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February 5, 2023

Honorable Board of Directors  
Marin County Transit District  
3501 Civic Center Drive  
San Rafael, CA 94903

**Subject: Fare Collection Study Final Recommendations**

Dear Board Members:

### Recommendation

Approve Fare Collection Study recommendations to replace Genfare Odyssey validating fareboxes with mechanical drop fareboxes and transition to automated passenger counters (APCs) for passenger counting over the next three years.

### Summary

This is the final Board item on the Fare Collection Study which evaluated technology options to replace Marin Transit's fareboxes and count passengers. Staff has completed the evaluation process and is recommending a technology package of Drop Fareboxes and Automated Passenger Counters for Board adoption. This item includes anticipated cost ranges for the recommended technology but does not include approval of funding for technology procurement; staff will request Board approval of any technology procurements that result from these recommendations. The recommended technology does not necessitate any fare policy changes; this letter summarizes fare media changes that will result from the technology for your information.

Following Board action, staff will bring the Fare Study to a close, including finalizing documentation of recommendations and a staff-level implementation plan and marketing/outreach plan that will guide staff efforts in managing the upcoming changes.

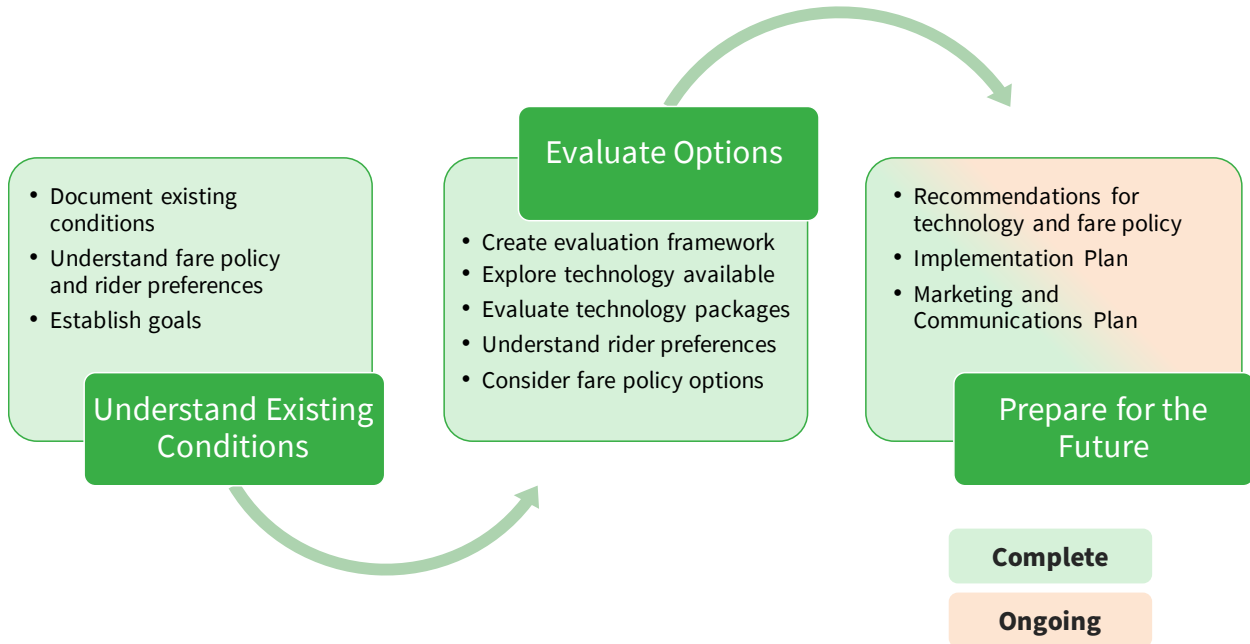
### Background

With the introduction of Clipper 2.0 in 2024 and the end of production and maintenance support for Marin Transit's current GFI fareboxes in 2025, the District has spent the last six months considering what functionality it needs from the next generation of fareboxes, how it will continue to count passengers in the future, and the appropriate fare policy to complement these decisions.

Key goals for the fare system that have served as the foundation for the evaluation of technology alternatives are: Maintain business continuity, Increase equity and inclusion, and Attract and retain riders.

The Study took form over three phases, illustrated in the figure below. The team is in the final Phase. Additional background on the study can be found in prior Board items (Sept. 2023 – Jan. 2024).

Figure 1 Fare Collection Study Phases



As follow-up to a prior fare-related item in November 2023 – your Board requested examples of the scale of service decrease that \$2.5M loss in fare revenue represents – staff prepared the information included in Attachment B.

## Discussion

### Clipper 2.0

With the introduction of Clipper 2.0, Clipper will become a much more useful and beneficial product for Marin Transit riders. This new iteration of Clipper will eliminate some of the current disadvantages and provide additional benefits for riders, including:

- **One tap:** Riders will no longer need to tap off and using Clipper will no longer carry the risk of getting overcharged for forgetting to tap off.
- **Pass products:** Marin Transit pass products will be available on Clipper.
- **Fare Capping:** Clipper will offer “fare capping” via fare accumulator products. Marin Transit will have two accumulator products – a Daily Pass Accumulator and a Monthly Pass Accumulator. Riders will be able to “pay-as-they-go” rather than paying up front for pass products. Each tap will count towards a daily and monthly pass. E.g. once a rider has paid \$5 in fare, their fare for the day will be capped and they will not be charged anything else for any trips made during the remainder of that day.
- **Credit/debit cards:** Clipper 2.0 will offer riders the option to ‘tap to pay’ with a credit or debit card enabled with a contactless chip .



- **Smartphone mobile wallet:** Clipper 2.0 will also offer riders the option to ‘tap to pay’ with a Smartphone mobile wallet (e.g. Google Pay or Apple Pay).
- **Free/Reduced Interagency Transfers:** A new regional free/reduced interagency transfer program will be available with Clipper 2.0 – all riders using Clipper will get \$2.50 off when they transfer to or from any other operator in the region. This means riders will get a free ride on Marin Transit when transferring from any other operator and will get a \$2.50 discount when transferring to any other operator.<sup>1</sup>
- **Clipper SMART:** This is not a new program but bears emphasis that any low-income transit rider can get 50% off all transit fares throughout the region when using Clipper. This discount is only available via Clipper.

When Clipper 2.0 is available, Marin Transit will transition to Clipper as the foundation of our fare system. The above features will make Clipper the most cost effective and beneficial way for our riders to pay. Further, most of these features will benefit riders across all transit systems they use; to the degree Marin Transit can help get Clipper cards into riders’ hands, it will yield benefits for them beyond their use of Marin Transit.

Staff recognizes that there are barriers to transitioning riders onto Clipper, including lack of awareness of Clipper and its benefits, lack of retail locations in Marin County to get Clipper cards, barriers for unbanked riders, and barriers to apply for discounted cards. Staff are actively working on plans to address each of these barriers as part of the implementation and marketing/outreach plans.

**Technology Recommendations**

In addition to Clipper, Marin Transit will need to continue to allow riders to use cash to pay fares into the future – this has been a foundational assumption of the Fare Study and was underscored by peer agency interviews and a rider survey conducted in Fall 2023. The team evaluated three technology alternatives that could meet this need: Drop Farebox, Registering Farebox, and Validating Farebox. Clipper was assumed as a baseline in all three packages. The Study considered the following options for counting passengers to capture the number of boardings as well as the type of rider (a.k.a. rider segment): driver tally, automated passenger counters (APCs), and validating fareboxes.

The team has completed the technology evaluation. The final recommendation for Board approval is shown in Figure 2. This figure includes anticipated cost ranges for each technology component. The variation reflects estimates provided by vendors during vendor interviews this winter. The large range for APCs reflects the fact that some Marin Transit buses are already equipped with APCs; the team is currently assessing these existing APCs to determine how many counters will need to be procured and what complementary software is needed.

Figure 2 Final Fare Study Technology Recommendation

| Technology Component | Recommended Technology              | Estimated Cost Range  |
|----------------------|-------------------------------------|-----------------------|
| Farebox              | Drop Farebox                        | \$260,000 - \$370,000 |
| Passenger Counting   | Automated Passenger Counters (APCs) | \$300,000 - \$945,000 |

<sup>1</sup> For reference, riders currently get a discount of \$1.50 transferring to or from SMART and \$1.80 Clipper or \$2.00 cash discount transferring to/from Golden Gate bus or ferry.



|                               |                                |   |
|-------------------------------|--------------------------------|---|
| <b>Rider Segment Counting</b> | Driver tally (separate tablet) | N/A (included in CAD/AVL system) <sup>2</sup> |
|-------------------------------|--------------------------------|---|

**Fare Media Impacts**

The upcoming fare collection changes at Marin Transit do not necessitate any fare policy changes – fare prices and eligibility will not change. The technology will necessitate some changes to the fare payment process and fare media – Clipper 2.0 introduces several new fare options, and removal of GFI validating fareboxes will require discontinuation of some fare media.

| Change  | Explanation  | Clipper Replacement Product    |
|---|--|--------------------------------|
| Discontinue paper change cards  | Not supported by Drop Farebox. Very low current usage.   | Load value onto Clipper card   |
| Discontinue paper day pass  | Not supported by Drop Farebox. Very low current usage.   | Day pass accumulator           |
| Discontinue paper monthly pass  | Not supported by Drop Farebox.   | Month pass accumulator         |
| Transition flash passes to Clipper (COM, youth, Marin Access Fare Assistance passes)) | Driver tally can continue to record flash pass products. Staff plans to transition these programs to Clipper over time.  | Clipper institutional products |
| Consider discontinuation of paper transfers   | Not supported by Drop Farebox. High usage by current riders.<br>Postpone decision on discontinuation of paper transfers until Clipper 2.0 is well established. Sufficient uptake may allow discontinuation of paper transfers; equitable access for Clipper and cash-paying riders will be central to this decision. | Clipper transfer               |

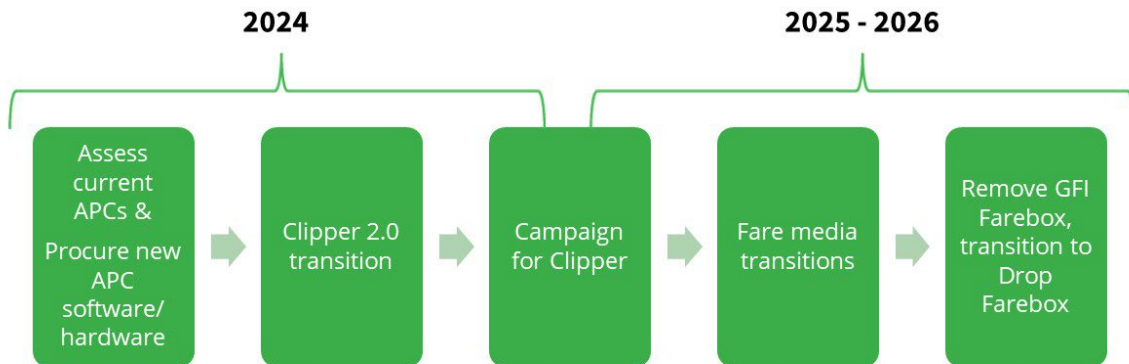
**Timeline**

Board approval of this recommendation gives staff the direction to pursue transitioning to the recommended technology options over the next three years. Staff will not move forward with making all technology or fare media transitions immediately. This provides Marin Transit with the opportunity to adjust if needed as we move forward with implementation. Staff will return to the Board to request approval of technology procurements that result from these recommendations. The first of these is anticipated later this year to begin the transition to counting riders via APCs.

<sup>2</sup> Computer-Automated Dispatch/Automated Vehicle Locator system, responsible for all onboard system integration.



Staff recommends the following phased implementation plan.



The transition to rider segment counting via tablet through CAD/AVL vendor can happen before or at same time as the transition to a Drop Farebox. The changes to fare media will occur over the next three years – in general, staff anticipates a several month or longer transition period while Clipper 2.0 gets established before making any changes to fare media that will impact a large share of riders.

**Fiscal/Staffing Impact**

None.

Respectfully Submitted,

Cathleen Sullivan  
Director of Planning

**Attachment A:** Follow-up Responses to Board Questions

February 5, 2023

**Subject: Follow-up to Board Questions Regarding Free Fares for All  
Marin Transit Fixed Route Riders**

In November 2023, staff estimated that Marin Transit collects approximately \$2.5 million annually in fixed route fare revenue.<sup>1</sup> Marin Transit's farebox recovery ratio for fixed route is currently 8.7%<sup>2</sup>. Thus, \$2.5 million is the amount of revenue loss Marin Transit would sustain if free fares were offered on fixed route buses (does not include Marin Access impacts).

This memo provides more information on examples of the scale of service decrease that \$2.5M loss in fare revenue represents. Other questions posed in that meeting will be addressed at future meetings.

***Service Implications of Fare Revenue Loss***

In response to questions from your Board, staff estimated what a loss of \$2.5 million in revenue means for service. Each of the following service cuts represents approximately \$2.5 million:

- Cancel one of our 30-minute frequency local routes (Route 17, 23, 36). These are 3 out of the 5 highest ridership routes.
- Reduce 30-minute frequency on routes 17, 22, 23, and 49 to every 60 minutes.
- Reduce 15-minute Canal frequency on Route 35 to every 60 minutes.
- Cut the whole stagecoach program plus all rural shuttles .
- Cut all school programs including the Supplemental school, Yellow Bus, and all Measure AA subsidy distributed to the other four yellow bus programs.

A key conclusion of fare assessments conducted by staff was that Marin Transit should not eliminate fares unless a secure ongoing source of funding were identified to backfill and avoid these types of service cuts. Thus, staff also explored the reverse of the question -- if Marin Transit had the good fortune to identify an additional \$2.5 million more for service provision, what would that represent in terms of service increases:

- Double the whole Stagecoach program (Routes 61 & 68)
- Change all 60-minute frequency service on Community Shuttle routes (the four 200 series routes – 219, 228, 233, 245) to 30-minute frequency
- Take 30-minute frequency service on Route 17 (Mill Valley) to every 15 minutes
- Reduce 30-minute frequency on Route 36 (Canal) to every 15 minutes
- Make all existing yellow bus service in the County free, double the Ross Valley Yellow Bus program and add another 5 yellow buses to other schools countywide
- Buy 2 new electric buses (expansion), per year (fully locally funded) or provide the local match to replace up to 10 retired buses with new electric buses, per year (with federal match)

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<sup>1</sup> Staff further estimated that the District spends approximately 10-15% of this revenue on fare collection.

<sup>2</sup> Marin Transit FY 2022/23 Annual Performance Report.