



Bay Area Metro Center
375 Beale Street
San Francisco, CA 94105

Meeting Agenda

Clipper Executive Board

Members:

Denis Mulligan, Chair Edward D. Reiskin, Vice Chair

*Grace Crunican, Nuria Fernandez, Jim Hartnett,
Michael Hursh, Therese W. McMillan, Rick Ramacier, and
Nina Rannells*

Monday, May 20, 2019	1:30 PM	San Francisco Bay Area Rapid Transit District 344 20th Street, 3rd Floor Oakland, CA 94612 BART Board Room
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This meeting will be recorded. Copies of recordings may be requested at the Metropolitan Transportation Commissioner (MTC) at nominal charge, or recordings may be listened to at MTC offices by appointment.

To access meeting location, please access through the Webster Street entrance between CVS Pharmacy and 24-Hour Fitness. Take the elevator to the 3rd floor and exit the elevator to your right where the agenda will be posted. Please enter the room through the double doors. For meeting location questions, please contact Angelica Dill-James at 510-464-6093.

1. Roll Call / Confirm Quorum

Quorum: A quorum of this committee shall be a majority of its regular voting members (5).

2. Consent Calendar

2a. [19-0428](#) Minutes of the April 15, 2019 Meeting

Action: Board Approval

Attachments: [2a CEB Minutes Apr 15 2019.pdf](#)

3. Approval

- 3a. [19-0429](#) Contract Amendment - Clipper® Technical Advisor: CH2M Hill, Inc. (\$800,000)

Request to Executive Board approval of a contract amendment between MTC and CH2M Hill, Inc. (CH2M Hill), in an amount not to exceed \$800,000 for continued technical oversight and advice services for the Clipper program in FY 2019-20. This contract amendment was contemplated and is included in the Two Year Clipper Budget and Work Plan approved by the Clipper Executive Board on March 18, 2019.

Action: Board Approval

Presenter: Jason Weinstein

Attachments: [3a C1 Technical Advisor Amendment.pdf](#)

4. Information

- 4a. [19-0431](#) Current Clipper® System Update

Update Board members on the current Clipper program. Clipper staff last updated this Board on the ongoing work and projects related to the current Clipper system at the March 2019 meeting.

Action: Information

Presenter: Jason Weinstein

Attachments: [4a C1 Program Update.pdf](#)

- 4b. [19-0432](#) Next Generation Clipper® System Update

Update Board members on key developments related to the implementation of the next generation Clipper System Integrator project, provide an overall program update, and to highlight key features of the next-generation Clipper mobile app.

Action: Information

Presenter: Jason Weinstein and Lysa Hale

Attachments: [4b C2 Program Update.pdf](#)

4c. [19-0618](#) Clipper® Mobile App Features and System

Update Board members on plans for the new Clipper mobile app for fare payment.

Action: Information

Presenter: Jason Weinstein

Attachments: [4c_Mobile App Features and Design.pdf](#)

5. Executive Director's Report – Kuester**6. Public Comment / Other Business****7. Adjournment / Next Meeting**

The next meeting of the Clipper® Executive Board will be Monday, June 17, 2019 at 1:30 p.m. in the Caltrain / SamTrans Board Room, 2nd Floor, 1250 San Carlos Avenue, San Carlos, CA.

Public Comment: The public is encouraged to comment on agenda items at Committee meetings by completing a request-to-speak card (available from staff) and passing it to the Committee secretary. Public comment may be limited by any of the procedures set forth in Section 3.09 of MTC's Procedures Manual (Resolution No. 1058, Revised) if, in the chair's judgment, it is necessary to maintain the orderly flow of business.

Meeting Conduct: If this meeting is willfully interrupted or disrupted by one or more persons rendering orderly conduct of the meeting unfeasible, the Chair may order the removal of individuals who are willfully disrupting the meeting. Such individuals may be arrested. If order cannot be restored by such removal, the members of the Committee may direct that the meeting room be cleared (except for representatives of the press or other news media not participating in the disturbance), and the session may continue.

Record of Meeting: Committee meetings are recorded. Copies of recordings are available at a nominal charge, or recordings may be listened to at MTC offices by appointment. Audiocasts are maintained on MTC's Web site (mtc.ca.gov) for public review for at least one year.

Accessibility and Title VI: MTC provides services/accommodations upon request to persons with disabilities and individuals who are limited-English proficient who wish to address Commission matters. For accommodations or translations assistance, please call 415.778.6757 or 415.778.6769 for TDD/TTY. We require three working days' notice to accommodate your request.

可及性和法令第六章: MTC 根據要求向希望來委員會討論有關事宜的殘疾人士及英語有限者提供服務/方便。需要便利設施或翻譯協助者，請致電 415.778.6757 或 415.778.6769 TDD / TTY。我們要求您在三個工作日前告知，以滿足您的要求。

Acceso y el Titulo VI: La MTC puede proveer asistencia/facilitar la comunicación a las personas discapacitadas y los individuos con conocimiento limitado del inglés quienes quieran dirigirse a la Comisión. Para solicitar asistencia, por favor llame al número 415.778.6757 o al 415.778.6769 para TDD/TTY. Requerimos que solicite asistencia con tres días hábiles de anticipación para poderle proveer asistencia.

Attachments are sent to Committee members, key staff and others as appropriate. Copies will be available at the meeting.

All items on the agenda are subject to action and/or change by the Committee. Actions recommended by staff are subject to change by the Committee.



Metropolitan Transportation Commission

375 Beale Street, Suite 800
San Francisco, CA 94105

Legislation Details (With Text)

File #: 19-0428 **Version:** 1 **Name:**
Type: Minutes **Status:** Consent
File created: 4/16/2019 **In control:** Clipper Executive Board
On agenda: 5/20/2019 **Final action:**
Title: Minutes of the April 15, 2019 Meeting
Sponsors:
Indexes:
Code sections:
Attachments: [2a_CEB Minutes_Apr 15 2019.pdf](#)

Date	Ver.	Action By	Action	Result
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Subject:
Minutes of the April 15, 2019 Meeting

Recommended Action:
Board Approval

Attachments:



Agenda Item 2a

Bay Area Metro Center
375 Beale Street
San Francisco, CA 94105

Meeting Minutes - Draft

Clipper Executive Board

Members:

Denis Mulligan, Chair Edward D. Reiskin, Vice Chair

*Grace Crunican, Nuria Fernandez, Jim Hartnett,
Michael Hursh, Therese W. McMillan, Rick Ramacier, and
Nina Rannells*

Monday, April 15, 2019

1:30 PM

San Francisco Bay Area Rapid Transit District
344 20th Street, 3rd Floor
Oakland, CA 94612
BART Board Room

1. Roll Call / Confirm Quorum

Present: 4 - Chair Mulligan, Vice Chair Reiskin, Board Member Crunican, and Board Member Rannells

Absent: 5 - Board Member Fernandez, Board Member Hartnett, Board Member Hursh, Board Member McMillan, and Board Member Ramacier

Ahsan Baig acted as a delegate and voting member of the Board in place of Michael Hursh. Actions noted below as "Hursh" were taken by Baig.

Andrew B. Fremier acted as a delegate and voting member of the Board in place of Therese W. McMillan. Actions noted below as "McMillan" were taken by Fremier.

Ruby Horta acted as a delegate and voting member of the Board in place of Rick Ramacier. Actions noted below as "Ramacier" were taken by Horta.

Carol Lawson acted as a delegate and voting member of the Board in place of Nuria Fernandez. Actions noted below as "Fernandez" were taken by Lawson.

Carter Mau acted as a delegate and voting member of the Board in place of Jim Hartnett. Actions noted below as "Hartnett" were taken by Mau.

2. Consent Calendar

Upon the motion by Board Member Crunican and second by Vice Chair Reiskin, the Consent Calendar was unanimously approved. The motion carried by the following vote:

Aye: 9 - Chair Mulligan, Vice Chair Reiskin, Board Member Crunican, Board Member Fernandez, Board Member Hartnett, Board Member Hursh, Board Member McMillan, Board Member Ramacier and Board Member Rannells

2a. [19-0300](#) Minutes of the March 18, 2019 Meeting

Action: Board Approval

Attachments: [2a_CEB Minutes_Mar 18 2019.pdf](#)

3. Approval

- 3a. [19-0302](#) Contract Actions - In-person Clipper® Customer Service Center (IPCSC) Amendments
- i. Contract Amendment - Clipper Customer Service Center Operations at Embarcadero San Francisco Bay Area Rapid Transit (BART) Station: Faneuil, Inc. (\$415,000)
 - ii. Contract Amendment - Clipper Customer Service Center Operations at the San Francisco Ferry Building: Nematode Holdings, LLC (\$300,000)
 - iii. Funding Agreement Amendment - Clipper Customer Service Center Operations at Alameda-Contra Costa Transit District (AC Transit) Headquarters: AC Transit (\$250,000)

Contract Actions for IPCSCs at Embarcadero Station, Ferry Building, and AC Transit.

Action: Board Approval

Presenter: Kelley Jackson

Attachments: [3a Customer Service Contracts.pdf](#)

Upon the motion by Board Member Crunican and second by Board Member Rannells, the Contract Actions - In-person Clipper® Customer Service Center (IPCSC) Amendments: i. Contract Amendment - Clipper Customer Service Center Operations at Embarcadero San Francisco Bay Area Rapid Transit (BART) Station: Faneuil, Inc. (\$415,000); ii. Contract Amendment - Clipper Customer Service Center Operations at the San Francisco Ferry Building: Nematode Holdings, LLC (\$300,000); and iii. Funding Agreement Amendment - Clipper Customer Service Center Operations at Alameda-Contra Costa Transit District (AC Transit) Headquarters: AC Transit (\$250,000) were unanimously approved. The motion carried by the following vote:

Aye: 9 - Chair Mulligan, Vice Chair Reiskin, Board Member Crunican, Board Member Fernandez, Board Member Hartnett, Board Member Hursh, Board Member McMillan, Board Member Ramacier and Board Member Rannells

- 3b.** [19-0303](#) Contract Actions - Customer Research, Education and Outreach for the Clipper® Program
- i. Contract Amendment - Customer Information Services: MIG, Inc. (\$770,000)
 - ii. Contract Amendment - Electronic Payments Consultant Assistance Services: Resource Development Associates, Inc. (\$270,000)

Contract Actions for Customer Research, Education, Outreach, and Operational Monitoring for the Clipper® Program.

Action: Board Approval

Presenter: Kelley Jackson

Attachments: [3b_Customer Communications Contracts.pdf](#)

Upon the motion by Board Member Crunican and second by Board Member McMillan, the Contract Actions - Customer Research, Education and Outreach for the Clipper® Program: i. Contract Amendment - Customer Information Services: MIG, Inc. (\$770,000) and ii. Contract Amendment - Electronic Payments Consultant Assistance Services: Resource Development Associates, Inc. (\$270,000) were unanimously approved. The motion carried by the following vote:

Aye: 9 - Chair Mulligan, Vice Chair Reiskin, Board Member Crunican, Board Member Fernandez, Board Member Hartnett, Board Member Hursh, Board Member McMillan, Board Member Ramacier and Board Member Rannells

4. Executive Director's Report – Kuester

5. Public Comment / Other Business

6. Adjournment / Next Meeting

The next meeting of the Clipper® Executive Board will be Monday, May 20, 2019 at 1:30 p.m. in the BART Board Room, 3rd Floor, 344 20th Street, Oakland, CA.



Metropolitan Transportation Commission

375 Beale Street, Suite 800
San Francisco, CA 94105

Legislation Details (With Text)

File #: 19-0429 **Version:** 1 **Name:**
Type: Contract **Status:** Committee Approval
File created: 4/16/2019 **In control:** Clipper Executive Board
On agenda: 5/20/2019 **Final action:**
Title: Contract Amendment - Clipper® Technical Advisor: CH2M Hill, Inc. (\$800,000)

Request to Executive Board approval of a contract amendment between MTC and CH2M Hill, Inc. (CH2M Hill), in an amount not to exceed \$800,000 for continued technical oversight and advice services for the Clipper program in FY 2019-20. This contract amendment was contemplated and is included in the Two Year Clipper Budget and Work Plan approved by the Clipper Executive Board on March 18, 2019.

Sponsors:

Indexes:

Code sections:

Attachments: [3a_C1 Technical Advisor Amendment.pdf](#)

Date	Ver.	Action By	Action	Result
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Subject:

Contract Amendment - Clipper® Technical Advisor: CH2M Hill, Inc. (\$800,000)

Request to Executive Board approval of a contract amendment between MTC and CH2M Hill, Inc. (CH2M Hill), in an amount not to exceed \$800,000 for continued technical oversight and advice services for the Clipper program in FY 2019-20. This contract amendment was contemplated and is included in the Two Year Clipper Budget and Work Plan approved by the Clipper Executive Board on March 18, 2019.

Presenter:

Jason Weinstein

Recommended Action:

Board Approval

Attachments:

Clipper[®] Executive Board

May 20, 2019

Agenda Item 3a

Contract Amendment – Clipper[®] Technical Advisor: CH2M Hill, Inc. (\$800,000)

Subject: Request to Executive Board approval of a contract amendment between MTC and CH2M Hill, Inc. (CH2M Hill), in an amount not to exceed \$800,000 for continued technical oversight and advice services for the Clipper program in FY 2019-20. This contract amendment was contemplated and is included in the Two Year Clipper Budget and Work Plan approved by the Clipper Executive Board on March 18, 2019.

Background: In 2009, MTC entered into a competitively-procured, multi-year contract with Booz Allen Hamilton to provide technical support and oversight for the design and implementation of Clipper on the Bay Area transit operators, as well as technical support for Clipper operations and maintenance through the completion of the contract, then November 2019. Booz Allen Hamilton assigned this contract to CH2M Hill in 2011. Over the past seven years, CH2M Hill has supported many implementation and operations and maintenance tasks, including deployment of Clipper at multiple transit agencies, integration of ticket vending machines and faregates, card inventory and retail network management, and design, testing, and deployment support for numerous system modifications.

Under the proposed amendment, CH2M Hill will provide support for the following activities in FY19-20 on an as-needed basis:

1. Administration of the Cubic Clipper Contract, including change notice and change order development, proposal evaluation, and independent engineer's estimates;
2. Development and maintenance of a master schedule summarizing all work in progress;
3. Support for transit operator requests for expansion and replacement of Clipper equipment;
4. Delivery of various system modifications, including support for testing, distribution, and reports;
5. Management of card inventory and oversight of the Clipper retail network;
6. Development and oversight of institutional programs, products, and strategy; and
7. Technical operations, including financial reconciliation and reporting, data analysis and reporting, asset management, and evaluation and support of system and device maintenance.

- Issues:** The contract amendment will provide resources equivalent to 2.5 full-time staff, including subcontractors, to support the activities above, which equals \$320,000 per fully loaded full-time equivalents. With an estimated 1,980 hours per fiscal year per equivalent staff member, the fully loaded hourly rate is \$162. In utilizing technical advisor services, MTC weighs the value of directly hiring staff versus contracting for specialized expertise. MTC recently prioritized several Clipper staff members to focus on the delivery of the next generation Clipper system and hired a prior Clipper contractor supporting the current Clipper system as a full-time employee. This contract amendment will provide the necessary CH2M Hill resources to allow for the backfill of these positions.
- Recommendation:** Staff recommends that the Clipper Executive Board approve a contract amendment with CH2M Hill in an amount not to exceed \$800,000 for continuing technical oversight and support of the Clipper program during FY 2019-20, bringing the approved contract amount to \$16,357,566.
- Attachments:** **Attachment A:** Small Business Enterprise and Disadvantaged Business Enterprise Status



Carol Kuester

Small Business Enterprise and Disadvantaged Business Enterprise Status

Prime Contractor

Subcontractor

Firm Name	Role on Project	DBE* Firm			SBE** Firm		
		Yes	If Yes, List #	No	Yes	If Yes, List #	No
CH2M Hill, Inc	Technical oversight and design, implementation and operations support			X			X
Auriga Corporation	Implementation and operations support	X	31943				X
TransSight LLC	Project and technical operations support	X	42484				X
Shiralian Management Group	Program schedule management			X			X
Velocilytics	Data support and database oversight.			X			X

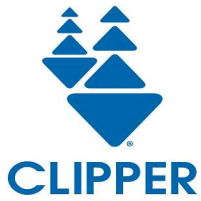
*Denotes certification by the California Unified Certification Program (CUCP).

**Denotes certification by the State of California.

REQUEST FOR BOARD APPROVAL

Summary of Proposed Contract Amendment

Consultant:	CH2M Hill, Inc. Oakland, CA
Work Project Title:	Technical Advisor Contract
Purpose of Project:	Provide continued technical oversight and advice services for the Clipper® program
Brief Scope of Work:	Provide support of Clipper® Contract administration, project oversight, project coordination, operations support and deployment oversight during FY 2019-20.
Project Cost Not to Exceed:	<p>\$800,000 (this Amendment)</p> <p>Total contract value including amendments before this amendment = \$14,957,566</p> <p>Previously approved amendment not yet finalized = \$600,000</p> <p>Total contract amount with this amendment = \$16,357,566</p>
Funding Source:	TCP, STP (FTA/FHWA) / CMAQ (OBAG 1 and OBAG 2), STA, Regional Measure 2 Capital, Regional Measure 2 Operating, Regional Measure 3, LCTOP, Fare Media and Card Fee Revenue, SB1 State of Good Repair, BATA Rehab
Fiscal Impact:	Funding is available in the FY 2019-20 Clipper Budget.
Motion by Board:	That the contract amendment with CH2M Hill, Inc., for the purposes described herein and in the Executive Director's May 20, 2019 memorandum, is hereby approved by the Clipper Executive Board.
Clipper Executive Board:	<hr/> Denis Mulligan, Chair
Approved:	May 20, 2019



Metropolitan Transportation Commission

375 Beale Street, Suite 800
San Francisco, CA 94105

Legislation Details (With Text)

File #: 19-0431 **Version:** 1 **Name:**
Type: Report **Status:** Informational
File created: 4/16/2019 **In control:** Clipper Executive Board
On agenda: 5/20/2019 **Final action:**
Title: Current Clipper® System Update

Update Board members on the current Clipper program. Clipper staff last updated this Board on the ongoing work and projects related to the current Clipper system at the March 2019 meeting.

Sponsors:

Indexes:

Code sections:

Attachments: [4a_C1 Program Update.pdf](#)

Date	Ver.	Action By	Action	Result
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Subject:

Current Clipper® System Update

Update Board members on the current Clipper program. Clipper staff last updated this Board on the ongoing work and projects related to the current Clipper system at the March 2019 meeting.

Presenter:

Jason Weinstein

Recommended Action:

Information

Attachments:

Clipper® Executive Board

May 20, 2019

Agenda Item 4a

Current Clipper® System Update

Subject: Update Board members on the current Clipper program. Clipper staff last updated this Board on the ongoing work and projects related to the current Clipper system at the March 2019 meeting.

Background: **Transactions and Sales**
Clipper processed 23.8 million transactions and settled \$57 million in revenue in April. This level of activity is consistent with average seasonal volumes.

Clipper Card Dispensing

To date, BART has dispensed 947,795 cards and Clipper's market share on BART was 83.9% in April. VTA completed a retrofit of 152 ticket vending machines in December to enable card sales. To date, VTA has dispensed 7,619 cards.

Implementation and Enhancement Projects

Noteworthy implementation and enhancement projects for the Clipper system include:

- As part of its ongoing effort to ensure reliability of the Clipper Back Office to support current operations, Cubic replaced the legacy Card Issuer component of the system in March. The Card Issuer was a key function of the back office responsible for maintaining an accurate record of all cards in use. Account Manager, its functional replacement, provides significantly improved performance. Additional benefits include website account updates occurring throughout the day instead of once per day and elimination of nightly website outages.
- Clipper on SFMTA Central Subway – Clipper installation is expected to begin late summer.

Upcoming projects include implementation of Clipper on AC Transit's Bus Rapid Transit Service and work on BART's extension stations. This list should continue to be somewhat light as the program's focus is largely on the development of the next-generation Clipper system. However, ongoing projects include bus fleet replacements and expansion. For the status of other projects, please see the attached Clipper Master Schedule.

Other Clipper News

Other Clipper-related news includes:

- For the more than 1,300 registered cardholders who still have parking value associated with the discontinued Park With Clipper program on their Clipper cards – a total of about \$50,000 that has been unusable since end of the program in 2017 – we are converting that parking value into Clipper cash value that can be used for transit trips on any operator. These cardholders have been notified of the planned conversion, which requires no action on their part unless they wish to request a cash-out refund.
- MTC has filled two of the three open Clipper staff positions as of March. The remaining position is expected to be posted in July.

Attachments:

Attachment A: Clipper Master Schedule



Carol Kuester

[illegible]



Metropolitan Transportation Commission

375 Beale Street, Suite 800
San Francisco, CA 94105

Legislation Details (With Text)

File #:	19-0432	Version:	1	Name:	
Type:	Report	Status:		Informational	
File created:	4/16/2019	In control:		Clipper Executive Board	
On agenda:	5/20/2019	Final action:			
Title:	Next Generation Clipper® System Update				

Update Board members on key developments related to the implementation of the next generation Clipper System Integrator project, provide an overall program update, and to highlight key features of the next-generation Clipper mobile app.

Sponsors:

Indexes:

Code sections:

Attachments: [4b_C2 Program Update.pdf](#)

Date	Ver.	Action By	Action	Result
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Subject:

Next Generation Clipper® System Update

Update Board members on key developments related to the implementation of the next generation Clipper System Integrator project, provide an overall program update, and to highlight key features of the next-generation Clipper mobile app.

Presenter:

Jason Weinstein and Lysa Hale

Recommended Action:

Information

Attachments:

Clipper® Executive Board

May 20, 2019

Agenda Item 4b

Next Generation Clipper® System Update

Subject: Update Board members on key developments related to the implementation of the next generation Clipper System Integrator project, provide an overall program update, and to highlight key features of the next-generation Clipper mobile app.

Background: **Executive Summary**
Included as Attachment A to this memorandum is a summary of recently completed activities related to delivering the program; upcoming activities and deliverables for MTC, Cubic, and the transit operators; and noteworthy items that the project team is managing. This will be updated and presented to this Board monthly.

Next Generation Clipper Program Schedule

Clipper staff have developed another version of the Next Generation Clipper summary schedule (Attachment B) that will help us plan for upcoming work, manage any schedule slippage, and communicate status of work to the Executive Board. In addition to monitoring the schedule at a high level, we will track package submittals, customer dependencies, and testing and release dates associated with individual accelerated deployment projects. The schedule is intended to answer high level questions to help Board members and their staff manage their resources for activities such as reviewing documents, participating in design sessions, making their properties/vehicles available to Cubic, facilitating third-party integration (i.e. BART and Ventek tasks) and monitoring testing. The account-based schedule information will likely be tracked at a high level until the second half of 2020 when we begin a period of significant design review and equipment procurements.

Mobile App Functionality

The Clipper mobile app being developed by Cubic under the next-generation Clipper contract is described in detail in Agenda Item 4c.

Next Generation Clipper Technical Update

MTC and transit operator staff have invited Cubic to brief the Executive Board with a technical update, and have included as Attachment C to this memo the presentation that Cubic will discuss during the May Executive Board meeting.

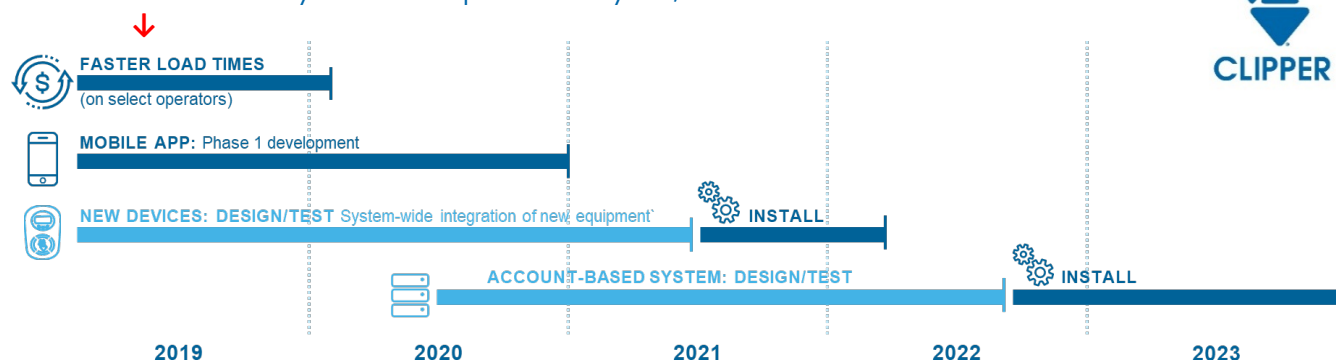
Attachments: **Attachment A:** Next Generation Clipper Program Executive Summary Status Report
Attachment B: Next Generation Clipper Program Schedule
Attachment C: Next Generation Clipper Technical Update



Carol Kuester



Next Generation Clipper Program Executive Summary Status Report – May 20, 2019



Summary

- Final comments on Submittal Package 2 sent to Cubic on 5/13/2019.
- Mobile app user interface/user experience (UI/UX) design process underway.
- Cubic surveys of vehicles/locations with legacy ERG equipment underway.
- Technical discussions continue with operators.

Recently Completed Activities

	MTC/IBI	Cubic	Operators	Date
• Submittal Package 2:				
○ Review meeting (internal)	●		●	Apr 23
○ Review meeting with Cubic	●	●	●	Apr 24
○ 1 st resubmittal received from Cubic		●		Apr 30
○ Review meetings with Cubic	●	●	●	May 7–8
○ Final comments sent to Cubic	●		●	May 13
○ 2 nd resubmittal received from Cubic		●		TBD
○ Approval by MTC	●			TBD
• Mobile app UI/UX design:				
○ Kick-off meeting	●	●	●	May 3
• Technical meetings with operators:				
○ BART (general)	●	●	●	Apr 17
○ BART (network engineering)	●	●	●	Apr 29

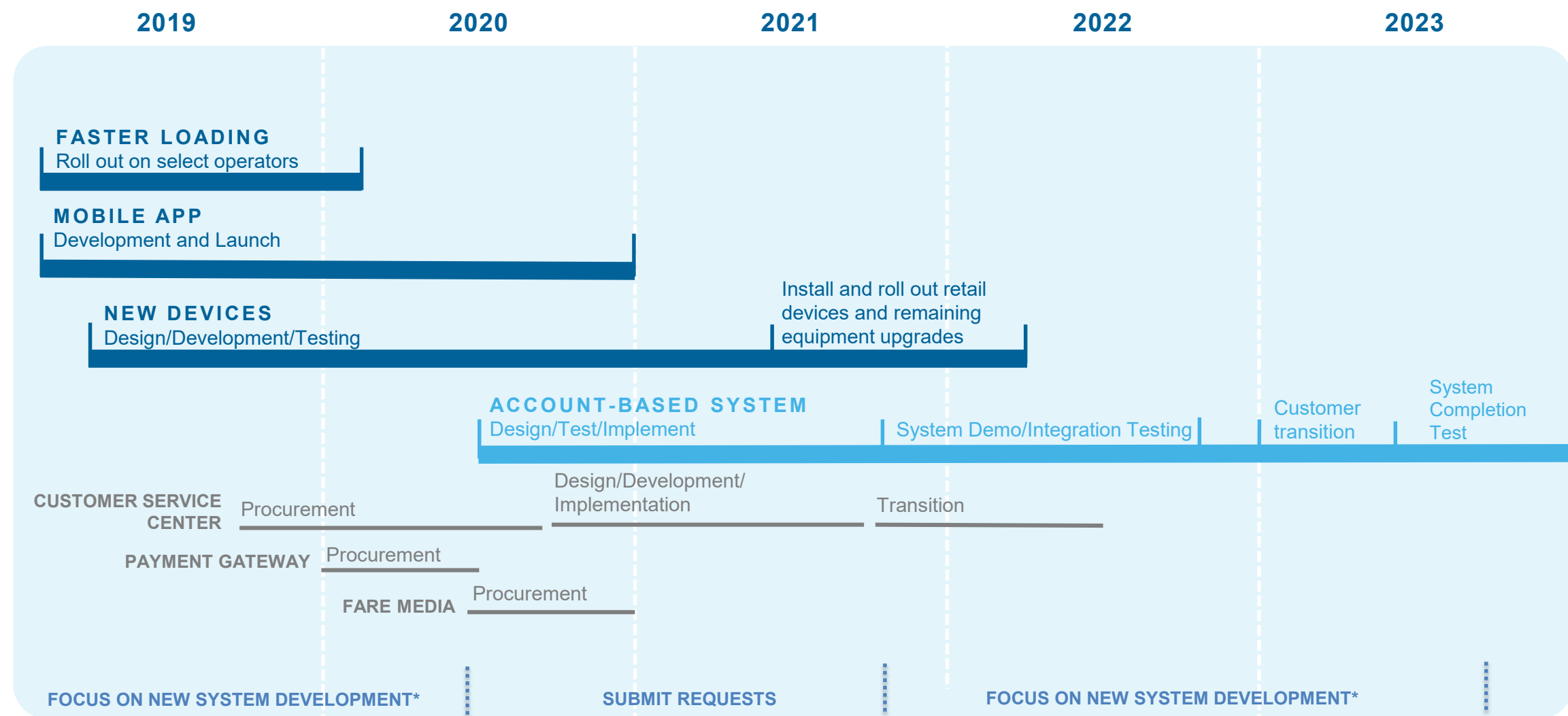
Upcoming Activities/Deliverables

	MTC/IBI	Cubic	Operators	Date
• Legacy ERG equipment surveys continue		●	●	through June
• Mobile app UI/UX workshops	●	●	●	Jun 3, Jun 17
• Clipper Executive Board Meeting	●	●	●	Jun 17

Items to Highlight

Description	Resolution/Mitigation
• More aggressive roll-out of more frequent actionlist updates is planned but not yet reflected in Cubic's Project Schedule.	• Cubic to revise Project Schedule to reflect planned dates.

Next Generation Clipper Program Schedule



* During these periods, resources will be dedicated to new system development instead of changes to current system



CUBIC™ | Transportation Systems

Next Generation Clipper Technical Update

May 20, 2019

Agenda Item 4b
Attachment C

1. Program Plans & Schedule

COMPLETE

- 1st Submission: 11/26/18
 - *Review Meetings: 12/6 - 7*
 - *Comment Period: 11/26 - 12/21*
- 2nd Submission: 1/30/19
 - *Review Meetings: 2/15, 2/19*
 - *Comment Period: 1/30 – 3/1*
- 3rd Submission: 3/5/19
 - *Review Period: 3/5 - 3/12*
- Approval: 3/12/19

Contents

- CS-DD-016a Accelerated C2 System Deployment Plan
- CS-PM-008 Program Management Plan
- CS-PM-009 Project Schedule
- CS-PM-011 Requirements Traceability Matrix
- CS-SL-001 Software List

Contents

- CS-DD-013 C1 Design Coordination Plan
- CS-DD-015 Joint C1-C2 Development and Testing Plan
- CS-O&M-005 Change Management Plan
- CS-O&M-013 Q/A and Q/C Program Plan
- CS-O&M-013a C2 System Configuration Management Plan
- CS-O&M-014 Risk Management Plan
- CS-O&M-015 Safety Management Plan
- CS-O&M-016 Information and Security Management Plan
- CS-O&M-018 Sys. Monitoring and Control Mgmt. Plan
- CS-PM-001 Change Management Register
- CS-PM-003 Contract Submittals Management Plan
- CS-PM-005 Cost Adjustment Register
- CS-PM-009a Schedule Recovery Plan
- CS-PM-012 Risk Register
- CS-TEST-001a Accel. C2 Sys. Deployment Testing Plan

2. Program Plans & Controls

COMPLETE

- 1st Submission: 3/19/19
 - *Review Meetings: 4/2 - 3*
 - *Review Period: 3/19 - 4/15*
 - *Response Review: 4/24*

- 2nd Submission: 4/30/19
 - *Review Meetings: TBD*
 - *Review Period: 4/30 – 5/13*

- Approval: 5/13/19

Mobile App User Interface / User Experience (UI/UX) Sprints

- Kickoff on May 3rd

- 12 weekly sprint meetings from June through August
 - *Iteration of visual design*
 - *Clickable demos*
 - *Broad stakeholder participation*

- Goal is to have a final UI/UX design by late August 2019

Installation Surveys

- Platform and vehicle surveys to proceed through the summer to plan for new C2 device installation

- Power, comms, device location, & mounting will be reviewed at representative locations and vehicle types

- Surveys will feed into design & documentation process of new equipment

Accelerated Deployment Preliminary Design Review

- 1st Submission: 8/8/19
 - *Review Meetings: 8/15 – 8/21*
 - *Review Period: 8/8 – 9/5*
 - *Response Review: TBD*
- 2nd Submission: 9/20/19
 - *Review Meetings: TBD*
 - *Review Period: 9/20 – 10/3*
- Approval: 10/3/2019

Contents

- CS-DD-018 Accelerated C2 System Deployment Design Doc.
(Accelerated Deployment Packages 1, 2, and 3)
- CS-DD-019 Accelerated C2 System Deployment Dev. Plan
(Accelerated Deployment Package 1)
- CS-DD-002 C2 System Back Office Design Document
- CS-DD-004 Communications Network Design
- CS-DD-008 Environmental Design Specifications Document
- CS-DD-009 Equipment Design Document
- CS-DD-009a Fare Validator Design Document
- CS-DD-009c Onboard Validator Solution Design Document
- CS-DD-009d Standalone Validator Solution Design Document
- CS-DD-009g Retail Solution Design Document
- CS-DD-010-[X] ICD Design Documents
- CS-DD-012a Website, Web Portal, and Mobile App Design Doc.

- Design Review Participants
 - *Program plans and controls*
 - *Design, development, and test plans*
 - *Device specifications*
 - *Active participation from mobile app UI/UX review team*
- Site Access
 - *Agencies with legacy ERG vehicle and platform devices*
- Software Testing
 - *Coordination with BART & VenTek (VTA/SMART/Caltrain) to integrate initial builds of updated Clipper software on their devices*



Metropolitan Transportation Commission

375 Beale Street, Suite 800
San Francisco, CA 94105

Legislation Details (With Text)

File #: 19-0618 **Version:** 1 **Name:**
Type: Report **Status:** Informational
File created: 5/13/2019 **In control:** Clipper Executive Board
On agenda: 5/20/2019 **Final action:**
Title: Clipper® Mobile App Features and System

Update Board members on plans for the new Clipper mobile app for fare payment.

Sponsors:

Indexes:

Code sections:

Attachments: [4c_Mobile App Features and Design.pdf](#)

Date	Ver.	Action By	Action	Result
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Subject:

Clipper® Mobile App Features and System

Update Board members on plans for the new Clipper mobile app for fare payment.

Presenter:

Jason Weinstein

Recommended Action:

Information

Attachments:

Clipper® Executive Board

May 20, 2019

Agenda Item 4c

Clipper® Mobile App Features and System

Subject: Update Board members on plans for the new Clipper mobile app for fare payment.

Background: Transit agencies in New York, Boston, Los Angeles, Chicago, Portland and other major cities have either developed mobile apps or are in the process of developing them now. Cubic recently kicked off design of the Clipper mobile app, which is part of the next-generation Clipper System Integrator contract. The app will be completed and in customers' hands by the end of 2020.

Meeting Public Demand

Attachment A shows a high-level overview of the features that will be included at the initial launch of the next-generation Clipper mobile app. The Clipper mobile app will give customers a choice of (1) creating a virtual card that is stored on the phone or (2) using the app to manage their plastic Clipper card.

Payment with a mobile app was one of the most frequently requested new features in two recent rounds of public engagement on the next-generation system. Thanks to the new Clipper mobile app, customers will be able to create a virtual card within the app, tag their phones to readers to pay their fares, and add value to their virtual cards immediately, including through the use of digital wallets. This feature will address one of the most common complaints about the current system – that it can take days for value added online to be available to use, and even then, the customer has to tag their card to “pick up” their order. Customers will also be able to perform basic account management functions on their phones (view their card balance, block a card, manage payment information, etc.).

Some people are very happy with their plastic cards, and they will be able to continue using them along with the mobile app to help them manage their accounts. As with the virtual card, these physical card customers will be able to create an online account or register a card using the mobile app. They will be able to add value in the same time frame as value is added via the website (i.e., with a delay of one or more days), view their card balance, block a card and manage payment information. They also will be able to use digital wallets to add value to their cards, but adding value this way will still be subject to the delays in the current system.

Customers can also choose to transition their plastic card to a virtual card and continue to use the same account and login information, but this will make their plastic card no longer usable.

Embarking on Design

To meet the late 2020 launch date, MTC and Cubic have developed a schedule that includes several rounds of development and testing phases. The first phase will focus on user interface/user experience (UI/UX) design. The next-generation System Integrator contract with Cubic calls for them to use their standard mobile app solution that they have used in other cities, but there are some opportunities to adapt it for Bay Area use. Accessibility by customers with disabilities, of paramount importance to MTC and the transit operators, will be addressed in the UI/UX design.

User testing will be part of the process. Several operators - AC Transit, BART, Caltrain/SamTrans, County Connection, Santa Rosa CityBus, SFMTA and VTA - are all participating in the UI/UX process by committing to a rigorous weekly meeting schedule for roughly 12 weeks that will start June 3rd and run through August 13th. After this point, the look and feel of the mobile app will be locked down, and Cubic will begin their development of the mobile app.

Making Policy Decisions

During the mobile app development process, policy questions may arise. Two related issues have already become apparent – minimum age requirements and the ability to use discount cards with the mobile app. MTC staff recommends the following:

- Require users of the app to be at least 13 years of age to comply with the Children's Online Privacy and Protection Act of 1998. Amend the Clipper Cardholder Agreement to reflect this limitation.
- Enable youth, senior and RTC Clipper card customers to obtain a discount card the traditional way (via a plastic card) and then transfer their card to the app, taking advantage of the benefits the app has to offer.

Attachments:

Attachment A: Clipper Mobile App Functionality



Carol Kuester

Clipper Mobile App Functionality

Agenda Item 4c
Attachment A

Use the mobile app...



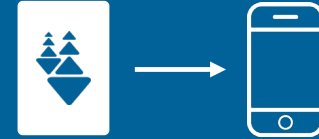
...TO SUPPLEMENT A PHYSICAL CARD

- ▶ Create web account/register a card
- ▶ Add value/passes in the same timeframe as on website
- ▶ View card balance based on recent transactions received
- ▶ Block card by end of day
- ▶ Manage account information/payment options
- ▶ Add value to card with Apple Pay, Google Pay, etc.



...AS A VIRTUAL CARD (STORED ON PHONE)

- ▶ Create a new account
- ▶ Add value/passes immediately
- ▶ View current balance, pass status and transaction history
- ▶ Block card immediately
- ▶ Manage account information/payment options
- ▶ Add value to account with Apple Pay, Google Pay, etc.
- ▶ Transfer virtual card between devices



TRANSFER FROM PHYSICAL CARD TO VIRTUAL CARD:

- ▶ Card balance and passes transfer to virtual card
- ▶ Existing log-in