

**Transportation Infrastructure Program
Annual Capital Plan Report
FFY2024 - FFY2028**



January 2024

Prepared by the Bureau of Engineering and Construction

Chief Engineer's Office

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List of Acronyms

AC	Advance Construction
ADA	Americans with Disabilities Act
APTA	American Public Transportation Association
ATMS	Advanced Traffic Management System
CEPA	Connecticut Environmental Policy Act
CM/GC	Construction Manager/General Contractor
CMAQ	Congestion Mitigation and Air Quality
CMAR	Construction-Manager-at-Risk
COG	Council of Government
CRSMS	Connecticut Roadway Safety Management System
CT	Connecticut
CTDAS	Connecticut Department of Administrative Services
CTDMV	Connecticut Department of Motor Vehicles
CTDOT	Connecticut Department of Transportation
DB	Design-Build
ECU	Engineering Coordination Unit
FAST	Fixing America's Surface Transportation Act
FFY	Federal Fiscal Year
FHWA	Federal Highway Administration
FRA	Federal Railroad Administration
FTA	Federal Transit Administration
HSIP	Highway Safety Improvement Program
IIJA	Infrastructure Investment and Jobs Act
LOTICIP	Local Transportation Capital Improvement Program
Low-No	Low or No Emission
MPO	Metropolitan Planning Organization
NEPA	National Environmental Policy Act
NHS	National Highway System
NHTSA	National Highway Traffic Safety Administration

NOFO	Federal Notice of Funding Opportunity
OPM	Office of Policy and Management
PEL	Planning and Environmental Linkages Study
RAISE	Rebuilding American Infrastructure with Sustainability and Equity
RSA	Road Safety Audit
RTSP	Regional Transportation Safety Plans
SAFE	Service and Fare Equity Analysis
SFY	State Fiscal Year
SHSP	Strategic Highway Safety Plan
SOGR	State of Good Repair
SRTS	Safe Routes to School Program
STF	Special Transportation Fund
STP-U	Surface Transportation Program - Urban
STO	Special Tax Obligation Bonds
T2 Center	Training and Technical Assistance Center
TA	Transportation Alternatives
TAM	Transportation Asset Management
TAMP	Transportation Asset Management Plan
TIME	Track Improvement and Mobility Enhancement
TRIP	Transportation Rural Improvement Program
UConn	University of Connecticut
USDOT	United States Department of Transportation
USHUD	United States Department of Housing and Urban Development
VRU	Vulnerable Road User

Introduction

Agency Overview

The Connecticut Department of Transportation (CTDOT) is responsible for the planning, design, construction, maintenance, and operation of the state's transportation infrastructure. This includes highways, railroads, mass transit systems, and waterways. The agency's mission is to establish and maintain a safe and efficient intermodal transportation network. This network not only enhances the quality of life for Connecticut's residents but also serves as a catalyst for economic vitality in both the state and the wider region.

Guided by this mission, the agency is led by the Office of the Commissioner and is further organized into five bureaus, each with a unique focus and responsibility:

- 1. Bureau of Engineering and Construction:** Dedicated to developing and implementing the Capital Program for Connecticut's transportation network. The Bureau leverages innovative engineering and construction solutions, incorporating stakeholder input, to enhance public safety, mobility, economic vitality, and community connectivity, all while preserving environmental and cultural resources.
- 2. Bureau of Finance and Administration:** Facilitates staff growth, improves financial and operational efficiency, simplifies business procedures, expands opportunities for community participation in the supply of goods and services for the promotion of economic development, and strives to enhance the state's transportation system.
- 3. Bureau of Highway Operations:** Focused on maintaining Connecticut's highway and bridge systems while balancing the needs of the motoring public. This involves tasks such as snow and ice control, incident management, and permitting for oversize/overweight vehicles.
- 4. Bureau of Policy and Planning:** Plays a central role in implementing a comprehensive statewide transportation planning process. It considers and implements projects, strategies, and services that address economic development, sustainability, safety, accessibility, environmental protection, and the integration and connectivity of the transportation system across all modes of travel.

- 5. Bureau of Public Transportation:** Responsible for the development, maintenance, and operation of a safe and efficient system of motor carrier, mass transit, rail facilities, and maritime assets. It facilitates the movement of people and goods through programs such as Bus Transit, Rail Operations, Ferries, and Ridesharing.

What is the Capital Plan?

The Capital Plan is an annual report prepared by CTDOT to inform stakeholders about the Department's planned Capital Investments over the upcoming 5-year period. The document describes how projects enter the Capital Program, how the program is funded, outlines the major projects and programs in the Capital Plan, and shows the agency's construction expenditures & contractor bidding opportunities for the past two years and projections for the upcoming year.

The Capital Plan utilizes the Federal Fiscal Year (FFY) as the timeframe for data presentation. This period, covering October 1 to September 30, takes precedence over the calendar year or the State Fiscal Year (SFY) due to the significant role that federal funds play in the broader Capital Program.

The Capital Plan is a product of collaborative efforts, including feedback from stakeholders, Connecticut's Metropolitan Planning Organizations (MPOs) and Councils of Governments (COGs), reflecting regional interests and priorities. This collaborative approach adds depth and relevance to the plan, aligning it with the broader vision and goals of the state and its communities.

How Does the Capital Plan Relate to Other Planning Documents?

The planning documents that guide how CTDOT selects its projects includes the Long-Range Transportation Plan, Metropolitan Transportation Plan, Transportation Improvement Program, and Statewide Transportation Improvement Program. Each document is described below:

- **Long-Range Transportation Plan:** Federally mandated policy document that serves as a framework for preparing future, project-specific transportation plans. This state led visioning document has a time horizon of 20+ years and is typically updated every 3-5 years.
- **Metropolitan Transportation Plan (MTP):** MPOs are required to prepare the MTP to identify how the metropolitan area will manage and operate a multi-modal transportation system. This MPO/COG led visioning document has a time horizon of 20+ years and is updated every 4 years.
- **Transportation Improvement Program (TIP):** Each MPO is required to develop a TIP in cooperation with the state and public transit providers and includes all regionally significant projects and projects that receive federal funds. This MPO/COG led execution document has a time horizon of 4 years and is updated regularly.
- **Statewide Transportation Improvement Program (STIP):** The STIP, which includes all projects in each TIP, is a financial document that lists all projects expected to be funded in those four years with Federal participation. It must be fiscally constrained and be assessed for impacts to air quality. This state led execution document has a time horizon of 4 years and is updated every year.
- **Capital Plan:** The 5-year Capital Plan is consistent with the STIP and reflects projects and programs authorized by the legislature. It informs the Department's stakeholders about the past year's program and outlines the plan for the upcoming year. This state led execution document has a time horizon of 5 years and is updated every year.

How is the Capital Program Funded?

The Capital Program is funded with a mix of federal, state, and local funding. At the federal level, the government allocates substantial resources for transportation through both formula and discretionary programs. The State plays a significant role by allocating its own funds and leveraging federal resources. Local funding complements these efforts by addressing community-specific transportation needs, including local road maintenance and pedestrian-friendly initiatives. Together, these layers of funding create a collaborative framework that sustains and advances transportation projects, connecting people and goods efficiently across the state. The available funding for the Capital Program is shown in Figure A.

Federal Funding and the Infrastructure Investment and Jobs Act

The Department has four major sources of federal funding, all of which fall under the umbrella of the United States Department of Transportation (USDOT):

1. The Federal Highway Administration (FHWA),
2. The Federal Transit Administration (FTA),
3. The Federal Railroad Administration (FRA), and
4. The National Highway Traffic Safety Administration (NHTSA).

Congress passed the Infrastructure Investment and Jobs Act (IIJA) in November 2021, which funds the transportation program for five years (FFY2022 - FFY2026) subject to annual appropriations. The IIJA provides Connecticut with approximately \$5.38 billion in federal transportation formula funding over the five years, which is an increase of \$1.6 billion over the levels authorized in the previous federal legislation, Fixing America's Surface Transportation (FAST) Act.

The IIJA maintains the FAST Act highway program while providing a focus on safety, bridges, climate change, resilience, and project delivery. The IIJA also creates more than a dozen new highway programs, including reducing carbon emissions, increasing resilience, reconnecting communities, and rehabilitating bridges in critical need of repair. For FTA, the IIJA provides new and increased funding for State of Good Repair and Low or No Emission Grants, while continuing

the existing structure for FTA programs with significant funding increases. FTA has established four priorities for implementation of the IJA: Safety, Modernization, Climate, and Equity.

The Capital Plan assumes an annual federal formula funding level of approximately \$1.1 billion. This includes anticipated FHWA, FTA, FRA, and NHTSA funding. Total new formula federal funding received for FFY2023 was \$1.16 billion (\$885m FHWA, \$255m FTA, and \$17m NHTSA). Recently, FRA announced discretionary grants for the Northeast Corridor and rail networks. FRA will be providing CTDOT \$1.168 billion towards the projects selected in CT. The Department's demonstrated ability to immediately utilize the additional federal funds resulted in a successful application. Despite this increase in federal funding, high levels of inflation, labor shortages, and supply chain disruptions are resulting in significant cost increases to perform the same level of work.

Federal Highway Administration Funding

The Federal Highway Administration (FHWA) is the largest federal funding source for the Department's transportation program and is the primary funding source for roadways and bridges. With annual funding from FHWA exceeding \$800 million in FFY2024, the strategic management and utilization of FHWA funds is critical to the Department's Capital Program. Federal funds are distributed to the Department through specific federal-aid programs, each of which has defined eligibility criteria. These criteria are primarily based on geographic area, roadway classification, asset condition, and type of improvement. At the same time, the growth in the number of federal programs with their specific eligibility criteria including sub-allocation based on geographic area is a significant planning and programming challenge.

FHWA regulations require the Department to obligate the full amount of formula limitation provided through an appropriations bill in that specific fiscal year or it lapses. The Department has consistently obligated its full annual formula limitation, along with additional limitation provided through the August Redistribution process. In fact, over the last five years, the Department obligated \$332.5 million in additional Federal funds through the August Redistribution process. The Department received its largest award of additional limitation in FFY2023 at \$103.3 million.

A key tool utilized by the Department to deliver a robust Capital Program is a federal financial tool called Advance Construction (AC). Advance Construction allows projects to begin in advance of having full obligation authority set aside, resulting in the ability to program a greater number of projects than would otherwise be possible. This financing mechanism is typically used on large projects that can be phase funded over a number of years using future obligation authority and future apportionment. Use of this financing tool and phase funding projects over multiple years, has played an important role in the Department's successful execution of the August Redistribution process.

Federal Transit Administration Funding

The Federal Transit Administration (FTA) is the primary federal funding source for the Department's Public Transportation infrastructure program. Annual funding from FTA now exceeds \$250 million and has five annual program apportionments. The strategic management and utilization of FTA funds, while paying close attention to funding eligibility requirements, is critical to the public transportation portion of the Capital Program.

FTA requirements and procedures for the management of all FTA grant programs are governed by FTA's Master Agreement. This is the official FTA document containing federal requirements applicable to the FTA recipient and the administration of FTA grants. The Master Agreement is incorporated by reference and is made part of each FTA grant.

The Department is the designated recipient for all FTA programs and is responsible for service and planning decisions for rail, fixed-route bus, and complementary paratransit service in the urbanized areas of the State.

For most regular formula funds authorized, FTA allows four years for funds to be obligated so the funding may be carried forward. This allows for larger projects to be financed with two or more years of apportionment. Additionally, as the designated recipient, the Department programs and plans the formula funding from the Urbanized Area / Section 5307 Formula Grants (the largest

FTA source of funds) and creates a funding pool from which capital projects in regions around the State are funded.

The Department does not utilize a formula to reallocate Section 5307 formula funds to the bus operators, rather the funding pool allows for a cooperative, non-discriminatory allocation of funds to different regions based on annual needs. The disbursement of these funds is approved by the MPOs in the STIP. Sub-area split agreements that reflect the annual disbursement of funds by region are created by the Department and executed by the operators from each region. This program allows local transit operators to fund major projects for which they may otherwise have never accumulated adequate funds.

FTA requires the recipients of federal funds to develop a finance plan to complete large projects. To achieve this, the Department uses a federal financial tool called Pre-Award Authority, particularly for large multi-year programs, providing for a phased approach to project funding. This mechanism allows the State to request and receive approval to construct a federal-aid project in advance of the availability of authorized federal funds.

Federal Railroad Administration Funding

The management of Federal Railroad Administration (FRA) funds requires the Department to adhere to both programmatic and administrative laws, regulations, policies, and procedures to effectively implement and manage projects awarded by FRA in accordance with the conditions of the grant agreement.

National Highway Traffic Safety Administration Funding

The National Highway Traffic Safety Administration (NHTSA) allocates funding to support and improve transportation safety and infrastructure at the state level. These funds are essential for the implementation of a wide range of road safety initiatives and projects, such as highway improvements, traffic management, and educational programs.

Federal Discretionary Funding

In addition to the formula funds, the IJJA makes more than \$100 billion in competitive federal transportation grants available for Connecticut to pursue. These discretionary grant programs provide even more opportunities for improvements to Connecticut's transportation system. The Department has established a dedicated Grants and Socio-Economics unit in the Bureau of Policy & Planning to support this initiative. This unit collaborates closely with key personnel from all Bureaus regarding grant applications. The Department and transportation stakeholders are monitoring the Federal Notice of Funding Opportunities (NOFOs) as they are released by USDOT and are actively applying to relevant opportunities. The list below includes some of the grants that the Department has applied for and received since the implementation of IJJA:

- \$158.2 million: Gold Star Memorial Bridge Northbound Structure Rehabilitation Project (FHWA - Bridge Investment Program).
- \$29.6 million: Ansonia, Beacon Falls, & Seymour Train Stations (FTA - All Stations Accessibility Program)
- \$26.4 million: Battery Electric Bus Deployment at CTtransit Stamford Division (Buses and Bus Facilities / Low or No Emission (Low-No))
- \$25 million: Move New Haven On-Street Bus Rapid Transit System (Rebuilding American Infrastructure with Sustainability and Equity / RAISE)
- \$20.4 million: Modernization of the SEAT Garage in Norwich, CT (FTA - Buses & Bus Facilities Grant Program)
- \$20 million: New Haven Line Power Program (FRA - State of Good Repair Grant Program)
- \$2 million: Connecticut Integrated Transit Mobility Project (OST - Strengthening Mobility and Revolutionizing Transportation – Phase 1 Planning Grant Program)
- \$1 million: Planning & Environmental Linkages Study for Bridge No. 00032 on I-95 in Stamford (FHWA - Bridge Investment Program)
- \$460 thousand: Joint Project to Evaluate & Protect Movement of People & Wildlife across Connecticut (FHWA - Wildlife Crossings Pilot Program)

FRA Federal-State Partnership for Intercity Passenger Rail Grant Program

Ten projects in Connecticut were selected for nearly \$2 billion in funding under the FY2022 – FY2023 FRA Federal-State Partnership for Intercity Passenger Rail Grant Program. The funding will help the Department to advance projects that will modernize critical infrastructure and support future ridership growth on the Northeast Corridor. The project awards are as follows:

- Amtrak Managed Projects (Total: \$830 million)
 - \$826,652,000: Connecticut River Bridge Replacement
 - \$4,000,000: New Haven to Providence Capacity Planning Study
- CTDOT Managed Projects (Total: \$1.168 billion)
 - \$465,000,000: Walk Bridge Replacement
 - \$245,920,000: Devon Bridge Replacement
 - \$122,800,000: New Haven Line Power Improvement Program
 - \$119,320,000: Devon Bridge Interim Repairs
 - \$104,866,500: Hartford Line Rail Program Double Track (Phase 3B)
 - \$71,648,000: New Haven Line Track Improvement and Mobility Enhancement (TIME) Parts 1 and 3
 - \$23,200,000: Saugatuck River Bridge Replacement
 - \$15,400,000: New Haven Line Network Infrastructure Upgrade

Community Project Funding / Congressionally Directed Spending

Community Project Funding / Congressionally Directed Spending (aka “Earmark”) projects were incorporated in the FFY2022 and FFY2023 appropriations bills. These projects are administered through either the USDOT or the US Department of Housing and Urban Development (USHUD). The earmark projects which were either awarded directly to CTDOT or which CTDOT is responsible for its administration are presented in the table below.

List of FFY2022 and FFY2023 Appropriations Projects

Funding Program	Appropriations Project Title	Location	Funding Amount
FFY2022 Appropriations			
USDOT – Highway Infrastructure Programs	Reconstruction of Route 34, Project 36-184	Derby	\$5,000,000
	East Industrial Road Reconstruction (Branford)	Branford	\$2,250,000
	City of Stamford Safe Routes to Schools and Access to Public Transit Facilities	Stamford	\$2,000,000
	Norwalk Safe Sidewalks, Crossings, and Trails Project	Norwalk	\$1,400,000
	Town of Southbury Pedestrian Safety Improvements	Southbury	\$444,946
	West Avon Road, Country Club Road, Scoville Road Sidewalk Replacement in the Town of Avon	Avon	\$424,000
USDOT – Transit Infrastructure Grants	Walk Bridge – Undergrade Bridges Demolition and Replacement in Norwalk, CT	Norwalk	\$15,000,000
USHUD – Community Development Fund	Enfield Rail Station Public Facilities Roadway Access, Sidewalks, and Parking Lot Improvements	Enfield	\$2,500,000
FFY2023 Appropriations			
USDOT – Highway Infrastructure Programs	Shoreline Greenway Trail—New Haven	New Haven	\$7,000,000
	Wall Street Corridor Revitalization Project	Norwalk	\$5,500,000
	Realignment of Lafayette Circle	Bridgeport	\$5,000,000
	Oxford Main Street (Route 67) Multiuse Trail—Dutton Road to Quarry Walk Design and Construction	Oxford	\$3,400,000
	Broad Street Complete Streets	Windsor	\$3,000,000
	Main Street Watertown Road Safety Audit	Watertown	\$3,000,000
	Quinebaug River Trail — SR 205 to Trout Hatchery Rd., Plainfield, CT	Plainfield	\$2,179,953
	Air Line Trail Gap Boardwalk	East Hampton	\$1,400,000
	Waterbury Signal Replacement	Waterbury	\$1,400,000

State Funding

The Special Transportation Fund (STF) is a state appropriated fund that has a primary purpose of financing of state highway and public transportation improvements, as well as the ongoing operations of CTDOT and the Connecticut Department of Motor Vehicles (CTDMV). The STF revenue base has become more diverse with motor fuels taxes no longer providing the predominant source of funding. The majority of revenue comes from the sales and use tax, followed by oil companies tax, motor fuels tax, motor vehicle receipts, licenses, permits, fees and other sources.

In October, Kroll Bond Rating Agency upgraded the credit rating of Connecticut's transportation bonds from AA+ to AAA, which is the highest rating possible. This credit rating increase demonstrates the State's commitment to funding transportation in a fiscally responsible way and will result in lower borrowing costs. Recently, the STF has realized an increase in revenues due to higher than anticipated sales tax interest income and a decrease in expenditures due to temporary federal support for transportation operations and personnel vacancies in the agencies. According to the November 20, 2023, forecast from the Office of Policy and Management (OPM), the STF is projected to end SFY2024 with an operating surplus of \$208.4 million, and the STF fund balance on June 30, 2024, is projected to be \$878.4 million.

State Bond Funding

Connecticut's primary source of bond funding for transportation purposes is through the issuance of Special Tax Obligation bonds (STO). The bond proceeds are used to fulfill federal matching requirements and to fund initiatives as 100% state that otherwise would not be fundable. The bonds are secured by transportation-related taxes, fees and a portion of the State's general retail sales tax. Bonding provides a cash flow tool that allows for payment of infrastructure improvements over their useful life and allows for construction of projects sooner. The state issues bonds to cover transportation infrastructure needs such as:

- Fix-it-First Road and Fix-it-First Bridge Programs,
- Urban Systems Program,
- Interstate and Intrastate Programs,

- Bus and Rail Facilities Program,
- Environmental Compliance Program,
- Local Transportation Capital Improvement Program (LOTICIP),
- Transportation Rural Improvement Program (TRIP), and
- Funds provided through Public Act 15-1, Connecticut's infrastructure improvement program.

Local Funding

There are a few projects in the Capital Plan that require a local match to federal or state funds. The municipality in which these projects are located is responsible for the local match if required. Local funding sources may include municipal bonding or other sources.

Expenditure of Funds

It is the Department's practice to ensure that authorization, allocation, and allotment of sufficient funds for each project occurs prior to advertising and awarding the construction contract. This is accomplished by establishing the budget before work commences. The process can result in the appearance that money is not being spent since the actual draw-down of funds will not occur immediately, but rather as the work is completed and accepted. Through this process, the Department is always financially ready to reimburse valid contract expenses. Undertaking large capital projects such as the I-91/I-681/Route 15 Interchange Improvements in Meriden or the WALK Moveable Bridge Replacement in Norwalk, are just a few examples of on-going projects that will have multi-year expenditures. Similarly, the purchase of high value rail cars and buses are budgeted upfront, have small payments when the order is placed and larger payments during production, delivery, and acceptance. The State's commitment to an increased investment level for our multi-modal transportation highway and transit system is improving our transportation infrastructure. An example of our increased investment and of the lagging indicator of expenditures can be seen in Figure B.

Department Priorities

The Department has a multifaceted set of priorities aimed at enhancing transportation infrastructure and services within the state to help the agency achieve its mission. These include:

- Safety
- Sustainability
- Wrong Way Driving
- Traffic Signal Upgrades and Replacement
- Complete Streets & Active Transportation
- Americans with Disabilities Act Engineering Coordination
- Asset Management

Each priority is discussed below.

Safety

CTDOT continues to prioritize safety across all transportation modes and throughout all programs. The Vision Zero Council, established in 2021 by Public Act 21-28, is an inter-agency working group tasked with developing statewide policy to eliminate transportation-related fatalities and severe injuries involving pedestrians, bicyclists, transit users, motorists, and passengers. This Council will help advise CTDOT, the legislature, and other state agencies in ways to advance transportation safety in Connecticut.

Safety efforts are also guided by the Strategic Highway Safety Plan (SHSP), which is required by the federal Highway Safety Improvement Program (HSIP). The 5-year plan is developed by safety stakeholders, who collaborate on safety efforts and leverage available resources. The current SHSP was approved in May 2022, with the Vulnerable Road User (VRU) Safety Assessment being amended to the SHSP in November 2023. Similar safety plans, called Regional Transportation Safety Plans (RTSP) have been prepared and completed for each of the nine COGs in Connecticut. CTDOT submitted the HSIP Implementation Plan in June 2023 to the Federal Highway Administration, which was a requirement as FHWA notified CTDOT that CT did not meet or make significant progress toward meeting the 2021 Safety Performance Targets, based on the 5-year

rolling averages from 2017 to 2021. The plan contains a list of programs and projects to be initiated in Federal Fiscal Year 2024 to reduce fatal and serious injury crashes on Connecticut's public roadways. Overall, it's anticipated that approximately \$40 million of projects will be advanced annually utilizing HSIP funds.

CTDOT worked with the Connecticut Transportation Safety Research Center at the University of Connecticut (UConn) to develop a state-of-the-art safety management system. The software tool, named the Connecticut Roadway Safety Management System (CRSMS), allows network-level screening and diagnosis of CT's roads and safety appurtenances. The tool enhances countermeasure selection and safety effectiveness evaluation for use in project selection and development. The software tool is being enhanced to provide the data needed for the VRU Safety Assessment, as required by the recently passed IJA.

Sustainability

The Capital Plan continues to align the Department's goals with the State's sustainability goals, including the goals set forth in Governor Lamont's Executive Orders No. 1 and No. 3, and the most recent Executive Order No. 21-3. The Department is pursuing projects that:

- Reduce greenhouse gas emissions, as well as vehicle miles traveled per capita,
- Improve the health and safety of Connecticut's residents,
- Adapt to changing climate conditions, and
- Protect and improve our natural and community resources.

Investments in public transportation, congestion reduction, safety, complete streets, and active transportation increase the economic and social vibrancy, equity, safety, health, and livability of our communities. Projects that directly reduce our carbon footprint and improve air quality include:

- Solar energy development at our facilities to provide clean electric power and lower utility bills,
- Increasing frequency of existing, and introducing new, public transportation services,

- Continuing investment in multi-use trails, sidewalks, and bike infrastructure to encourage active transportation,
- Investing in roundabouts and road-diets to reduce emissions and improve safety for all users, and
- Upgrading the electrical infrastructure at our bus transit garages to accommodate EV charging and beginning to convert the state’s transit bus to clean and quiet battery-electric buses.

Wrong Way Driving

In recent years, the number of wrong way driving occurrences on the State’s highways has significantly increased, often with tragic consequences. To address this issue, the Department received \$40 million in state bond funding dedicated to this initiative. The Department has conducted a network screening analysis focused on locations where there is a higher risk of experiencing wrong way events, principally at ramp locations where the on-ramp and off-ramp are on the same side of the road. The Department has installed countermeasures such as pavement markings at select off-ramp intersections to help identify the correct direction of travel, installing vertical arrows at signalized off-ramp intersections to prevent drivers from turning onto an off-ramp, and installing wrong way detection flasher systems. Typical wrong way detection flasher systems include a 360-degree camera and/or thermal sensors at the ramp intersection to detect vehicles traveling in the wrong direction and wrong way signs with red LED lights, that are activated and flash when a wrong-way vehicle is detected. There are 22 wrong way detection systems that are currently active and another 200 locations where the system has been identified to be installed in the next few years.

Traffic Signal Upgrades and Replacement

Traffic signals are a key asset class in the Department’s highway transportation network and play a vital role in support of the Department’s mission to provide a safe and efficient transportation network in Connecticut. The agency operates over 2,500 traffic signals – more than all the other New England state DOTs combined. To improve traffic signal operational efficiency and safety,

while reducing delays to motorists, the Department is planning a 10-year program for the systematic upgrade of traffic signal equipment. Targeted investment in our traffic signal systems will provide improvements in safety, improved air quality, reduced congestion; and, improve travel efficiency for commuters, transit passengers, and pedestrians across Connecticut. From 2023 – 2026, the Department is planning over 1,300 signal upgrades, including: signal modifications for new pedestrian features, upgrades from side street green to concurrent pedestrian crossings, upgrades to vehicle detection, upgrades to detection and controller cabinets, and full traffic signal replacements. These investments will improve the transportation experience for all roadway users at intersections.

Complete Streets & Active Transportation

Complete Streets is a means to provide safe access for all users (pedestrians, persons using mobility aids, bicyclists, transit users and vehicle operators) by providing a comprehensive, integrated, and connected multi-modal network of transportation options.

The Department has established the Complete Streets Standing Committee to provide guidance for the implementation of Complete Streets throughout the Department. The committee is made up of representatives from each of the Department's five bureaus and meets quarterly to:

- provide input on the development of guidance documents,
- work with program managers to refine prioritization criteria and to ensure projects that focus on bicycles and pedestrians are able to compete with traditional roadway projects for funding,
- use the collective expertise of these groups with a goal of establishing a unified, Department-wide Complete Streets approach,
- identify annual training opportunities related to Complete Streets.

The Department implemented a Complete Streets Policy that includes training, design guidance, funding, and data collection. Additionally, in 2023, the Department instituted a Complete Streets Controlling Design Criteria Policy and complementary Engineering and Construction Directive outlining the Complete Streets Controlling Criteria and Justification Processes. These newly

released documents establish three new controlling design criteria and design guidance for pedestrian facilities, bicycle facilities, and transit provisions to be incorporated on all applicable CTDOT administered projects.

Public Act 23-116, passed in 2023, requires the Department to examine proposals from the Vision Zero Council's equity subcommittee and consider infrastructure that specifically protects VRUs, including pedestrians, bicyclists, and people with disabilities. The Department has fulfilled this requirement through the new Complete Streets Controlling Design Criteria. Additionally, output from the VRU assessment and analysis as part of the SHSP will contribute to meeting the goal. In order to support additional Complete Streets and other safety efforts, the Department has set aside \$5 million annually of state funds to be used for short-term Complete Streets projects to supplement existing programs.

The Department plans to monitor the progress of this initiative through performance measures. In SFY2023, the Department awarded 51 projects that included elements for pedestrians or bicyclists, such as sidewalks, ramps, pedestrian signals, push-buttons, signs, and pedestrian/bicycle trails. The total dollars expended for these items was \$34.3 million in SFY2023. These costs are only for the specific item costs noted above and not the total project costs.

The Department has formed a new Active Transportation Unit that is dedicated to improving multimodal and safe transportation for the State's vulnerable users. The primary responsibility of this unit is to lead the development and execution of the new Active Transportation Plan, a statewide document that outlines strategies for all non-motorized users of Connecticut's transportation system. This encompasses on-road facilities, sidewalks, linear trails and paths, and micro mobility connections. The unit will actively engage with bicycle and pedestrian groups, active transportation stakeholders, and the public to advance the strategies and implement recommendations outlined in the plan.

The Department also offers Connecticut's towns and cities assistance to conduct a Road Safety Audit (RSA) at critical bike and pedestrian corridors and intersections. An RSA is a process that identifies safety issues and countermeasures to help improve safety and reduce vehicle crashes.

An RSA is an innovative tool that documents factors that can help or hinder safe bicycle and pedestrian travel.

In 2023 the Department re-established the Safe Routes to School Program (SRTS). A dedicated SRTS Coordinator was hired, and Department is utilizing approximately \$200,000 annually in federal funds to provide non-infrastructure support for activities such as Education, Outreach and School Walk Audits for communities and school districts around Connecticut.

Multiple programs run by the Department provide funding to local governments to build projects on state and municipally owned roadways. While the overall intent of these programs is not strictly focused on Complete Streets, many of these projects include elements of Complete Streets and contribute to improving safety for active transportation modes. Some of these programs are described below.

The Federal Transportation Alternatives (TA) Set-Aside Program funds a variety of smaller-scale transportation projects such as pedestrian and bicycle facilities, recreational trails, safe routes to school, and community improvement projects. Funding for this program has increased through IIJA, with Connecticut receiving \$14.9 million in FFY2023, and there is an added provision requiring that a competitive process be used for project prioritization and selection. Projects should be in high-need areas, such as low-income, transit-dependent, rural, or in the vicinity of schools or other locations. The Department is continuing its coordination with the COGs to fully program projects with this increase in funding.

The Community Connectivity Grant Program provides construction funding for local initiatives that will improve safety and accessibility for bicyclists and pedestrians in and around community centers, encouraging more people to use these healthy and environmentally sustainable modes of transportation. This program spent approximately \$8 million in SFY2023 to help pay for various projects and initiatives that enhance safety, mobility, and access for bicyclists, pedestrians, and persons with disabilities. A fifth round of funding equaling \$11.7 million was awarded in November 2023. Including this round, 120 awards totaling more than \$50 million has been invested in Connecticut's towns and cities under the program during the past five years.

LOTICIP is a program that provides state funds to **urbanized** area municipal governments in lieu of Federal funds otherwise available through federal transportation legislation. LOTICIP currently provides over \$70 million of state funds for projects such as roadway improvements, bicycle and pedestrian enhancements, drainage improvements, stand-alone sidewalk projects, pavement structure improvements, traffic signal projects, intersections improvements, bridge rehabilitation and reconstruction projects.

TRIP is a new program that provides state funds to municipal governments for infrastructure improvements in **rural** areas of Connecticut. Eligible activities include transportation capital projects such as construction, modernization, or major repair of infrastructure. This program provides \$10 million of state funds annually and approximately 60-70% of these funds will contribute to Complete Streets and active transportation projects.

Also, in conjunction with the Department's maintenance resurfacing program, Americans with Disabilities Act compliant curb ramps and sidewalks are installed as part of the roadway reconstruction to ensure pedestrian access, and roadway travel lanes were narrowed where possible to provide wider shoulders for bicycles. Approximately \$3.5 million was spent on this effort in SFY2023.

Finally, the Department was chosen to participate in the 2022-2023 Smart Growth America Complete Streets Leadership Academies. This initiative unites the state department of transportation, state health partners, and three localities within the state to gain insights into Complete Streets implementation, formulate strategies for coordinating across jurisdictions, and plan and execute a temporary “quick-build” street safety demonstration project on a state-owned road. Connecticut was among the three states selected and the participating localities included the City of Middletown, the City of Bristol, and the City of Waterbury. Each of these localities received a \$10,000 grant from Smart Growth America to acquire materials for the construction of the “quick-build” demonstration projects.

Americans with Disabilities Act Engineering Coordination

The Department has established an Engineering Coordination Unit (ECU) to oversee the implementation of the Department's federally required Americans with Disabilities Act (ADA) Transition Plan, assess technical infeasibility of ADA implementation, and conduct public outreach. The ECU addresses ADA related complaints in the State Right-Of-Way, assists designers in bringing facilities into ADA compliance, and documents locations where future scopes of work need to incorporate ADA compliant improvements. The ECU maintains the Department's curb ramp inventory and compliance database. Coordination across other State agencies, the Department bureaus, FHWA, and COGs is underway. The ECU is conducting a statewide compliance assessment of the 169 municipalities to gauge what efforts are being made at the local level, and to identify what support or training may be needed. Working with the CT Training and Technical Assistance Center (T2 Center) at UConn and other organizations, the ECU assists with training and outreach on requirements related to ADA.

Asset Management

The Department continues to mature in its implementation of Transportation Asset Management (TAM) principles and practices to address the condition and needs of the State's transportation infrastructure. The Department complies with all federal TAM requirements.

The Highway Transportation Asset Management Plan (TAMP) goes beyond the federal mandates and demonstrates the Department's strong commitment toward achieving a SOGR for our transportation system. An asset management strategy for both National Highway System (NHS) bridges and pavements is included in the Highway TAMP in accordance with federal requirements. In addition, the Highway TAMP covers all Department maintained bridges, pavements, traffic signals, signs, sign supports, pavement markings, highway buildings, illumination, retaining walls, drainage culverts, and intelligent transportation systems (Advanced Traffic Management System – ATMS). The Highway TAMP contains information on asset inventory and condition, asset data management, performance objectives, life cycle planning, risk management, financial planning, investment strategies, and process improvements. The FHWA-certified 2022 TAMP is compliant

with IJJA to consider extreme weather and resilience within the TAMP lifecycle cost and risk management analysis. The Highway TAMP guides the Department to deliver better highway asset performance, while also managing risks. In 2022, the Department updated both the Highway and Transit TAMPs.

FTA requirements include development and continued implementation of the Public Transportation Transit TAMP, as well as the Department sponsoring the development of a group TAM Plan for the State's Transit Districts and other small transit providers. Although group plans are not required to have the same level of detail, the group plan was developed in parallel to the Department's Transit TAMP, including initiatives to facilitate collaboration between the Department and Transit Districts for TAM implementation activities.

The implementation of Asset Management for both highway and transit assets builds on the Department's past management practices. It is intended to provide a more detailed and objective framework that is guiding investment decisions and development of the Capital Program. Both asset management plans and underlying management systems provide an objective, data driven methodology to assess current and future needs required to maintain the State's transportation assets.

Asset Fact Sheets are developed and updated annually to provide current information on each of the 17 assets covered in the Highway and Transit TAMPs and are available on the Department website. The Asset Fact Sheets provide key information including updated inventory and condition data, and performance projections. The asset management systems utilize condition assessments and deterioration models to predict the effects of age, environmental conditions, and investment upon assets. In so doing, long-term and cost-efficient treatment strategies can be devised to effectively maintain the overall transportation system.

While maintaining our current assets is a priority, the Department is analyzing the state's transportation system to identify strategic investment opportunities to improve safety, reduce congestion, address inequities, enhance our bus and rail systems and service, and provide economic benefits to local regions – and the State as a whole.

How are Projects Selected for the Capital Plan?

With limited budgets and a multitude of infrastructure demands, thoughtful prioritization is essential to build and maintain transportation systems that support economic growth, enhance quality of life, and uphold safety standards, ultimately creating a more efficient and sustainable transportation network. Prioritizing transportation projects is a critical process that involves careful evaluation, planning, and decision-making to allocate limited resources effectively. In the realm of infrastructure and mobility, prioritization ensures that the most pressing needs are addressed, and available funding is optimally utilized. The five steps that CTDOT uses to prioritize projects are outlined below. Projects in the Capital Plan are classified into one of two statuses:

- A. **Programmed:** The project is actively being advanced through the design process toward construction or delivery. These include projects necessary to maintain an acceptable state of good repair.
- B. **Overprogrammed:** The project will be actively developed, but there is no identified or planned construction funding source.

Capital Plan Five-Step Project Selection Methodology

1. **Identify potential projects and define the purpose and need:** Potential projects and initiatives are identified from many sources:
 - Statewide or regional planning documents
 - Corridor/feasibility studies
 - Federal regulations and mandates
 - Cogs, municipalities, & public input
 - Legislator requests
 - Data-driven analysis
 - High crash rates
 - Congestion
 - State of good repair
 - Sub-standard geometrics

The purpose can be defined as the reason to conduct the project and the need can be defined as the identification of deficiencies of the project supported by facts or data. e.g.: The purpose of the project is to reduce congestion and improve mobility at the intersection of Town Road and Main Street. This project is needed because the capacity of the intersection of Town Road and Main Street is inadequate to meet current and future traffic volumes, resulting in congestion, reduced mobility and poor Level of Service.

2. Categorization of project by scale and scope

- Is there a clearly defined solution?

Projects that provide condition upgrade (SOGR), improve general safety conditions, or address federal mandates typically fall into this category (bridge rehabilitation, traffic signal upgrade, railroad safety, maintenance of transit assets).

- Does the project provide an enhancement or improvement?

Projects that enhance the transportation network, add or significantly modify a facility, where the solutions are less straight forward (interchange reconfigurations, rail line enhancement and expansion, improvement to multimodal transportation).

- Is it a major program or initiative?

Significant initiatives that span all modes of transportation. Solutions are multi-faceted, challenging, costly, and likely take substantial time to implement (vision and goals are developed for the overarching program and individual projects are identified with a succinct purpose & need for each).

3. Apply metrics: The overarching goals of the Department define the metrics by which each project is measured, but quantification of those metrics differs by project type and mode.

- Primary metrics:
 - Increase mobility for all users
 - Improve safety across all modes
 - Maintain or enhance condition of assets
- Other factors and considerations:
 - Freight movement around the state

- Economic development
- Community input and involvement

4. Solicit feedback

- The Department regularly engages with COGs through monthly coordination meetings, STIP/TIP requests, & coordination and planning meetings.
- Development of Capital Plan includes coordination.
 - Information is prepared for inclusion in the Draft Capital Plan
 - Draft Capital Plan Project List is distributed to COGs for comment
 - Department addresses/replies to comments
 - Final version of Capital Plan is prepared
 - Capital Plan is published
 - Public provides feedback and incorporated into future versions

5. Program projects: Assign a specific funding source to the estimated costs of a project, drawing down from the anticipated available funding in the year of expenditure. Each funding source or “bucket” has different eligibility requirements:

- Mode
- Scope of work
- Geographic area within the state (MPO)
- Urban vs rural characterization
- Cost of project vs available funding in program

Major Capital Projects and Initiatives

Public Transportation Initiatives

CTDOT is spearheading a range of innovative initiatives aimed at making it easier and more convenient for people to use public transportation across the state. Some of the most notable public transportation initiatives currently being undertaken by the agency include:

- **Transit is a Trip Marketing Campaign:** Aims to bring back customers to public transportation in the wake of pandemic ridership losses. The creative assets were designed to show that using transit can be an enjoyable experience and is a comfortable, relaxing way to travel in Connecticut. This is an ongoing multi-media campaign, including broadcast and streaming television spots, digital display banners, radio and streaming audio, social media ads, bus exterior advertising and highway billboards.
- **CX Action Plan:** Outlines programs, policies, and investments to improve bus and rail services for all of Connecticut. The Action Plan is the culmination of a yearlong engagement effort with transit customers, community stakeholders, service providers, and transit employees. The effort received a first-place award from the American Public Transportation Association (APTA) for the best comprehensive marketing and communications campaign highlighting transit needs.
- **Mystery Rider Program:** The Mystery Rider Program was established for CTtransit branded buses so that staff from the Office of Transit and Ridesharing can experience what our customers experience. While riding, Mystery Riders respond to questions about fare payment, seat availability, and bus stop cleanliness, among others. The goals of the program are to ensure quality service and customer experience. Results from the Mystery Rider surveys aid in identifying and resolving potential customer complaints and in improving performance throughout the CTtransit system.
- **Transit Royale One-year Free Subscription:** Transit is a free mobile app that helps public transportation users plan and track their bus and train trips using schedule information and real-time vehicle location, where available. CTDOT offered members of the public a free one-year upgrade to a premium version (Royale) of the app. CTDOT

continues to work to integrate bus and rail services into the app and just recently integrated UConn's HuskyGo shuttles into the app.

- **Unified Fare Project:** This project will identify ways to make transit fares in Connecticut simpler and more equitable, as well as to increase transit ridership. The goal is to have a coordinated statewide bus fare policy and structure to create a seamless and unified system. Coordination will be focused on improving transit travel throughout the state, making travel between bus service areas and providers seamless. This project will include all CTtransit Divisions as well as all Transit Districts. Rail fares and how rail customers interact with bus services statewide will be evaluated during this project.
- **Service and Fare Equity (SAFE) Analysis:** This analysis is being used to identify any disparate impacts and disproportionate burdens on minority and low-income riders that may be caused by proposed service and fare changes. SAFE also includes essential outreach, public hearings and a comment period to get public feedback on the proposed changes.
- **ParkConneCT Summer Program:** This program was launched for a third year through a partnership between CTDOT and the CT Department of Energy and Environmental Protection, identifying and enhancing transit connections to Connecticut State parks to promote seasonal employment and recreational activity. Service was expanded to cover the Juneteenth holiday and marketing planning was expanded to collect feedback from customer satisfaction surveys and pop-up events in the parks to help identify improvements in future program years.
- **Drive Less Connecticut Climate Challenge:** This May event asked the public to drive less to reduce emissions that cause climate change. Participants qualified for gift card drawings based on the number of trips recorded on eligible modes. The event resulted in over 374,000 pounds of emissions prevented by eliminating 26,866 car trips and 432,000 vehicle miles.

Planning and Environmental Linkages Studies

For many of the State's major initiatives, the Department is conducting Planning and Environmental Linkages (PEL) studies. PEL is a process approach that considers environmental, community and economic goals in the very early planning phase of a transportation program. It is generally conducted before any project construction phasing is identified and before specific problems and solutions are known. The PEL process is used nationally as a tool for pre-NEPA (National Environmental Policy Act) activities.

PEL studies are intended to recommend class(es) of action under NEPA (EA, EIS, etc.) and prioritize or phase identified projects with respect to their importance and anticipated available funding. It is that component, the prioritization and phasing of projects, that is intended to allow the Department to strategically implement targeted investments to improve safety, mobility, and congestion around the State that will serve as a catalyst for future economic growth along our transportation corridors. The PEL studies currently underway include:

- Greater Hartford Mobility Study (final report published December 18, 2023),
- I-84 in Danbury (estimated completion in 2024),
- I-84 / Route 8 New Mix Interchange in Waterbury (estimated completion in 2024),
- I-95 from Branford to Rhode Island State Line (estimated completion in 2024),
- I-95 Exits 7-9 including Bridge No. 00032 in Stamford (estimated completion in 2025),
- I-95 from New York State Line to Exit 7 in Greenwich (estimated completion in 2025),
- I-95 Exits 19-27A in Fairfield and Bridgeport (estimated completion in 2026).

Greater Hartford Mobility Study

The vision of the Greater Hartford Mobility Study is to improve mobility by planning an integrated, resilient, multimodal transportation system in the Greater Hartford Region, thereby enhancing the quality of life, economic vitality, and opportunity in the region. This is the first PEL study to be completed by CTDOT. The community-driven study resulted in four major program long-term components:

1. **CityLink West:** Addresses safety, reduces the number of ramps in the Study Core, and improves connectivity between neighborhoods and green spaces/parks. Lowering the highway will link neighborhoods currently severed by the highway and create additional developable land while improving rail and bus service that share the corridor.
2. **CityLink East:** Proposes to mitigate highway congestion in downtown Hartford by relocating the I-84/I-91 interchange and creating a new bridge connecting I-84 and Route 2 in East Hartford. This redesign will separate local and highway traffic and reclaim the historic Bulkeley Bridge for local traffic, including opportunities for dedicated high-capacity transit facilities, separated bike lanes, and improve sidewalks.
3. **River Gateway:** Connects Hartford's central business district with the Connecticut River. It allows for equitable access to green space, will mitigate some of the visual and noise impacts of I-91, and create an urban boulevard to strengthen local travel options. In addition, a new bridge will connect the Sheldon/Charter Oak neighborhood with a new, river-oriented, mid-rise neighborhood in East Hartford. The bridge will prioritize bus, bicycle, and pedestrian travel while accommodating automobile traffic.
4. **Founders Gateway:** Proposes to consolidate the I-84/Route 2 interchange ramps in East Hartford. It will open significant acres of land to potential development and provide opportunities to strengthen the local street grid.

In addition to the four primary long-term components, the study resulted in approximately 30 early action, 20 mid-term, and 10 additional long-term recommendations. These include capital projects, policy recommendations, and operations improvements. Several early action projects will be implemented within the next five years for the traveling public to reap the benefits of improved mobility and safety.

The other recommendations will be evaluated, as required, through the NEPA and Connecticut Environmental Policy Act (CEPA) processes for implementation. Following this environmental documentation, other steps will include financing, design, and construction.

Sample of Projects in the Capital Plan

Listed below are a sample of projects that are included in the 5-year Capital Plan:

Projects in Design

- Roadway Projects:
 - Route 9 in Middletown. Series of projects to support removing traffic signals from the expressway.
 - Route 85 in Salem and Montville. Corridor improvements to provide consistent shoulder widths, improve sightlines, left-turn lanes, and replace deficient bridges.
 - Route 82 in Norwich. Safety improvement project to reduce the number and severity of crashes.
- Bridge Projects:
 - I-95 P.T. Barnum Bridge Rehabilitation over the Pequonnock River in Bridgeport.
 - I-291 Bissell Bridge Rehabilitation over the Connecticut River.
 - Route 2A Mohegan-Pequot Bridge Rehabilitation over the Thames River and Railroads in Montville and Preston.
 - Route 130 (Stratford Avenue) Lift Bridge Rehabilitation over the Pequonnock River in Bridgeport.
 - US 1 Mystic River Bridge Rehabilitation over the Mystic River in Groton.
- Facilities Projects
 - Central Storage Facility Roof Replacement in Rocky Hill.
 - Renovation of Bridge and Electrical Facility in Hartford.
 - New Maintenance Facility in Canterbury.
- Public Transportation Projects
 - Hartford Line – Double Tracking from West Hartford to Enfield.
 - Hartford Line – New Enfield Station.
 - MOVE New Haven Bus Rapid Transit System.
 - New Haven Union Station Campus Improvements.
 - New Haven Rail Yard Improvements.
 - Naugatuck Station Relocation.
 - Waterbury Line Platform Replacement Program.

Projects in Construction

- Roadway Projects
 - I-91/I-691/Route 15 Interchange Improvements in Meriden. Three separate projects to reduce congestion, improve operations, and address safety concerns. One project will be delivered using the Design-Build method.
 - Route 2 Resurfacing, Bridge Rehabilitation, and Safety Improvements in East Hartford.
 - Route 15 (Merritt Parkway) Corridor Improvements in Norwalk and Westport.
 - I-95 Resurfacing, Bridge Rehabilitation, and Median Reconstruction in Norwalk and Westport.
 - I-95 Interchange Improvements at Exit 74 in East Lyme.
- Bridge Projects
 - I-91 Dexter Coffin Bridge Rehabilitation over the Connecticut River in Windsor and East Windsor.
 - Route 82 Swing Bridge Rehabilitation over the Connecticut River in Haddam and East Haddam.
 - I-95 Northbound Gold Star Memorial Bridge Rehabilitation over the Thames River in Groton and New London.
 - I-84 / Route 8 Interchange Rehabilitation in Waterbury.
- Facilities Projects
 - New Repair and Maintenance Facility in Putnam.
 - New Maintenance Facility in New Milford.
 - New Bridge, Signs and Markings Facility in Torrington.
 - New Maintenance, Signs and Markings Facility in East Hartford.
 - Electric Vehicle Charging Stations at the Maintenance Facility in Hartford.
 - Electric Vehicle Charging Stations at the Districts 2, 3 and 4 Main Offices.
- Public Transportation Projects
 - Stamford Station Elevators and Escalators Improvements in Stamford.
 - Darien Railroad Station Improvements in Darien.
 - WALK Moveable Bridge Replacement in Norwalk.

Recently Completed Construction Projects

- Roadway Projects
 - Relocation of I-91 Exit 29 at Charter Oak Bridge in East Hartford, Hartford, and Wethersfield.
 - I-84 Safety and Operational Improvements in West Hartford.
- Bridge Projects
 - I-84 Rochambeau Bridge Rehabilitation over the Housatonic River in Newtown and Southbury.
- Facilities Projects
 - Construction of a New Repair Facility in Brookfield.
- Public Transportation Projects
 - CTfastrak Commuter Parking Lot in Farmington.
 - Clinton Railroad Station North Platform Improvements and Pedestrian Bridge in Clinton.
 - Merritt 7 Station in Norwalk.
 - Stamford Parking Garage in Stamford.

Alternative Contracting

The Department uses alternative contracting techniques to improve project delivery and expand the capacity of the Capital Program. These techniques include Construction-Manager-at-Risk (CMAR), Construction Manager/General Contractor (CM/GC), and Design-Build (DB). Together, these techniques help to maximize contractor innovation and expedite the construction schedule of projects. Projects are screened through a project delivery decision matrix to guide project managers in selecting the procurement methodology. To date, CTDOT has completed one CMAR project and two DB projects. Over the past year, the agency was engaged in one CMAR project, one CM/GC project, and ten DB projects. In total, these twelve active projects represent \$2.2 billion in construction costs.

List of Active Alternative Contracting Projects

Project Title	Location	Status
Construction Manager at Risk		
New District 1 Headquarters and Materials Testing Lab	Rocky Hill	Design
Construction Manager/General Contractor		
WALK Moveable Bridge Replacement	Norwalk	Construction
Design-Build		
Replacement of Bridges and Ramps on Route 15 and 99	Wethersfield	Advertising Document Development
Rehabilitation of Four Bridges along Route 72	New Britain & Plainville	Procurement
I-95 Auxiliary Lane & Resurfacing, Bridge Rehabilitation, and Safety Improvements	Stamford	Design
Dutch Point Viaduct Rehabilitation	Hartford	Design
Replacement of I-95 Bridges over Route 745 and Metro-North Railroad	West Haven	Design
Route 8 Resurfacing, Bridge Rehabilitation, and Safety Improvements	Ansonia, Derby, Seymour & Shelton	Design
I-91/I-691/Route 15 Interchange Improvements (I-691 EB to I-91 NB)	Meriden & Middletown	Construction
I-691 Resurfacing, Bridge Rehabilitation, and Safety Improvements	Cheshire, Meriden, Middlefield & Southington	Substantially Complete (November 2023)
Automated Work Zone Speed Control Pilot	Statewide	Substantially Complete (December 2023)
Stamford Parking Garage	Stamford	Substantially Complete (December 2023)

Capital Construction Program

State Advertised Projects

The Department's Capital Construction Program is a subset of the overall capital funding program. The Capital Construction Program is multimodal, with highway and bridge construction constituting most of the program. The Capital Construction Program does not include equipment procurement, such as rail cars or replacement buses. It does, however, include projects such as the catenary replacement program, track speed improvements, and rail station construction.

Connecticut's infrastructure needs, like most states throughout the nation, exceed the financial resources to address them all. Therefore, having a clearly defined project purpose and need and committing the State's financial resources to the most critical transportation deficiencies is more important than ever. One of the main priorities of the Capital Construction Program is preservation of our existing multimodal assets and maintaining them through a systematic Asset Management Program.

For planning purposes, roughly twenty five percent (25%) of the Capital Construction Program funding is utilized for preliminary engineering and the purchase of property rights for projects. The remainder of the Capital Construction Program funding is dedicated to the construction phase. The construction phase includes:

- The amount of the awarded construction contract,
- *Plus* a contingency budget for extra work and change orders,
- *Plus* the Department's costs to manage and oversee the work (known as incidentals),
- *Plus* any utility relocation costs.

A summary of the project delivery statistics for the previous two years, in addition to the estimated figures for FFY2024, are shown in the table below.

	FFY2022	FFY2023	FFY2024*
Number of Design/Bid/Build Projects	61	68	75
Total Construction Cost of Design/Bid/Build Projects	\$875	\$947	\$925

Notes:

All dollar amounts are in millions.

Values only represent Department advertised contracts.

*FFY2024 figures are estimated.

From the table above, it's important to note that the number and dollar amount of projects fluctuates on an annual basis. In some years there are many smaller projects being advertised; in other years, a large project may be delivered that will be paid for over several years.

Municipal (Local) Projects and Grants

The Capital Plan includes projects managed and financed by municipalities, with financial contributions from the Department. It also incorporates grants provided by the Department to municipalities. The list of grant projects to municipalities is not included in the attached project listing.

Some of the projects advertised by municipalities include:

- State Local Bridges,
- Off-system Bridges,
- Surface Transportation Program - Urban (STP-U),
- Congestion Mitigation and Air Quality (CMAQ),
- Transportation Alternatives Program, and
- Earmarks.

Grants to municipalities include:

- LOTCIP,
- TRIP, and
- Community Connectivity Grant Program

In FFY2024, the Department anticipates funding 102 local projects at a value of \$189.8 million.

Projects Scheduled for Advertising

The attached 5-year Capital Plan project listing contains information on the specific projects and programs contemplated for FFY2024 – FFY2028 as well as anticipated funding for each. This project listing contains projects that are expected to be financed with available funding. The upcoming projects to be advertised are listed in two categories on the Department’s website and is updated monthly. The categories are:

1. State advertised and administered contracts for which the list covers a one-year timeframe,
2. Some municipally advertised and administered contracts for which the list covers a six-month timeframe.

The lists of projects scheduled for advertising can be found at the following link:

<https://portal.ct.gov/DOT/Department-Bureaus/Finance/Capital-Services---Programming-and-Scheduling>

Summary

The Department’s total Capital Plan includes locally advertised projects and funding programs, preservation projects utilizing contractors selected through Connecticut Department of Administrative Services (CTDAS), and projects directly performed by Amtrak and Metro-North on the Department’s behalf, as well as projects bid the Contracting Unit. In FFY2023, the Department advanced 287 projects at a value of \$1.34 billion. In FFY2024, the Department anticipates advanced 322 projects with a value of \$1.31 billion. See Figure C and Figure D for more detail.

In addition, the Department is responsible for developing and administering contracts for rolling stock for transit operations and fleet and equipment purchases to support operations.

The Department's Capital Program has been expanding over the years, consistent with the increased transportation investment levels. For example, the value of advertised design/bid/build projects has increased from \$608 million in 2020 to \$947 million in 2023. While the State has been benefiting from these increased investment levels, the full benefit of this increase has been offset by the increased cost (inflation) of capital projects and the continuing deterioration of our existing assets over time. FHWA's official measure of highway and bridge construction costs, the National Highway Construction Cost Index, indicated that these costs increased 25% in the latest one-year timeframe (index of 2.86 in quarter 1 of 2023 as compared to 2.28 in quarter 1 of 2022).

Conclusion

The Department's Capital Program continues to be focused on an asset management approach, while also planning for and designing affordable system enhancements that can fit within our fiscally constrained program. Emphasis areas include improving pedestrian and roadway user safety, upgrading the condition and technology of the state's traffic signal system, developing projects and programs that directly reduce our carbon dioxide and other air emissions, targeted improvements to our highway system to reduce congestion and improve mobility, and implementing corridor improvements along the New Haven Line to reduce travel times.

Large transportation infrastructure improvements take many years to proceed from planning through design and finally to construction; therefore, a consistent and long-term vision is necessary to achieve desired results.

The federal component of the transportation Capital Program is expanding with passage of the IIJA and provides a higher base funding level for future transportation reauthorizations. The state capital funding stream from the STF is stable and the State continues to submit competitive grant applications to bring more federal monies back to Connecticut.

The Department's goal is to optimize the capital funding for all its transportation modes and to continuously improve its ability to deliver maximum infrastructure improvements for each dollar expended. The Department achieves this in the following ways:

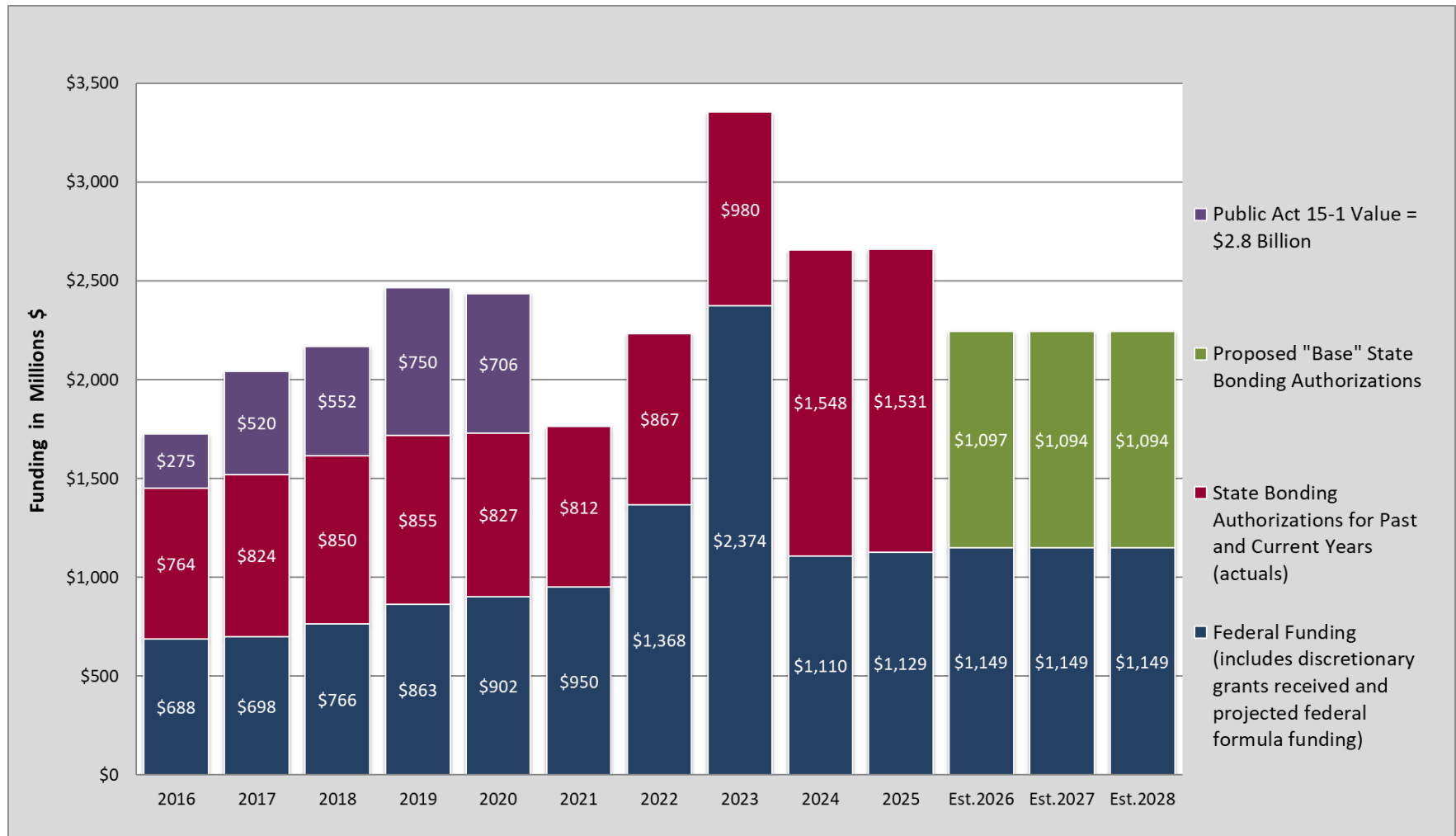
- Obtaining and using all the federal funds allocated to the state,
- Receiving tens of millions of dollars of funds other entities could not obligate on schedule,
- Working with the Governor's Office, the Legislature and other state and federal agencies to identify and/or create additional sources of funding and to be successful in competitive discretionary grant programs,
- Using advance construction on major projects while managing financial risk and deploying a mixture of projects to meet the many needs of the state,

- Managing the Capital Program by allocating its resources in a manner that optimizes output. At the same time creating a variety of jobs and economic benefits: engineering, legal, public safety, materials production, and sale,
- Improving project delivery to increase the Department's capacity to provide the State with higher quality transportation improvements,
- Addressing the transportation needs of the State in an equitable manner while accounting for resilience and climate change,
- Enhancing transportation investment strategies through strategic planning and using an asset management approach to maintain our transportation infrastructure, and
- Using more durable materials to reduce future maintenance and rehabilitation costs,

The Department will continue to balance the priorities for the Capital Program using a data-driven decision-making framework to assess a variety of criteria including asset management, safety, sustainability, and economic vitality.

Although the outlook is good, the projected costs of some of the planned major highway and rail transportation improvements (I-84 Waterbury, I-84 and I-91 Hartford, I-95 East and West, I-84 Danbury, and Moveable Bridges on the New Haven Line) will likely exceed the projected fiscal resources of the current Capital Program. These large investments are critical to the State's economic vitality; therefore, the State must plan carefully in order to provide the necessary financial support for our transportation infrastructure now, and into the future.

Figure A – Capital Program Funding FFY2016 – FFY2028



Note: Federal Funding in 2023 includes \$1.168 billion of NEC funds awarded by FRA

Figure B – CTDOT Capital Expenditures SFY2019 - SFY2023

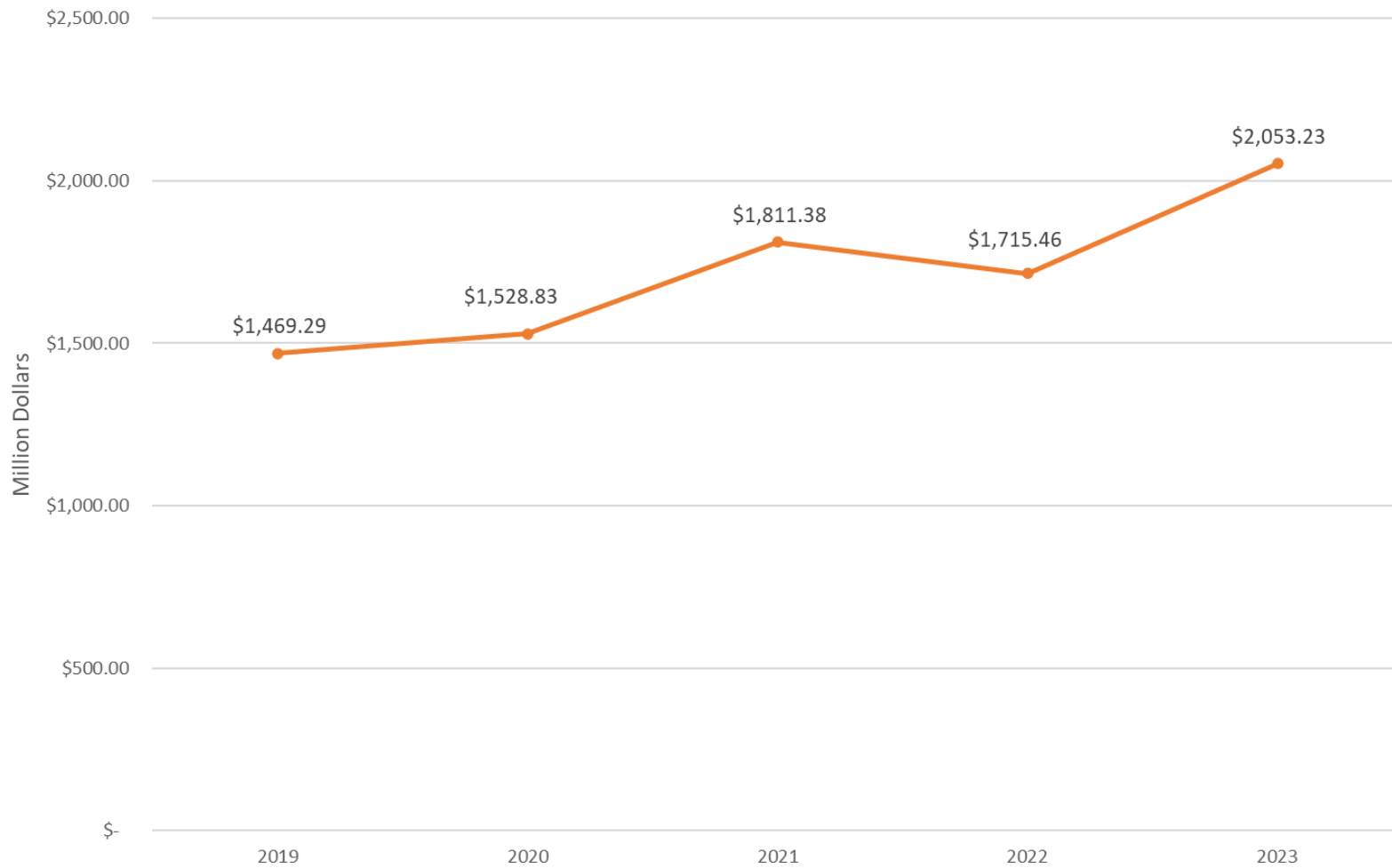
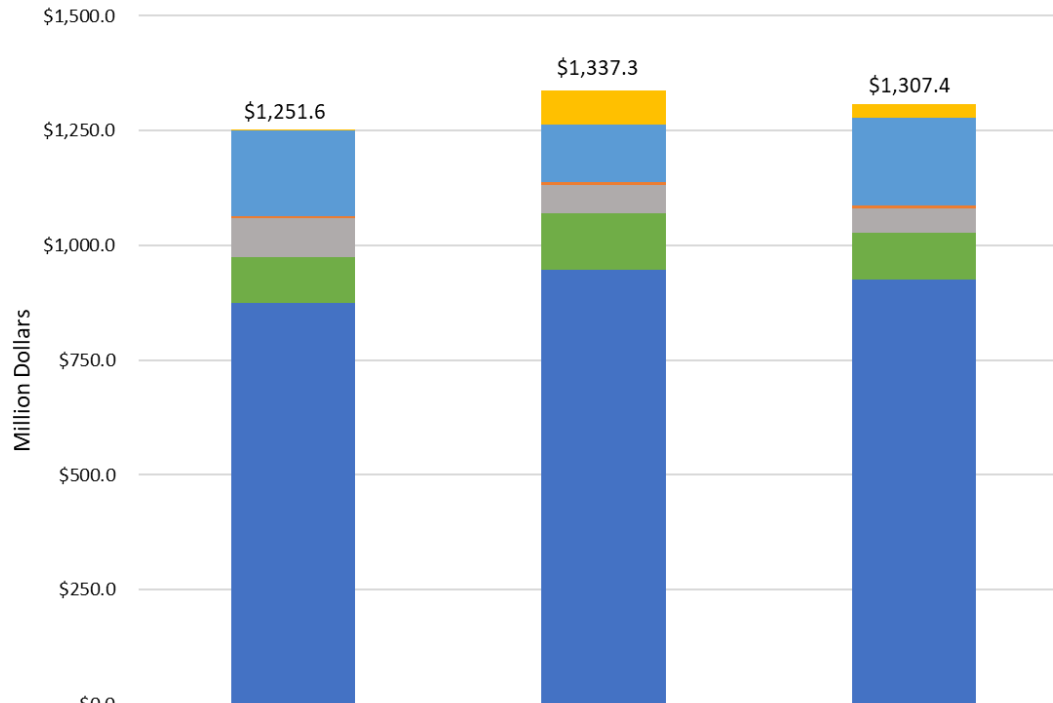


Figure C – CTDOT Committed Construction Dollars FFY2022 – FFY2024 (est.)



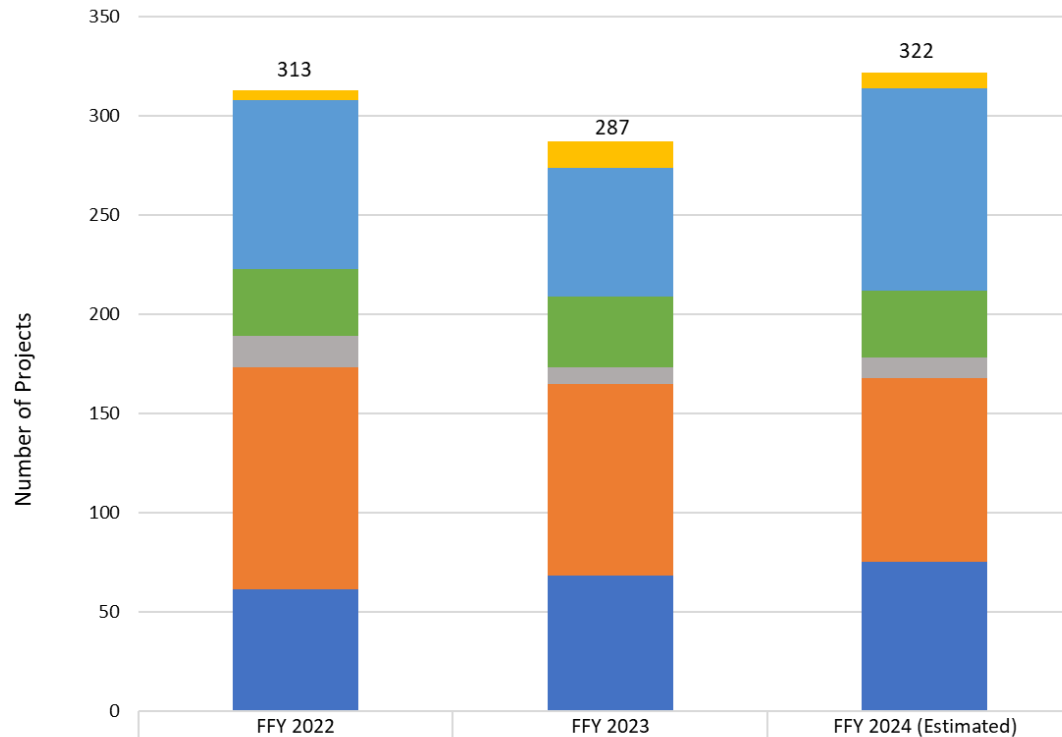
	FFY 2022	FFY 2023	FFY 2024 (Estimated)
Emergency Declarations	\$1.1	\$73.4	\$30.0
Municipal Projects & Grants	\$186.5	\$126.2	\$189.8
Environmental Compliance	\$4.4	\$5.6	\$6.0
Public Transportation	\$85.3	\$62.4	\$54.1
Maintenance	\$98.8	\$123.1	\$102.5
State Advertised Projects: Design-Bid-Build	\$875.5	\$946.6	\$925.0

Project Category Definitions:

- **Emergency Declarations:** Contracts issued to respond to unforeseen disasters
- **Municipal (Local) Projects and Grants:** Projects advertised by municipalities such as State Local Bridges, Off-system Bridges, Surface Transportation Program - Urban (STP-U), Congestion Mitigation and Air Quality (CMAQ), Transportation Alternatives Program (TAP), Earmarks, etc. Grants to municipalities include Local Transportation Capital Improvement Program (LOTICIP), Transportation Rural Improvement Program (TRIP), Community Connectivity Grant Program (CCGP)
- **Environmental Compliance:** State pier remediation, Salt shed construction, and Contracts issued to address site remediation
- **Public Transportation:** Projects administered by CT Transit Districts
- **Maintenance:** Bridge Repair Unit (BRU) and Vendor-in-Place (VIP) Paving
- **State Advertised Projects – Design-Bid-Build:** DOT advertised projects following the traditional Design-Bid-Build process

Note: The figure above does not include Alternative Contracting or Town Aid Road projects

Figure D – CTDOT Number of Construction Projects FFY2022 – FFY2024 (est.)



Project Category Definitions:

- **Emergency Declarations:** Contracts issued to respond to unforeseen disasters
- **Municipal (Local) Projects and Grants:** Projects advertised by municipalities such as State Local Bridges, Off-system Bridges, Surface Transportation Program - Urban (STP-U), Congestion Mitigation and Air Quality (CMAQ), Transportation Alternatives Program (TAP), Earmarks, etc. Grants to municipalities include Local Transportation Capital Improvement Program (LOTICIP), Transportation Rural Improvement Program (TRIP), Community Connectivity Grant Program (CCGP)
- **Environmental Compliance:** State pier remediation, Salt shed construction, and Contracts issued to address site remediation
- **Public Transportation:** Projects administered by CT Transit Districts
- **Maintenance:** Bridge Repair Unit (BRU) and Vendor-in-Place (VIP) Paving
- **State Adversed Projects – Design-Bid-Build:** DOT advertised projects following the traditional Design-Bid-Build process

Note: The figure above does not include Alternative Contracting or Town Aid Road projects