is anticipated, therefore, that the information contained herein will serve as a "living" resource to be referenced and updated periodically as conditions change – most notably including any details related to the freight projects and investment plan (Chapter 5), or the freight planning and implementation tasks in the freight strategic plan (Chapter 6). Collectively, DelDOT, their MPO planning partners, and related agencies/stakeholders may pull and modify guidance from this resource in a way that meshes with future updates to other ongoing transportation planning activities throughout the state as these efforts evolve.

Based on federal requirements for state freight plans as revised under the 2021 IIJA and as detailed per 49 U.S.C. §70202(e), state freight plans must be updated "not less frequently than once every four years." Assuming FHWA approval of this current version of the Delaware State Freight Plan by Fall 2022, the next required update and certification of Delaware's plan will be needed by no later than Fall 2026.

Federal requirements do, however, also permit the Freight Investment Plan to be updated more frequently than the overall freight plan. Based on prior planning cycles, it is anticipated that DelDOT will monitor, update, and submit revisions to Delaware's Freight Investment Plan for NHFP Funding (**Appendix L** in this document) as needs arise and in coordination with overall project cost estimate/funding revisions and related management/development of the Delaware CTP.

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