Caltrain Fare Study Update

Board of Directors
January 4, 2018
Agenda Item 13

Overview

- Study overview
- Key findings from Existing Conditions and Peer Comparison Reports
- Fare Study Rider Survey highlights
- Estimated elasticity of demand for Caltrain's current system
- Staff recommendations on scenarios of potential fare changes to test
- Update on MTC's Regional Means-Based Fare Study

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Study Overview

Study Overview

- Currently, Caltrain has no fare policy in place
- Fare Study objectives:
  - Identify potential opportunities to maximize revenue;
  - Enhance ridership; and
  - Safeguard social and geographic equity.
- Explore the trade-offs with Caltrain's current funding structure
- Promulgate policy

Key Questions for the Fare Study

- What is the current elasticity on the system?
- How much revenue can and should Caltrain generate from fares?
- Is the current fare and pass structure the right fit for Caltrain?
- How should Caltrain phase and implement changes to its fare system?

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Key Findings from Existing Conditions and Peer Comparison Reports

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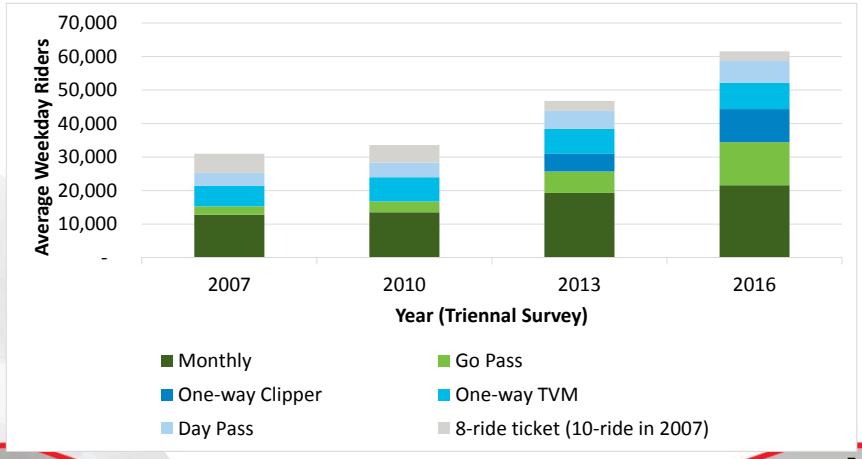
Average Weekday Riders by Fare Product, 2007 – 2016

- Ridership has doubled since 2007
- Large growth in Go Pass and Clipper Card use in recent years



Source: 2016 Triennial Survey

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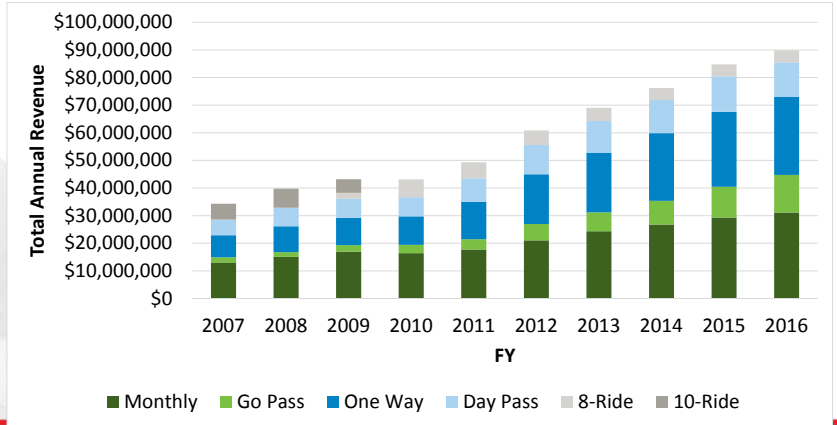
Total Revenue by Fare Product, 2007 – 2016

- Fastest growing revenue source is One-Way tickets
- Monthly Pass revenue has also had high growth



Source: Caltrain Revenue, 2007 – 2016

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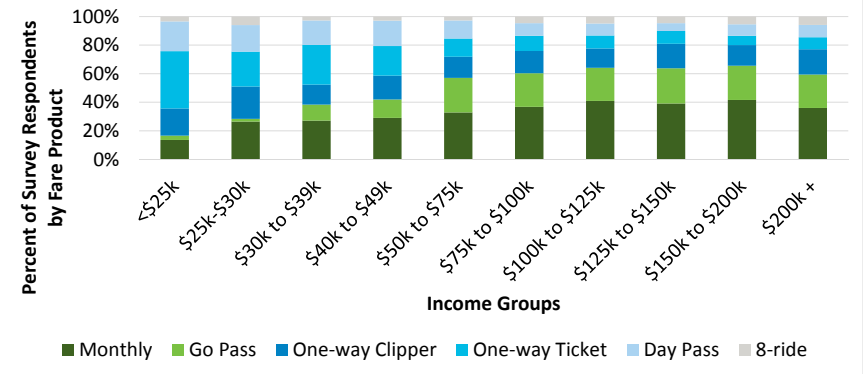
Fare Products by Annual Household Income

Fare Product	*Under $50,000*	*$50,000 - $100,000*	*$100,000 - $150,000*	*$150,000 - $200,000*	*$200,000 or more*	*Total*
One-way Ticket	38%	23%	16%	8%	15%	100%
Day Pass	29%	25%	15%	12%	19%	100%
Go Pass	5%	27%	25%	17%	26%	100%
Clipper Cash Value	17%	23%	21%	14%	25%	100%
Clipper 8-ride ticket	12%	19%	22%	18%	29%	100%
Monthly Pass	9%	24%	25%	18%	24%	100%
All Riders	**16%**	**24%**	**22%**	**15%**	**23%**	**100%**

Source: 2016 Caltrain Triennial Survey

Fare Product Use by Annual Household Income (2016)

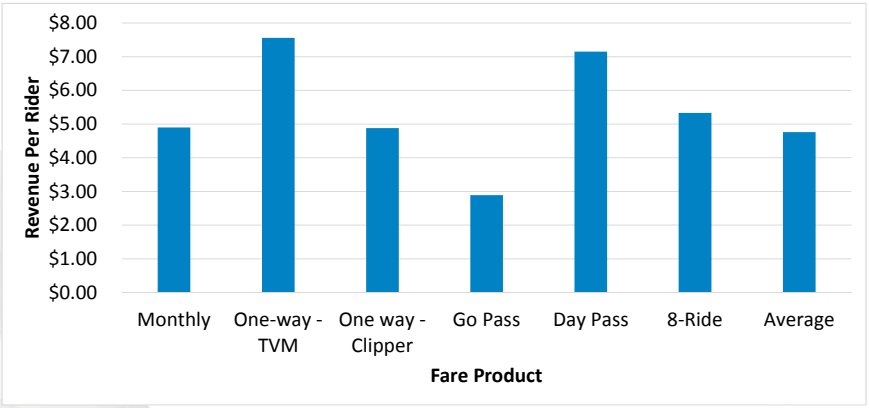
- As annual household income increases, usage of high-value products like Go Pass or Monthly Pass increases
- One-way tickets are most common in lowest income groups



Sources: Caltrain Triennial Survey 2016

October 2016 Revenue Per Rider for Full Price Products

- Revenue per rider is highest for One-way TVM and Day Pass
- Revenue per rider is lowest for Go Pass



Sources: Caltrain Triennial Survey 2016; Caltrain Fare Media Sales Based Ridership, 2016; Caltrain Revenue 2016; Go Pass Fare Revenue, 2016

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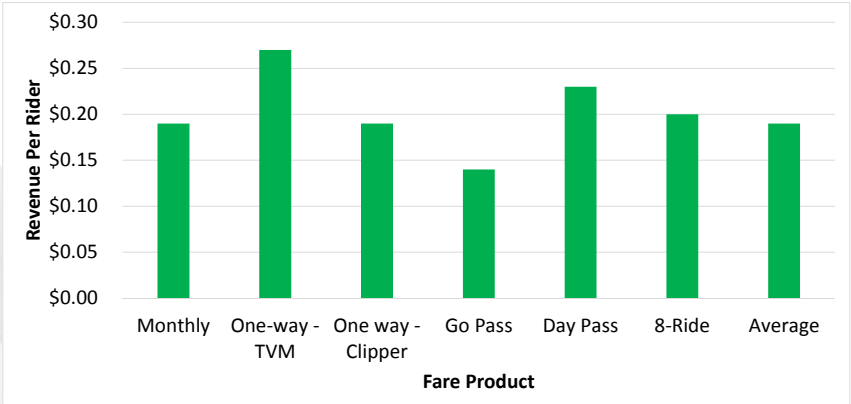
October 2016 Revenue Per Mile for Full Price Products

- Revenue per mile is highest for One-way TVM and Day Pass
- Revenue per mile is lowest for Go Pass



Sources: Caltrain Triennial Survey 2016; Caltrain Fare Media Sales Based Ridership, 2016; Caltrain Revenue 2016; Go Pass Fare Revenue, 2016

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Peer System Characteristics

- Fare structure for 19 systems studied (including Caltrain):
  - 12 operate with zone-based fare system
  - 7 operate with fare system of station-to-station pairs
- Zones-based system is regarded as easier to understand for passengers and is easier to enforce
- Station-to-station fares can be seen as more fair for passengers but harder to enforce

Sources: Agency websites, May 2017

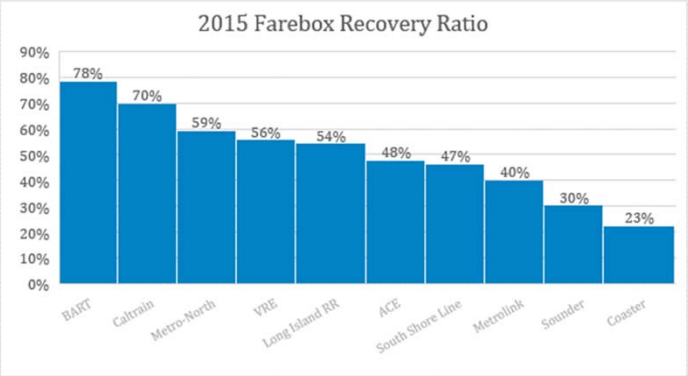
Peer System Characteristics

- Of the 19 systems studied, Caltrain has fares that are about average (as of May 2017 Clipper Cash fares):
  - 11th highest base fare (no change after FY18 fare increase)
  - 8th highest maximum fare (7th highest after FY18 fare increase)
  - 10th highest price per track mile (no change after FY18 fare increase)
- Majority of peer systems studied offer monthly pass:
  - Some discount longest trip; some discount shortest trip
  - Others do multiplier for number of trips (like Caltrain)

Sources: Agency websites, May 2017

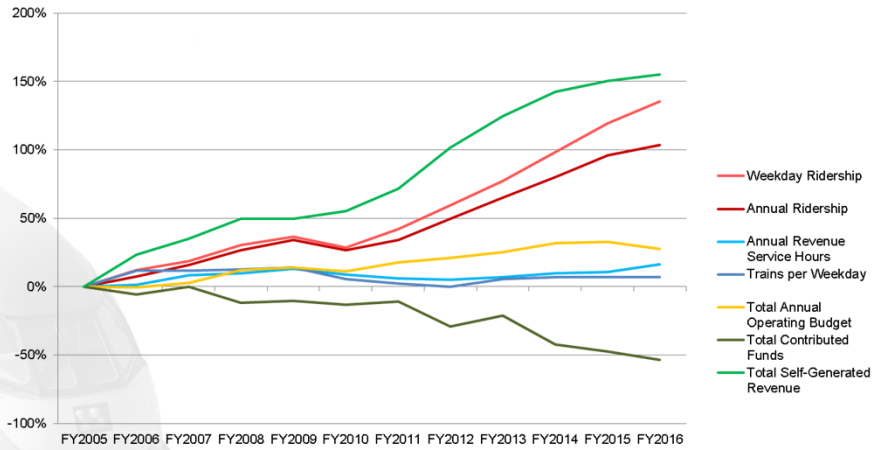
Farebox Recovery Ratio

- Caltrain has highest farebox recovery of commuter rail systems (2015)



Source: National Transit Database, 2017.

Caltrain Business Metrics



Percentage Change in Key Operating Metrics - CPI Adjusted

Fare Study Rider Survey: Offered on-board and online in September 2017

Fare Study Rider Survey

- Designed as a stated preference survey
  - Tested how passengers would respond to scenarios with changes to price of travel
- 3,135 surveys completed (75% on board, 25% online)
- Results used to build fare elasticity model and determine Caltrain's demand elasticity
- Other key results:
  - 79% of respondents have flexibility in work schedule
  - 55% of respondents somewhat or very likely to travel at different times of day to save money

Estimated Elasticity of Demand for Caltrain's System

Price Elasticity of Demand

- Demand elasticity is the relationship between the price of a good and the quantity of the good that is consumed
  - How price sensitive is a good?
- Elastic = a small change in price results in large changes in consumption (high price sensitivity)
- Inelastic = price changes have little effect on consumption (low price sensitivity)

Caltrain System's Demand Elasticity

- Calculated using Caltrain's newly developed fare elasticity model
- Preliminary modeling results:
  - **Caltrain's ridership is inelastic**
  - **Elasticity value: estimated to be -0.2**
- Fare increases are unlikely to result in steep drops in ridership on Caltrain and should be revenue positive
- Resulting policy question: how much revenue *should* Caltrain generate from its fares?

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Staff Recommendations of Potential Fare Changes to Analyze

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Goals for Caltrain's fares

Goal	Metrics
Enhance Ridership	- Average weekday ridership - Total annual ridership
Increase Operating Revenue	- Total annual revenue - Total annual revenue per passenger
Safeguard Social and Geographic Equity	- Percentage of low income riders projected vs. percentage of low income riders in Caltrain-serving counties - Caltrain's average fare per mile vs. other transit agencies' average fare per mile

Note: Title VI analysis would be updated/performed for any future proposed fare changes

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Analysis of Potential Scenarios

Potential fare changes	Relative level of implementation complexity
Price changes to Caltrain's existing fare products: - Base fare - Zone fare - Clipper discount - Monthly pass multiplier	Easy ~ 6-18 months
Introduction of a new Caltrain fare product: - Off peak discount	Intermediate ~ 2-4 years

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Analysis of Potential Scenarios

Potential fare changes	Relative level of implementation complexity
Changes to deep discount pass program: - Changing Go Pass price and/or number of minimum participants - Extending Go Pass program to include non-profits, etc. - Removing Go Pass program	Intermediate ~ 12 – 18+ months
Changing the overall fare structure: - Switching from zone-based to point-to-point system	Difficult ~ 5+ years

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Recommendations of Potential Fare Changes to Analyze

- Fare Study will analyze potential fare changes and resulting effects for Caltrain
- Seeking scenarios that achieve these goals:
  - Scenario(s) to maximize revenue
  - Scenario(s) to maximize ridership
  - Scenario(s) to maximize equity

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Recommendations of Potential Fare Changes to Analyze

- Staff's recommendation to analyze scenarios that test changes to:
  1. Introduce off-peak discount
  2. Eliminate the discount on Clipper Card
  3. Base Fare increase
  4. Go Pass

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MTC's Means-Based Fare Study

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Regional Coordination on MTC Means-Based Fare Study

- MTC study for region commenced in 2015
  - Caltrain staff is continuing to participate in regional conversations with MTC and transit operators
- Study goals:
  - Make transit more affordable for low-income residents
  - Move toward a more consistent regional standard for fare discounts
  - Develop implementation options that are financially viable and administratively feasible

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Next Steps

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Next Steps

- Test and analyze potential fare scenarios
  - Report back in January/February 2018
- Draft final report in February/March 2018
- Integrate analysis and findings into Caltrain Business Plan
- Determine next steps for Fare Study
  - Further analysis of potential fare changes
  - Develop fare policy
  - Pursue Parking Study (anticipated FY19)

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Questions?

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