



BOSTON REGION METROPOLITAN PLANNING ORGANIZATION

Jamey Tesler, Acting MassDOT Secretary and CEO and MPO Chair
Tegin L. Teich, Executive Director, MPO Staff

MEMORANDUM

DATE: June 17, 2021
TO: Administration and Finance Committee
FROM: Tegin Teich, Executive Director, Central Transportation Planning Staff
RE: Draft Proposed Five-Year Plan (SFY 2022–26) for Computer Resources Development

1 BACKGROUND

The Central Transportation Planning Staff (CTPS) prepares a Five-Year Computer Plan annually, with the goal of updating the plan each state fiscal year (SFY) to better represent the computing infrastructure investment needs of the agency. The plan typically includes hardware and software that are considered to be major reinvestments or cost more than \$5,000 per single item.

2 SUMMARY OF PROGRESS

In the past five years, CTPS has made significant progress in updating and replacing its computing infrastructure and ancillary support systems. The following details the total cost of these investments by year.

Progress made during SFY 2017 (\$44,200)

- Dedicated a high-performance workstation for the Travel Model Development Group to run TransCAD
- Added four more TransCAD workstations for pre- and post-processing of model runs
- Installed Active Directory host and “fail-over” (or “fallback”) Active Directory host
- Replaced plotter

Progress made during SFY 2018 (\$55,150)

- Replaced application server
- Replaced fileserver
- Purchased a dedicated high-performance workstation for the Transportation Systems Analysis Group to run TransCAD
- Replaced one TransCAD workstation for pre- and post-processing of model runs
- Replaced tape library with a 3-drive LT07-compatible unit

Progress made during SFY 2019 (\$49,800)

- Replaced firewall hardware
- Replaced backup server
- Replaced VMware server
- Upgraded network switches in the server room and upgraded NIC cards on the servers to 10 gigabytes

Progress made during SFY 2020 (\$49,000)

- Replaced eight TransCAD workstations for pre- and post-processing of model runs
- Replaced application server with a VMware host server

Progress made during SFY 2021 (\$40,500)

- Purchased two dedicated high-performance workstations for TransCAD model runs
- Replaced the primary domain server
- Paid Association of Metropolitan Planning Organizations fees

3 PROPOSED DIRECT PURCHASES FOR SFY 2022 (COST \$57,500)

CTPS proposes the following direct purchases for SFY 2022:

- Replace application/database server (\$18,500 estimate)
- Replace VMware host server, which was originally purchased as a webserver (\$13,000 estimate)
- Purchase two VMware Horizons servers to host Windows 10 virtual machines for all full-time staff (\$26,000 estimate)

4 FUTURE DEVELOPMENTS

In SFY 2023 CTPS must replace the EMC Data Domain disk backup appliance that will reach its end of life on July 31, 2022. The backup appliance is used to backup all CTPS data for up to six months; after that time our data is stored on backup tapes.

In the outer years of this plan, it will be necessary to replace the file server, firewall server, VMware host servers, plotters, and several dedicated TransCAD workstations.

5 COST ESTIMATES

Cost estimates for SFY 2022–26 proposed purchases are shown in the attached Table 1 – *Direct Charges for Computer Purchases by Fiscal Year*. The allocation of direct funding by source is shown at the bottom of Table 1 in the column for SFY 2022. The funding will be adequate for CTPS to advance the

implementation of the plan in SFY 2022. All future year funding will be proposed during the annual update process.

Attachment: Table 1 – *Direct Charges for Computer Purchases by Fiscal Year*

DRAFT

Table 1
Direct Charges for Computer Purchases by Fiscal Year

Item	SFY 2022 Proposed	SFY 2023 Proposed	SFY 2024 Proposed	SFY 2025 Proposed	SFY 2026 Proposed	SFY 2022–26 Total
Workstations	\$0	\$0	\$26,000	\$39,000	\$52,000	\$117,000
Dedicated workstation for model runs			\$26,000	\$39,000	\$52,000	\$65,000
Servers	\$57,500	\$0	\$24,000	\$16,000	\$0	\$58,500
Replace VMware server "formerly Lindalino"				\$16,000		\$16,000
Replace file server "lilliput"			\$12,000			\$12,000
Replace application server "appsvr3"	\$18,500					\$18,500
Replace VMware server "formerly webserver"	\$13,000					
Two VMware Horizons servers to host virtual machines for all full-time staff	\$26,000					
Replace VMware server purchased in SFY 2019				\$12,000		\$12,000

Item	SFY 2022 Proposed	SFY 2023 Proposed	SFY 2024 Proposed	SFY 2025 Proposed	SFY 2026 Proposed	SFY 2022–26 Total
Peripherals	\$0	\$0	\$0	\$5,000	\$5,000	\$10,000
Replace plotter purchased in SFY 2016				\$5,000		\$5,000
Replace plotter purchased in SFY 2017					\$5,000	\$0
Network and Computer Room	\$0	\$61,600	\$6,000	\$0	\$0	\$67,600
Replace firewall hardware			\$6,000			\$6,000
Replace EMC backup system purchased in SFY 2015		\$61,600				\$61,600
Total	\$57,500	\$61,600	\$56,000	\$60,000	\$57,000	\$292,100

Source of Funding for SFY 2022:

FFY 2021 3C Combined Contract \$13,000
 FFY 2022 3C Combined Contract \$44,500

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To request this information in a different language or in an accessible format, please contact

Title VI Specialist
Boston Region MPO
10 Park Plaza, Suite 2150
Boston, MA 02116
civilrights@ctps.org

By Telephone:

857.702.3702 (voice)

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