



## Transportation and Capital Infrastructure

The Department of Transportation and Capital Infrastructure (DTCI) manages capital facility planning, assists with the preparation of the capital budget, and the planning, design, and construction of capital projects for the County through the Capital Improvement Program (CIP). DTIC also is responsible for the County's transportation system, which includes transit and commuter services, long range transportation planning, and traffic engineering. Staff in DTIC serve as technical advisors to the Board on matters relating to transportation, facility development, regional funding, land acquisition, project scheduling, and cost estimating.

### Transportation and Capital Infrastructure's Programs

#### Capital Design and Construction

Collaborates with the Department of Finance and Budget to develop the Capital Improvement program budget, schedules, and cost estimates. Oversees the financial management of capital project accounts with multiple funding sources and prepares and monitors the department's operating budget. Manages the planning, design and construction of capital transportation project, facilities and public infrastructure while ensuring compliance with applicable federal, state, and local codes, standards, and specifications; administers land acquisition for public infrastructure projects and provides quality control and delivery of projects on schedule and within budget.

#### Transportation Services

Provides a complement of administrative oversight and operations for County provided public transit services. Services include, but may not be limited to, local fixed route neighborhood level transit service, paratransit service, Metrorail connection and long-haul commuter bus service to the greater Washington DC area. Represents the County at regional organizations with an interest in transit services and funding, along with serving as the county liaison to the Washington Metropolitan Area Transit Authority for mass transit services. Manage grant funded program for transit operations and capital investment.

#### Transportation Planning and Traffic Engineering

Develops, manages revisions, and ensures compliance with the Countywide Transportation Plan, acting as a referral agency in the Community Development process. Performs traffic and transportation modeling, safety and operational studies, and special transportation related studies and evaluations. Performs traffic and highway engineering services to address community traffic and parking complaints. Manages the Residential Permit Parking Program. Coordinates transportation planning and funding with regional partners and funding organizations. Monitors and develops grant funding applications for transportation projects and programs. Supports the Department of Finance and Budget on matters related to capital facility standards and capital intensity factors.



## Transportation and Capital Infrastructure

### Budget Analysis

#### Department Financial and FTE Summary<sup>1</sup>

	FY 2019 Actual	FY 2020 Actual	FY 2021 Adopted	FY 2022 Proposed	FY 2023 Projected
<b>Expenditures</b>					
Personnel	\$7,612,508	\$3,878,669	\$4,728,466	\$4,801,616	\$4,945,664
Operating and Maintenance	20,748,866	19,523,801	28,159,820	26,149,346	26,410,839
Capital Outlay	0	58,076	0	0	0
Other Uses of Funds	220,975	210,458	0	0	0
<b>Total – Expenditures</b>	<b>\$28,582,349</b>	<b>\$23,671,004</b>	<b>\$32,888,286</b>	<b>\$30,950,962</b>	<b>\$31,356,504</b>
<b>Revenues</b>					
Permits, Fees, and Licenses	\$255,477	\$196,709	\$220,116	\$255,280	\$255,280
Charges for Services	9,516,510	7,807,044	10,475,241	5,492,795	8,760,647
Miscellaneous Revenue	1,012,507	(152,084)	510,000	632,037	632,037
Recovered Costs	463,703	477,447	685,559	549,598	549,598
Intergovernmental – Commonwealth	3,669,582	4,248,736	3,555,783	3,233,196	3,233,196
Intergovernmental – Federal	118,155	86,580	86,580	86,580	86,580
Other Financing Sources	5,640,355	44,000	0	3,267,852	0
<b>Total – Revenues</b>	<b>\$20,676,290</b>	<b>\$12,708,433</b>	<b>\$15,533,279</b>	<b>\$13,517,338</b>	<b>\$13,517,338</b>
<b>Local Tax Funding</b>	<b>\$7,906,059</b>	<b>\$10,962,571</b>	<b>\$17,355,007</b>	<b>\$17,433,624</b>	<b>\$17,839,166</b>
<b>FTE</b>	<b>71.00</b>	<b>33.00</b>	<b>36.00</b>	<b>36.00</b>	<b>36.00</b>

#### Department Financial and FTE Summary – Capital Projects Fund<sup>1</sup>

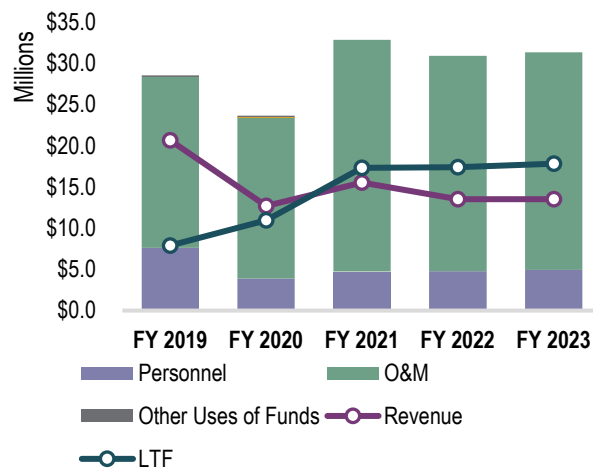
	FY 2019 Actual	FY 2020 Actual	FY 2021 Adopted	FY 2022 Proposed	FY 2023 Projected
<b>Expenditures</b>					
Personnel	\$0	\$6,328,147	\$7,017,374	\$7,023,355	\$7,234,056
<b>Total – Expenditures</b>	<b>\$0</b>	<b>\$6,328,147</b>	<b>\$7,017,374</b>	<b>\$7,023,355</b>	<b>\$7,234,056</b>
<b>Revenues</b>					
Revenue	\$0	\$6,328,147	\$7,017,374	\$7,023,355	\$7,234,056
<b>Total – Revenues</b>	<b>\$0</b>	<b>\$6,328,147</b>	<b>\$7,017,374</b>	<b>\$7,023,355</b>	<b>\$7,234,056</b>
<b>Local Tax Funding</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>FTE</b>	<b>0.00</b>	<b>48.00</b>	<b>48.00</b>	<b>51.00</b>	<b>51.00</b>

<sup>1</sup> Sums may not equal due to rounding.



## Transportation and Capital Infrastructure

### Revenue and Expenditure History



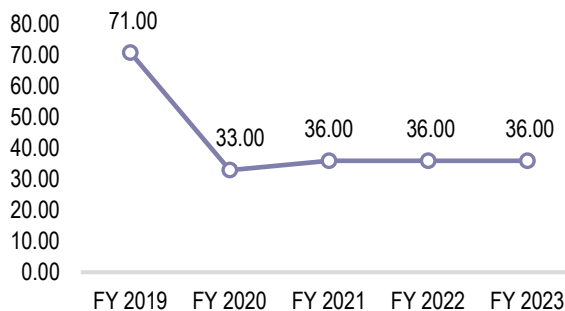
#### Revenue/Local Tax Funding

As shown, DTCI is primarily funded by local tax funding (56 percent). Revenues from transit fares are proposed to decrease in FY 2022 because of teleworking. Local gas tax is allocated in FY 2022 to offset the decreased revenue from transit fares. Program-generated revenue consists of state assistance for transit operations, fares from transit operations, and some land development revenue.

#### Expenditure

The majority of DTCI's expenditure budget is dedicated to operating and maintenance costs (84 percent). From FY 2021 to FY 2022, operating expenditures decreased because of reduced costs associated with transit bus service due to a decline in ridership. The decrease in personnel expenditures from FY 2019 to FY 2020 reflects the shift of 43.00 FTE to the Capital Projects Fund.

### Staffing/FTE History



FY 2019: 3.00 FTE civil engineers, 1.00 FTE traffic engineer, 1.00 FTE land acquisition manager, 2.00 FTE construction managers, 1.00 FTE field technician

FY 2019 Mid-Year: 1.00 FTE senior transportation engineer

FY 2020: 2.00 FTE senior transportation planners, 1.00 FTE administrative assistant, 1.00 FTE e-Builder and Technology Specialist, 1.00 FTE chief of staff (now deputy director), 2.00 FTE civil engineers, 1.00 FTE project architect, 1.00 FTE land acquisition manager, 6.00 FTE capital support staff

were transferred to the Capital Projects Fund, 37.00 FTE direct capital staff were transferred to the Capital Projects Fund.

FY 2021: 1.00 FTE procurement and accounting specialist, 1.00 FTE GIS analyst, 1.00 FTE administrative assistant.

Operating and maintenance costs make up 84 percent of DTCI's expenditures. The decrease in operating costs from FY 2021 to FY 2022 reflect reduced costs associated with transit service. Transit ridership decreased due to increased teleworking and social distancing measures related to COVID-19. Correspondingly, revenues reduced from FY 2021 to FY 2022 because of decreased transit operations fare revenue.

Recent changes to revenue in the General Fund for DTCI include a removal of the transfer into the Department from the CIP in FY 2020 due to the movement of 43 positions (43.00 FTE) to the Capital Projects Fund. Previously, these positions were funded by a transfer from the Capital Projects Fund to the General Fund. The commuter bus service remains predominantly funded through fares and state operating assistance. DTCI also receives a small portion of land development revenue.

From FY 2019 to FY 2020, personnel expenditures decreased by 47 percent within DTCI's General Fund budget, as the 43 positions that support and execute the CIP were moved to the Capital Projects Fund. Personnel expenditures increased



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from FY 2020 to FY 2021 because of additional staffing as outlined in the Staffing/FTE History section, adjustments in FY 2020 and 2021 to reflect a new classification and compensation system approved by the Board in November 2019, and a 3.5 percent merit increase for FY 2021.

The FY 2021 Adopted Budget added a total of three positions (3.00 FTE). Due to the unclear economic picture resulting from the COVID-19 pandemic, when the Board of Supervisors adopted the FY 2021 Budget, most new expenditures, including new positions, were frozen until revenues are determined available to support those expenditures. In FY 2021, one procurement and accounting specialist (1.00 FTE) was added to provide quality control over Department financial processes and help department staff navigate the complexities of procurement and accounting processes in a construction environment through training and individual help. This position will handle commitment changes due to bond sales, serve as a buyer, take on the responsibility of complex purchase orders and change orders, review and close purchase orders in a timely manner, and solve reconciliation issues. The Board unfroze this position with the initial release of frozen expenditures and positions on December 15, 2020. The remaining two FY 2021 positions, a GIS analyst (1.00 FTE) and an administrative assistant (1.00 FTE), remain frozen until further Board action or until the start of FY 2022.

The FY 2022 Proposed Budget includes a \$55,000 base budget adjustment that supports the maintenance of software and licenses for e-Builder and traffic engineering. The FY 2022 Proposed Budget includes two requests focused on the thematic area of support to the CIP.

### Support to the CIP

DTCI's FY 2022 Proposed Budget includes two resource requests: one utility engineer (1.00 FTE) and two civil engineers (2.00 FTE). Both requests provide direct support to the CIP; therefore, personnel expenditures will be costed in the Capital Projects Fund.

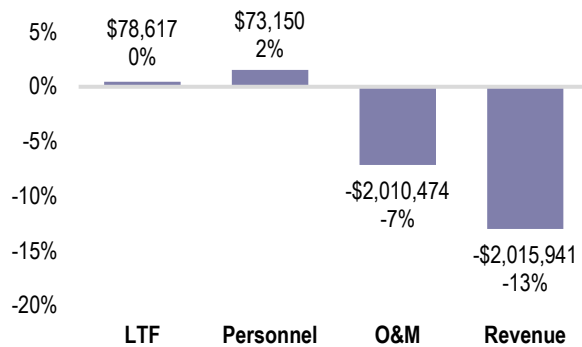
Currently, only one engineer provides utility coordination in the Department. From FY 2018 to FY 2022, the number of design projects needing utility coordination is anticipated to increase by 32 percent. The additional utility engineer will meet increased service level demands and help improve the timeliness of capital design projects. The position will oversee the utility relocation process on transportation (roads, sidewalks, signals, and trails) and assist in obtaining utility service connections for facility and public infrastructure projects (buildings, parks, and park and rides). The position will complement the existing position, increasing Department capacity in project development, land acquisition, and delivery. The overall utility relocation and service connection process significantly impacts capital project schedules. By having two dedicated utility engineers concentrated on utility coordination, these processes can be performed in a more efficient and timely manner.

The FY 2022 Proposed Budget also includes two civil engineer positions (2.00 FTE). There are approximately 65 projects assigned to all DTCI's civil engineers. Civil engineers provide expertise in the areas of cost estimating, scheduling, right of way and utility coordination, and constructability. A primary focus for these two positions will be the management of individual projects funded through the Intersection Improvement Program and the Sidewalk and Trails Program in the CIP, initiated in FY 2019. Design and construction funding for a Sidewalk and Trail Program will be available in FY 2022. In addition, civil engineers now assist with additional design projects and studies being conducted by the Transportation Planning and Traffic Engineering Division in responses to Board Member Initiatives, traffic corridor studies, and grant applications. The inclusion of a Sidewalk and Trail Program in the CIP as well as additional design support to Board member initiatives, traffic studies, and grant applications is anticipated to add seven to ten new projects to civil engineers, land acquisition, and construction manager's workloads annually. On average, studies and projects last two to five years, depending on scope and complexity. Two additional civil engineers will maintain existing service levels. Future requests may be necessary for construction management staffing.



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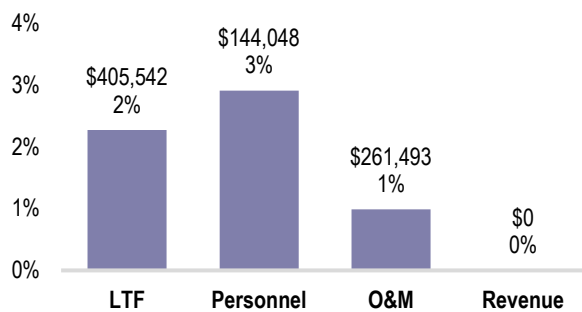
### Percent Change from Adopted FY 2021 to Proposed FY 2022



#### Reasons for Change:

**Personnel:** ↑ general pay increases || **O&M:** ↓ decrease costs associated with transit bus service  
**Revenue:** ↓ decrease in transit fare revenue

### Percent Change from Proposed FY 2022 to Projected FY 2023



#### Reasons for Change:

**Personnel:** ↑ 3 percent || **O&M:** ↑ 1 percent  
**Revenue:** ↔



## Transportation and Capital Infrastructure

### FY 2022 Proposed Resource Requests<sup>1</sup>

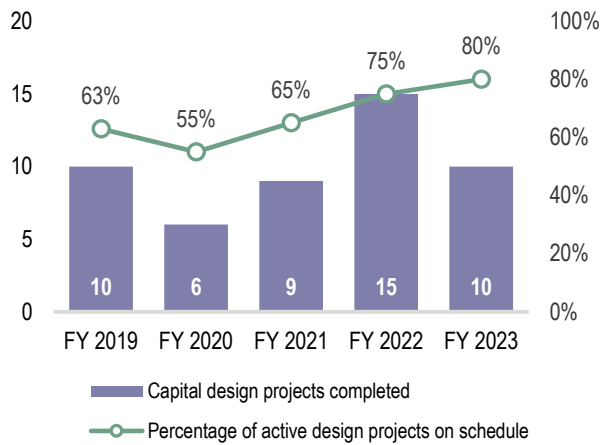
Support to the CIP: Utility Engineer						
Personnel:	O&M:	Capital:	Reallocation:	Revenue:	LTF:	FTE:
\$123,931	\$16,683	\$25,000	\$0	\$123,931	\$41,683	1.00
Details			Overview			
Service Level:	Current Service Level Request		<ul style="list-style-type: none"><li>• Position will be costed in the Capital Projects Fund as a Direct position.</li><li>• Currently only one utility engineer exists in the department.</li><li>• With the number of projects needing utility coordination anticipated to increase by about 32 percent over the next few years, having a second utility engineer will help project design move forward faster and keep more projects on time.</li></ul>			
Mandates:	Not mandated					
PM Highlight:	Percentage of active design and construction projects on schedule					
Program:	Capital Design and Construction					
Positions:	1 Utility Engineer					
Theme:	Support to CIP					
One-time Costs:	\$32,615					
Recurring Costs:	\$132,999					
Support to the CIP: Civil Engineers						
Personnel:	O&M:	Capital:	Reallocation:	Revenue:	LTF:	FTE:
\$247,863	\$22,146	\$0	\$0	\$247,863	\$22,146	2.00
Details			Overview			
Service Level:	Current Service Level Request		<ul style="list-style-type: none"><li>• Positions will be costed in the Capital Projects Fund as Direct positions.</li><li>• Due to the need for them to assist in addressing Board member initiatives, traffic corridor studies, and grant applications, the number of projects assigned to civil engineers has been growing.</li><li>• The inclusion of the sidewalk and trail program in FY 2022 will impact the workload of this engineers, which is anticipated to add 7-10 projects to civil engineer workloads annually.</li><li>• To maintain existing service levels, 2.00 FTE are needed.</li></ul>			
Mandates:	Not mandated					
PM Highlight:	Percentage of active design and construction projects on schedule					
Program:	Capital Design and Construction					
Positions:	2 Civil Engineers					
Theme:	Support to the CIP					
One-time Costs:	\$14,660					
Recurring Costs:	\$255,349					
Department Total						
Personnel:	O&M:	Capital:	Reallocation:	Revenue:	LTF:	FTE:
\$371,794	\$38,829	\$25,000	\$0	\$371,794	\$63,829	3.00

<sup>1</sup> The requests presented display total cost, including the acquisition of vehicles, technology, and office furniture (as applicable). Funds for these items are shown in the Non-Departmental section, page 6-2.



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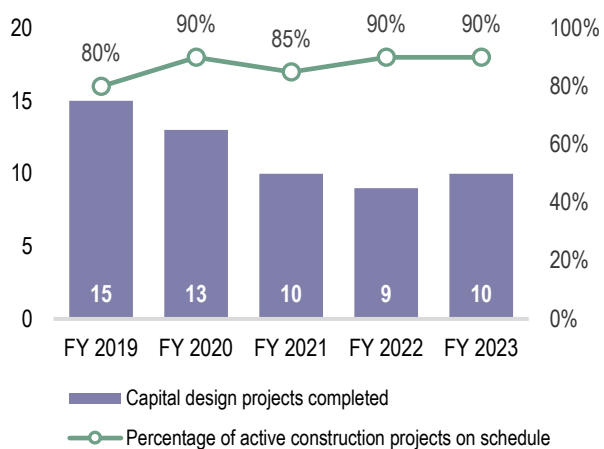
### Key Measures



**Objective:** Deliver approved capital projects in accordance with established CIP schedule.

**Measure:** Capital design projects completed; Percentage of active design projects on schedule.

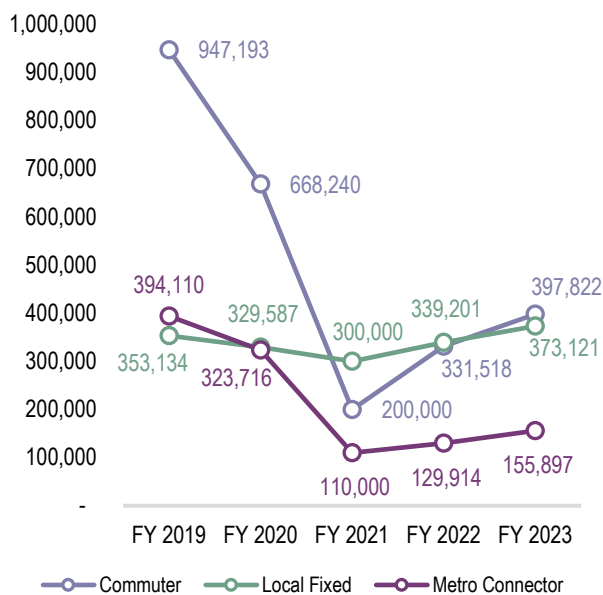
*The utility engineer and two civil engineers requested in FY 2022 will improve the timeliness of design projects.*



**Objective:** Deliver approved capital projects in accordance with established CIP schedule.

**Measure:** Capital construction projects completed; Percentage of active construction projects on schedule.

*The utility engineer and two civil engineers requested in FY 2022 will improve the timeliness of construction projects.*



**Objective:** Provide a safe and reliable transit system to meet the needs of Loudoun residents.

**Measure:** Transit Ridership.

*This measure provides transit ridership across all transit services. The Local Fixed Route includes ridership for the Paratransit service. Transit ridership has decreased due to social distancing measures and increased teleworking related to the COVID-19 pandemic.*

**Transportation and Capital Infrastructure****Department Programs****Department Financial and FTE Summary by Program<sup>1</sup>**

	FY 2019 Actual	FY 2020 Actual	FY 2021 Adopted	FY 2022 Proposed	FY 2023 Projected
<b>Expenditures</b>					
Capital Design and Construction	\$4,842,566	\$680,291	\$558,233	\$542,578	\$548,004
Transportation Services	20,701,777	19,701,710	27,842,878	25,802,577	26,079,049
Transportation Planning and Traffic Engineering	3,038,005	3,289,003	4,487,175	4,605,807	4,729,451
<b>Total – Expenditures</b>	<b>\$28,582,349</b>	<b>\$23,671,004</b>	<b>\$32,888,286</b>	<b>\$30,950,962</b>	<b>\$31,356,504</b>
<b>Revenues</b>					
Capital Design and Construction	\$5,321,880	\$1,191	\$0	\$0	\$0
Transportation Services	14,876,258	12,466,533	15,213,679	13,162,574	13,162,574
Transportation Planning and Traffic Engineering	478,153	240,709	319,600	354,764	354,764
<b>Total – Revenues</b>	<b>\$20,676,290</b>	<b>\$12,708,433</b>	<b>\$15,533,279</b>	<b>\$13,517,338</b>	<b>\$13,517,338</b>
<b>Local Tax Funding</b>					
Capital Design and Construction	\$(479,313)	\$679,100	\$558,233	\$542,578	\$548,004
Transportation Services	5,825,520	7,235,178	12,629,199	12,640,003	12,916,475
Transportation Planning and Traffic Engineering	2,559,853	3,048,294	4,167,575	4,251,043	4,374,687
<b>Total – Local Tax Funding</b>	<b>\$7,906,059</b>	<b>\$10,962,571</b>	<b>\$17,355,007</b>	<b>\$17,433,624</b>	<b>\$17,839,166</b>
<b>FTE</b>					
Capital Design and Construction	41.00	0.00	0.00	0.00	0.00
Transportation Services	7.00	7.00	7.00	7.00	7.00
Transportation Planning and Traffic Engineering	23.00	26.00	29.00	29.00	29.00
<b>Total – FTE</b>	<b>71.00</b>	<b>33.00</b>	<b>36.00</b>	<b>36.00</b>	<b>36.00</b>

<sup>1</sup> Sums may not equal due to rounding.