Clipper® Executive Board

October 18, 2021   **Agenda Item 4b**

Clipper® Implementation Update

Subject:

Update on key developments related to the implementation of the Current and Next Generation Clipper system.

Background:

Current Implementation and Enhancement Projects

MTC continues to coordinate with transit operators on Clipper equipment installation for several implementations, including:

- Caltrain ticket vending machines (TVM) Integration – Caltrain is working with VenTek to upgrade an additional 21 TVMs. Upgrades are planned to occur between December 2021 and January 2022. Clipper equipment continues to meet contractual performance requirements.

Next Generation Implementation and Enhancement Projects

Included as Attachment A to this memorandum is a summary of recently completed activities related to delivering the Next Generation Clipper program; upcoming activities and deliverables for MTC, Cubic Transportation Services, and the transit operators; and noteworthy items that the project team is managing.

Highlights Include:

- approval of On-Site System Installation and Pilot Test plans;
- expected resubmission of Equipment Manuals and Training Materials;
- expected submission of Account-based Development and Testing documents;
- initial execution and witnessing for System Integration Testing;
- ongoing Final Design Review of the account-based system;
- ongoing technical and planning discussions and review with operators; and
- planned installation of new devices, scheduled to begin later this year.

MTC received an updated Project Schedule and Schedule Narrative from Cubic on September 9, 2021. This schedule still shows the same delays we described in previous months, namely delays caused by COVID-driven engineering resource shortages and supply chain issues with chips and plastics leading to a 4-month delay in equipment installation. The current schedule for installation will start towards the end of this year with fleetwide installation complete by Fall 2022.

Clipper staff will continue to work with Cubic to refine an approach to make meaningful schedule recovery. We have requested that Cubic document this in the testing and implementation plans to be submitted in Contract Submittal Packages 8 (System Development Plans) and 9 (Testing Plans).

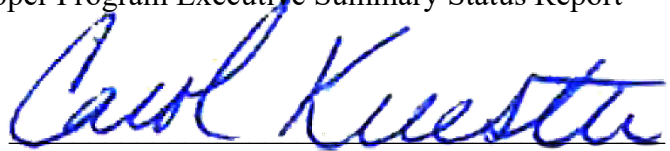Attachment A to this memo is the current C2 Program Project Schedule Summary.

Issues:
None identified.

Recommendations:
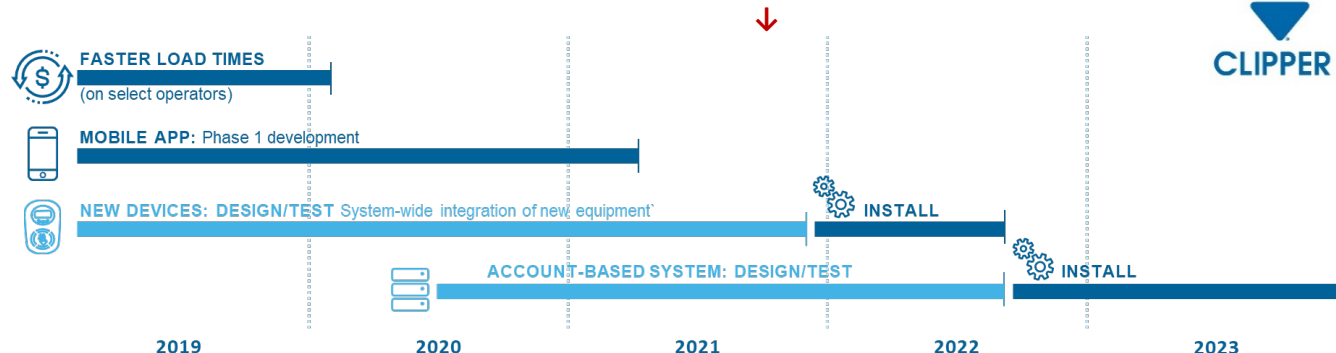Information.

Attachments:
- Attachment A: Next Generation Clipper Program Executive Summary Status Report

Carol Kuester

Next-Generation Clipper Program
Executive Summary Status Report – Oct 18, 2021

CLIPPER

FASTER LOAD TIMES (on select operators)				
MOBILE APP: Phase 1 development				
NEW DEVICES: DESIGN/TEST System-wide integration of new equipment`		INSTALL		
	ACCOUNT-BASED SYSTEM: DESIGN/TEST		INSTALL	
2019	2020	2021	2022	2023

Summary

- Mobile App System Integration Testing (SIT) and Pilot Test results approved.
- New Devices SIT underway; On-Site System Installation (OSIT) and Pilot Test plans approved. Initial Pilot installations starting soon.
- Final Design Review (FDR) and review of Account-Based Development & Testing Plans ongoing.
- Technical and planning discussions continue with operators on various topics, including CAD/AVL integration, paratransit integration, BART and Muni equipment, and new device installation.

Recently Completed Activities

	MTC/IBI	Cubic	Operators	Date
• New Devices:				
o SIT execution/witnessing (Retail devices)	●	●	●	Sep 21, 24, 29
o OSIT/Pilot Test plans approval	●		●	Oct
o Manuals/Training Materials resubmitted		●		Oct
o Manuals/Training Materials approved	●		●	Oct
• Account-Based System Final Design Review:				
o FDR Part 2 review session with MTC/IBI	●		●	Sep 22
o FDR Part 1 comments from MTC/operators	●		●	Sep 24
o FDR Part 2 review sessions with Cubic	●	●	●	Sep 29, 30
o FDR Part 1 comment review sessions	●	●	●	Oct 11–15
• Account-Based Development & Testing Plans:				
o Initial submittal by Cubic (Package 8)		●		Sep 29

Upcoming Activities/Deliverables

	MTC/IBI	Cubic	Operators	Date
• New Devices:				
o SIT execution/witnessing (cont'd.)	●	●	●	Oct–Jan
o Installation at Pilot Test locations	●	●	●	Oct–Feb
o Pilot Testing	●	●	●	Nov–Feb
• Account-Based System Final Design Review:				
o FDR Part 1 resubmittal by Cubic		●		Oct
o FDR Part 2 comments from MTC/operators	●		●	Oct
o FDR Part 2 comment review sessions	●	●	●	Nov
o FDR Part 2 resubmittal by Cubic		●		Nov
• Account-Based Development & Testing Plans:				
o Comments from MTC/operators	●		●	Oct/Nov
• Clipper Executive Board Meeting	●		●	Nov 15