CONNECTICUT 2055
Long-Range Transportation Plan

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Appendix E: Implementation Matrix

JULY 2026

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1.0 A Strategic and Systematic Planning Approach

CTDOT's planning efforts are designed to create a cohesive and systematic approach to transportation development across the state and over decades. This process is iterative, with plans regularly reviewed and updated to reflect evolving needs and priorities at CTDOT. The following table highlights the major planning documents that collectively shape Connecticut's transportation strategy. Together, these plans establish CTDOT's strategic vision, identify priorities, initiate recommendations for implementation, guide investment decisions, and support the development of modal strategies for roadways, public transportation, active transportation, and freight. CTDOT's integrated transportation plans align with and advance the goals of Connecticut 2055, coordinating statewide initiatives toward the same common goals.

Plan Name	Last Updated	Description	Link
CTDOT Strategic Plan	2025	The Strategic Plan outlines the organizational goals and opportunities that can be implemented to align CTDOT's functions with its mission of serving the people of Connecticut by improving lives through transportation. This Strategic Plan includes 12 implementation strategies under three goals focused on promoting a PEOPLE FIRST organization, prioritizing ACCOUNTABILITY, and leveraging INNOVATION. The plan includes advancing two key roadmaps for the future: Capital Program Roadmap and Strategic Technology Roadmap.	Strategic Plan
Capital Program Roadmap	2025	The Capital Program Roadmap serves as a strategic framework to modernize and deliver its capital program. It aims to improve project delivery efficiency, transparency, and data management by streamlining agency workflows as they relate to people and processes. The roadmap is built around five interrelated initiatives including establishing a portfolio management function, standardizing procurement and scoping, instituting data and information standards, enhancing needs identification and prioritization, and assessing skills gaps and developing a training program.	Capital Program Roadmap

Plan Name	Last Updated	Description	Link
Strategic Technology Roadmap	2025	The Strategic Technology Roadmap outlines a multi-year plan to modernize technology infrastructure and data management practices. The roadmap provides 11 improvement opportunities spanning software upgrades, information sharing, and governance processes. Each initiative includes a description, prioritization, implementation timeline, key benefits, dependencies and adjacent initiatives, resources needed, and implementation actions.	Strategic Technology Roadmap
Annual Capital Plan Report FFY 2026-FFY2030	2026	The Capital Plan is an annually updated execution document that outlines the state's planned transportation capital investments over the upcoming 5-year period. It translates long-range goals into near-term actions, aligning with the Long-Range Transportation Plan and the state's other planning documents. CTDOT's current Capital Plan emphasizes five priority areas: safety, sustainability, Americans with Disabilities Act (ADA) engineering coordination, asset management, and emergency response, while advancing multimodal initiatives that support mobility, equity, and economic vitality.	5-Year Capital Plan
2025-2028 Statewide Transportation Improvement Program (STIP)	2024	The STIP is a four-year planning document that lists all statewide, federally funded projects under each regional Metropolitan Planning Organization's (MPOs) Transportation Improvement Plan (TIP). This plan is updated approximately every two years. The STIP includes planned multimodal investments developed in coordination with regional MPOs, public transit providers, and rural council of governments (COGs). The STIP is a primary venue for implementing the goals and objectives identified in regional and state long-range transportation plans. The STIP must be fiscally constrained and be assessed for impacts to air quality.	2025-2028 STIP

Plan Name	Last Updated	Description	Link
CT Statewide Freight Plan Update (2022-2026)	2022 (to be updated in 2026)	The Statewide Freight Plan provides a strategic framework for improving the state's multimodal freight system and is federally required. It aligns with and is updated alongside the Long-Range Transportation Plan, focusing on goals such as safety, resiliency, state of good repair, equity, and economic competitiveness. The plan addresses freight trends like e-commerce growth, electrification, and climate impacts while identifying infrastructure needs and bottlenecks across highways, rail, maritime, and air cargo. It also recommends key strategies for targeted investments, such as truck parking solutions and system enhancements to support mobility and economic vitality.	2022-2026 Freight Plan
Statewide Active Transportation Plan	2019 (to be updated in 2026)	The Active Transportation Plan outlines strategies to improve safety, connectivity, and accessibility for pedestrians, bicyclists, and other non-motorized users. It aligns with the Long-Range Transportation Plan and supports statewide goals for equity, sustainability, and multimodal mobility. The plan builds on Complete Streets and Vision Zero policies, identifies infrastructure gaps, and recommends investments in sidewalks, bike lanes, trails, and micro-mobility connections. Key initiatives include expanding regional trail networks, enhancing ADA compliance, and promoting programs like Safe Routes to School to create a safer, more integrated transportation system.	Active Transportation Plan
Connecticut State Rail Plan (2022-2026)	2022	The Rail Plan provides a strategic framework for passenger and freight rail improvements and is federally required. It aligns with the Long-Range Transportation Plan by advancing safety, reliability, economic competitiveness, and multimodal connectivity. The plan identifies near- and long-term investment priorities, such as initiatives like *Time for CT*, station upgrades, and freight corridor enhancements to support mobility and resiliency.	Connecticut State Rail Plan (2022-2026)

Plan Name	Last Updated	Description	Link
2022 Transportation Asset Management Plan (TAMP)	2022 (to be updated in 2026)	The federally required TAMP provides a performance-based framework for managing and preserving highway assets statewide. It integrates risk management, lifecycle planning, and financial strategies to maintain a state of good repair (SOGR) at minimal cost. The plan supports the Long-Range Transportation Plan by linking asset condition targets and investment priorities to broader goals of safety, resiliency, and cost efficiency.	TAMP
Tier 1 and Tier 2 Transit Asset Management (TAM) Plans	2022 (to be updated in 2026)	The Tier 1 and 2 TAM Plans documents asset management processes and policies, summarize inventory and condition of transit assets, prioritize State of Good Repair investments, and construct a blueprint for transportation asset management improvements moving forward. The Tier 1 TAM Plan addresses transit assets owned and maintained by CTDOT. The Tier 2 TAM Plan encompasses other smaller, specialized CTDOT-sponsored transit providers (owning <100 vehicles) across the state. These documents comply with federal requirements, building on past practices and accomplishments in maintaining Connecticut's transit infrastructure while also emphasizing the importance of implementing a plan for future maintenance and operations.	Transit Asset Management Plan Tier 1 Transit Asset Management Group Plan Tier 2
Resilience Improvement Plan (RIP)	2026	The RIP outlines a comprehensive strategy to enhance the resilience of Connecticut's transportation system against natural hazards. It identifies vulnerabilities, assesses risks, and develops resilience strategies to ensure the infrastructure can withstand and recover from extreme weather events. The plan's strategies emphasize stakeholder engagement, funding collaboration, and the integration of resilience measures into planning and operations. The plan aims to improve transportation system reliability by proactively planning for natural disaster risks.	Not yet published

Plan Name	Last Updated	Description	Link
Strategic Highway Safety Plan (SHSP)	2022 (to be updated in 2027)	The SHSP is a federally required document that sets a goal to reduce roadway fatalities and serious injuries by at least 15% through a Safe System Approach and the 4Es of safety: Education, Enforcement, Engineering, and Emergency Services. It highlights strategies around three key emphasis areas: infrastructure, behavioral, and pedestrian safety. This plan serves as a comprehensive statewide safety plan and framework, aligning with other statewide plans to direct safety-focused investments.	CT SHSP 2022-2026
Highway Safety Improvement Plan (HSIP) Implementation Plan for FFY 2025	2025	The HSIP outlines Connecticut's federally required, data-driven approach to coming into compliance with federal safety performance targets for fatalities and serious injuries on all public roads. The HSIP tracks progress on the performance measures and identifies implementation actions to meet targets. The plan supports and aligns with the Long-Range Transportation Plan by advancing safety as a core goal and guiding targeted investments and strategies to implement infrastructure-based safety improvements statewide.	HSIP
2024-2026 Triennial Highway Safety Plan	2024	The Triennial Highway Safety Plan is a federally required document that outlines the state's behavioral safety strategies to reduce roadway fatalities and serious injuries. It focuses on programs such as impaired driving prevention, occupant protection, speed management, pedestrian and bicyclist safety, and traffic records improvement, supported by National Highway Traffic Safety Association (NHTSA) funding. The plan complements the Strategic Highway Safety Plan by implementing targeted behavioral initiatives and works alongside the HSIP's infrastructure improvements to advance statewide safety goals.	Triennial Highway Safety Plan
FY2026 National Electric Vehicle Infrastructure (NEVI) Plan Update – Connecticut's Charging Ahead Plan	2025	Connecticut's FY2026 NEVI Plan Update builds on Connecticut's commitment to expedite the deployment of electric vehicle charging infrastructure and establish an interconnected network to facilitate data collection, access, and reliability nationwide.	Connecticut's Charging Ahead Plan

2.0 Strategies for Implementation

The following table outlines CTDOT's proposed strategies recommended for implementation to meet the vision and goals of Connecticut 2055. These strategies build off the strategies and initiatives from CTDOT's family of plans (discussed above) and have been shaped through input from the public, stakeholders, and bureaus within CTDOT. They reflect current best practices and lessons learned across Connecticut and the nation. Each strategy is organized by objective, action, affected modes, and timeframe, providing a practical roadmap for advancing the goals of **Connecticut 2055: Safety for All Users, Connected Communities, Resilient and Sustainable Infrastructure, Innovative Future, and Vibrant Economy**. Together, these strategies serve as a foundation for implementing the long-range transportation plan and can help steer transportation planning efforts across Connecticut.

Category	Strategic Actions	Timeframe
Goal Area: Safety for All Users		
SHSP & HSIP Implementation	Prioritize implementation and continued updates of the Strategic Highway Safety Plan (SHSP) and Highway Safety Improvement Program (HSIP).	Short term (0-5 years)
Work Zone Safety	Increase work zone safety training, awareness, and enforcement. Actions include: • Update the current work zone training program for consistency in training and implement regular refresher courses. • Seek legislative support, when appropriate, for actions that address common work zone safety concerns, including distracted driving and speed enforcement. • Expand awareness campaigns to educate the public on their role in transportation work zone safety. • Implement work zone safety technology.	Short term (0-5 years)
Roadway Visibility	Implement greater safety measures and standards to increase visibility of roadways during nighttime driving, weather events, and other adverse driving conditions.	Short term (0-5 years)

Category	Strategic Actions	Timeframe
Road and Transit Station Safety Audits	Continue to expand Road Safety Audits with local and regional partners. Develop new protocols for Transit Station Safety Audits.	Short term (0-5 years)
Safe Routes to School Programs	Continue to fund Safe Routes to School Programs by improving bicycle and pedestrian infrastructure and providing safety education to children.	Short term (0-5 years)
Wrong Way Detection (WWD) Program	Support the expansion of the Wrong Way Driving Program with countermeasures such as warning lights and detection systems at high-risk locations in the state.	Short term (0-5 years)
Automated Speed Enforcement	Explore expansion of automated enforcement and electronic citation systems on interstates and highways.	Short term (0-5 years)
Blood Alcohol Content (BAC) Limit	Support legislation to reduce the legal blood alcohol limit (BAC) limit to 0.05 g/dL, which has proven to decrease DUI-related crashes significantly.	Short term (0-5 years)
Advanced Alcohol Detection Technologies	Promote pilot programs and other research and development initiatives to support the development of advanced alcohol detection technologies, such as passive indicators becoming standardized in all vehicles.	Medium term (5-10 years)
Universal Helmet Law and E-Bike Safety	Support legislation for a universal motorcycle helmet law and expanded e-bike regulation and enforcement to promote safety and improve how the transportation system is used.	Short term (0-5 years)
Intelligent Speed Assistance (ISA) program	Explore development of an ISA program to monitor repeat offenders of reckless and risky driving.	Short term (0-5 years)
Railroad at-grade crossings	Continue safety upgrades of railroad at-grade crossings statewide, including identifying opportunities to reduce the number of railroad at-grade crossings.	Short term (0-5 years)

Category	Strategic Actions	Timeframe
Secure Transportation Infrastructure	Strengthen transportation infrastructure security through regular statewide risk assessments.	Short term (0-5 years)
Pedestrian-Friendly ITS Devices	Continue investment in pedestrian-friendly intelligent transportation system devices like Rectangular Rapid Flashing Beacons, Pedestrian Hybrid Beacons, and Leading Pedestrian Intervals at signalized intersections.	Short term (0-5 years)
Goal Area: Connected Communities		
Pedestrian and Bicyclist Mobility	Prioritize investment in addressing pedestrian and bicycle safety corridors identified in the Statewide Active Transportation Plan.	Short term (0-5 years)
Access for All Users	Prioritize investments to improve multimodal access for all populations, particularly older adults, youth, persons with disabilities, and underserved communities.	Short term (0-5 years)
Complete Streets	Continue to implement and expand CTDOT's Complete Streets policy in project planning and design to accommodate all users.	Short term (0-5 years)
Multi-use Trails	Enhance and expand regional multi-use trails and bikeways across the state for greater connectivity.	Medium term (5-10 years)
Bus Service	Improve bus service by investing in expanded routes, adjusting routes to meet demand, increasing service frequency to align with travel patterns, and expanding bus rapid transit networks.	Short term (0-5 years)
Unified Fare System	Support the development of a unified fare system with better navigation and trip planning tools across all transit systems.	Medium term (5-10 years)
Passenger Rail Service	Prioritize passenger rail investment to improve travel times, increase rail service frequency, expand service areas, modernize the train fleet, optimize commuter parking, add new stations, and improve station accessibility.	Short term (0-5 years)
Micromobiity Service	Continue to invest in and spread awareness of micromobility options and microtransit services.	Short term (0-5 years)
Land use	Encourage transit-supportive development and mixed-use land development that promotes and expands walking, biking, and transit access.	Medium term (5-10 years)

Category	Strategic Actions	Timeframe
MPO Coordination	Continue coordination and collaboration with state MPOs and establish a regional implementation framework to support statewide-regional communication, planning, and alignment.	Short term (0-5 years)
Local Government Coordination	Increase awareness and promote use of the Quick Build Program with local governments, which allows less expensive, temporary materials to quickly change street design that increase safety and improves multimodal transportation.	Short term (0-5 years)
Multimodal Improvements	Use multimodal corridor studies, Planning and Environmental Linkages (PEL) studies, and other planning programs to identify and shape local and regional solutions for the most critical transportation needs.	Short term (0-5 years)
Hartford Line passenger rail improvements	Advance Hartford Line station expansion projects, including new stations at Windsor Locks and Enfield, to improve accessibility and convenience, especially for riders on the east side of the Connecticut River and along the state line into Springfield. Prioritize Hartford Line track improvements, replacement of movable bridges, installation of new interlockings, and double tracking to boost capacity and support future rail expansion.	Medium term (5-10 years)
Transit workforce initiatives	Identify dedicated funding to address rising costs of transit operations and to maintain the ability to pay staff competitively. Address driver shortages and an aging workforce with increased recruitment and training.	Medium term (5-10 years)
Public Feedback	Create a centralized repository of public and stakeholder feedback from transportation projects to inform future planning efforts, studies, and project development.	Short term (0-5 years)
Goal Area: Resilient and Sustainable Infrastructure		
Improved Data Collection and Analysis	In alignment with the Connecticut Resilience Improvement Plan, develop improved data collection and forecasting tools to better assess bridges, culverts, and other transportation infrastructure areas that are prone to intense storms, reoccurring flooding, and extreme weather.	Short term (0-5 years)
Resilient Roadway Design	Incorporate resilient roadway design such as raising road elevations, armoring roadway shoulders, minimizing erosion, stabilizing embankments, using stronger pavement surfaces, adding protective coatings on bridges, and improving stormwater drainage.	Medium term (5-10 years)
Vulnerable Infrastructure	Develop state-specific guidance for CTDOT when evaluating inland precipitation increases and sea level rise impact along the coast.	Short term (0-5 years)

Category	Strategic Actions	Timeframe
Emergency Preparedness	Improve emergency preparedness by developing communications procedures and tools that improve coordination across CTDOT staff, transportation operators, and transportation users prior to, during, and after emergencies.	Short term (0-5 years)
Flood Planning	Incorporate real-time community data into the planning process to enhance situational awareness and community engagement in flood planning.	Medium term (5-10 years)
State of Good Repair	Continue to focus investments on the state of good repair by implementing the TAMPs for highways, bridges, and public transportation.	Short term (0-5 years)
Asset Management Tools	Continue the development of tools to simplify asset management tracking such as life cycle planning tools, comprehensive asset inventory systems, and asset-specific management software programs.	Medium term (5-10 years)
Low Maintenance Assets	Incorporate the use of low maintenance assets such as jointless bridges and bridges with resilient and durable materials wherever feasible. Evaluate and test the use of alternative and emerging technologies that may help minimize maintenance and replacement needs.	Medium term (5-10 years)
Assets Inspection Programs	Increase inspection programs of all CTDOT-maintained assets to assess conditions and proactively identify issues, particularly for bridges, culverts, facilities, and retaining walls. Increase the identification of preventative maintenance needs.	Short term (0-5 years)
Environmental Mitigation	Continue to integrate environmental impact avoidance and mitigation on federally funded projects through National Environmental Policy Act (NEPA) procedures and on state funded projects through Connecticut Environmental Policy Act (CEPA).	Short term (0-5 years)
Goal Area: Innovative Future		
Connected Vehicles and Autonomous Vehicles	Implement CTDOT's Connected Vehicle and Autonomous Vehicle (CAV) Strategic Plan by supporting the testing, piloting, and deployment of CAVs.	Short term (0-5 years)
CAV Partnering	Building off the CTDOT's CAV Strategic Plan, explore opportunities to partner with AV companies and other partners for pilot deployments in urban and rural areas, similar to other states that have statutes permitting AV operations.	Short term (0-5 years)

Category	Strategic Actions	Timeframe
CAV Policies	Engage with partners and legislature to develop regulations and policies to support the sustainable growth of CAV and EV technology.	Medium term (5-10 years)
CAV Data Protection	Enforce and publicize Connecticut's 2023 data privacy act to protect the data of CAV users.	Short term (0-5 years)
Electric Vehicles	Expand the state's electric vehicle (EV) charging network and infrastructure to meet CTDOT's National Electric Vehicle Implementation (NEVI) Plan standards.	Short term (0-5 years)
Bus Electrification	Support the expansion of bus electrification including the placement of adequate charging and storage infrastructure.	Long term (10+ years)
Electric Grid Capacity	Assess grid capacity to ensure that transmission and distribution systems are ready for increased capacity from expanded EV infrastructure and emerging technologies such as vehicle to grid (V2G) technology.	Medium term (5-10 years)
Cybersecurity	Develop a CTDOT-specific cybersecurity framework and action plan to minimize cybersecurity risks and improve incident response.	Short term (0-5 years)
Cybersecurity	Increase and advance employee training and phishing simulations to empower employees to recognize and prevent emerging cyber threats like AI deepfakes.	Short term (0-5 years)
Cybersecurity	Integrate formalized offline backups for critical data to mitigate ransomware attacks.	Short term (0-5 years)
Artificial Intelligence	Develop policies and procedures to clearly outline how and when artificial intelligence (AI) can be used in the workplace to put appropriate safeguards in place.	Short term (0-5 years)
Drone Applications	Expand CTDOT's drone capabilities for traffic monitoring, surveying and data collection, emergency management services support, and post-disaster assessments.	Medium term (5-10 years)
Drone Applications	Consider implementing a designated drone corridor pilot program for preliminary testing of emergency supply delivery, traffic monitoring, infrastructure inspection, and private delivery.	Long term (10+ years)
Drone Applications	Update state laws to be consistent with Federal Aviation Administration (FAA) drone application standards, ensure compliance with restrictions on foreign made drones, and avoid overregulation at the local level.	Medium term (5-10 years)

Category	Strategic Actions	Timeframe
Goal Area: Vibrant Economy		
State-owned Right-of-Way	Leverage state-owned property and public right-of-way to support advanced communication networks, intelligent transportation systems technology, and other potential uses for revenue generation and operational enhancements.	Medium term (5-10 years)
Congestion and Travel Time	Continue to invest in reducing congestion and improving travel time reliability on key corridors across the state such as I-95 and Merritt Parkway.	
Truck Bottlenecks	Continue to address truck bottlenecks on major interstates through project development.	Medium term (5-10 years)
Truck Parking	Continue to implement the statewide truck parking expansion project aimed at expanding truck parking facilities at key locations across the state.	Short term (0-5 years)
Navigation Channels	Continue to support investment in the maintenance and dredging of Connecticut's 30 federal navigation channels, secure funding for non-federal shares and special handling of contaminated material, and coordinate with the Army Corps of Engineers for long-term planning.	Medium term (5-10 years)
Port Asset Expansion	Promote dual-use and increased utilization of port assets and reestablish rail connections to maximize infrastructure value.	Medium term (5-10 years)
Freight Rail Connections	Support improved freight railroad connections to ports and Bradley International Airport.	Medium term (5-10 years)
Freight Movement Tool	Promote the development of a statewide, data-driven freight movement tool to track container destinations and optimize final-mile logistics.	Medium term (5-10 years)
Freight Rail Infrastructure at Ports	Support the expansion and upgrade of rail infrastructure at New Haven and New London ports.	Medium term (5-10 years)
Ferry Services	Continue to promote ferry services for the transport of goods and people.	Short term (0-5 years)
Data and Knowledge Sharing	Support increased information sharing between state agencies and peer states through centralized data portals, data-sharing agreements, and coordination meetings to improve integrated planning efforts.	Medium term (5-10 years)

Category	Strategic Actions	Timeframe
Data and Knowledge Sharing	Enhance technical assistance, training, and networking opportunities for local transportation agencies to address shared challenges and foster best practices.	Short term (0-5 years)
Regional Collaboration	Promote regional collaboration with MPOs/COGs to create efficiencies in resource use, particularly for transit and housing development, where impacts are interconnected across municipalities.	Short term (0-5 years)
Tourism	Coordinate with Connecticut Office of Tourism to support transportation improvements that improve access to travel destinations and enhance the experience of tourists.	Short term (0-5 years)
Maritime Performance	Support the development of maritime performance measures in coordination with the Connecticut Port Authority to track progress on maritime freight improvements.	Short term (0-5 years)
Construction	Enhance project delivery practices to minimize disruption to businesses and communities during transportation construction projects.	Short term (0-5 years)