

# Pass Program Study

---

## PPWG Recommendation

February 27, 2018

The logo for the Regional Transportation District (RTD) is displayed in a large, bold, red font. The letters 'R', 'T', and 'D' are stylized with thick outlines and rounded terminals. The background of the slide is a grayscale photograph of a city skyline with various skyscrapers.

# Agenda

---

- Description of Modeling Assumptions
- Overall Modeling Summary & Results
- Additional Analysis Requested:
  - EcoPass & Phasing of Price Increases/Decreases
  - Airport Fare
  - Regional Fare
  - Low Income Fare

# Description of Modeling Assumptions

---

- Modeling assumptions remain virtually unchanged from Feb. 6 meeting
- General Fare Products
  - Cash Fare = \$3.00 / \$5.25 / \$10.50
  - 3-Hour Pass **(change from Feb. 6 meeting, previously 2-Hour Pass)**
  - Stored Value discount = eliminated (\$0.00)
  - 10-Ride Ticket discount = eliminated (longer term discontinue 10-Rides)
  - Day Pass = 2X Cash Fare
  - Monthly Pass = 38X Cash Fare
  - ValuPass (Annual Pass) = eliminated (buy 12 monthly passes)
- Discount Programs
  - Senior / Disabled / Medicare = 50% discount
  - Youth Discount = 70% discount (all products)
    - Ages 5 & Under = free with fare paying customer
    - Ages 6 to 19, inclusive = 70% discount
  - Low Income = 40% discount, 185% of FPL (Stored Value only)
    - 50% adoption, launch in 2020

# Modeling Assumptions - Pass Programs

---

- EcoPass
  - Maintain current employer size buckets
  - Update select employer's SLA designation, based on review of boundaries
  - SLA prices based on utilization data, 0% discount, \$5 fee not applied
  - Linked trips priced at the Full Adult Cash Fare
  - Phasing over 3-years with maximum price increases/decreases of 20% in Years 1 & 2
- CollegePass
  - Institutions priced based on utilization data, 0% discount
  - Linked trips priced at the Full Adult Cash Fare
  - Phasing over 3-years, increases limited to 20% in Years 1 & 2, 100% of any decrease passed on in Year 1

# Modeling Assumptions - Pass Programs

---

- Neighborhood EcoPass
  - Neighborhoods priced based on utilization data, 0% discount
  - Discount customers (Senior/Disabled/Youth) utilization considered at their discounted price
  - Phasing over 3-years, increases limited to 20% in Years 1 & 2, 100% of any decrease passed on in Year 1
- FlexPass
  - 0% discount, can still use pre-tax money
- Youth Pass
  - 70% discount to eligible institutions providing passes to Youth customers
  - Fixed First Year pricing, contract-specific utilization pricing in Years 2+
- Non-Profit Program
  - Bulk Purchases of fare products at face value, 0% discount
  - Eligible non-profits able to buy low income 3-Hour and Day Passes at the low income price
- Bulk Purchases = 0% discount

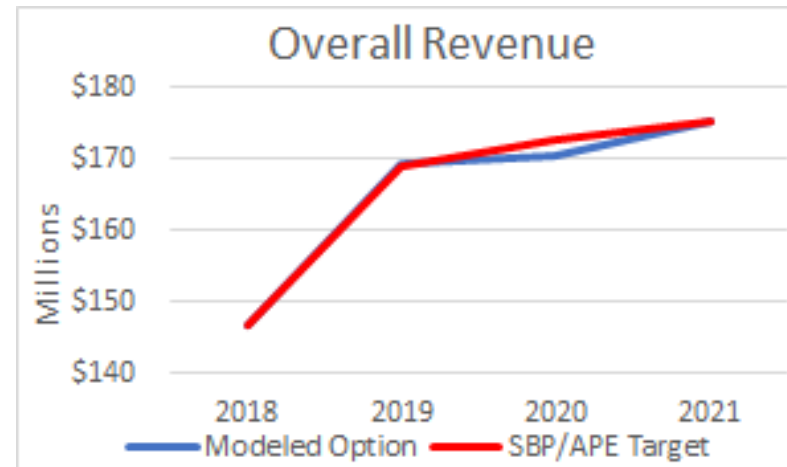
# Overall Modeling Results

- The Recommendation is slightly below (-\$2 million) the cumulative Strategic Budget Plan fare revenue target for 2019-2021
- Compared to the Baseline, the Recommendation results in a slight change in ridership. The Baseline ridership performs better than the Recommendation since the Baseline revenue is ~1% below the SBP target each year

Revenue (millions)	2019	2020	2021
SBP/APE Target	\$168.9	\$172.8	\$175.3
Modeled Recommendation	\$169.3	\$170.5	\$175.3
	<0.5%	(1%)	0%

Boardings (millions)	2019	2020	2021
Baseline Model	99.7	102.0	103.4
Modeled Recommendation	98.9	102.1	103.3
	(1%)	<0.5%	(<0.5%)

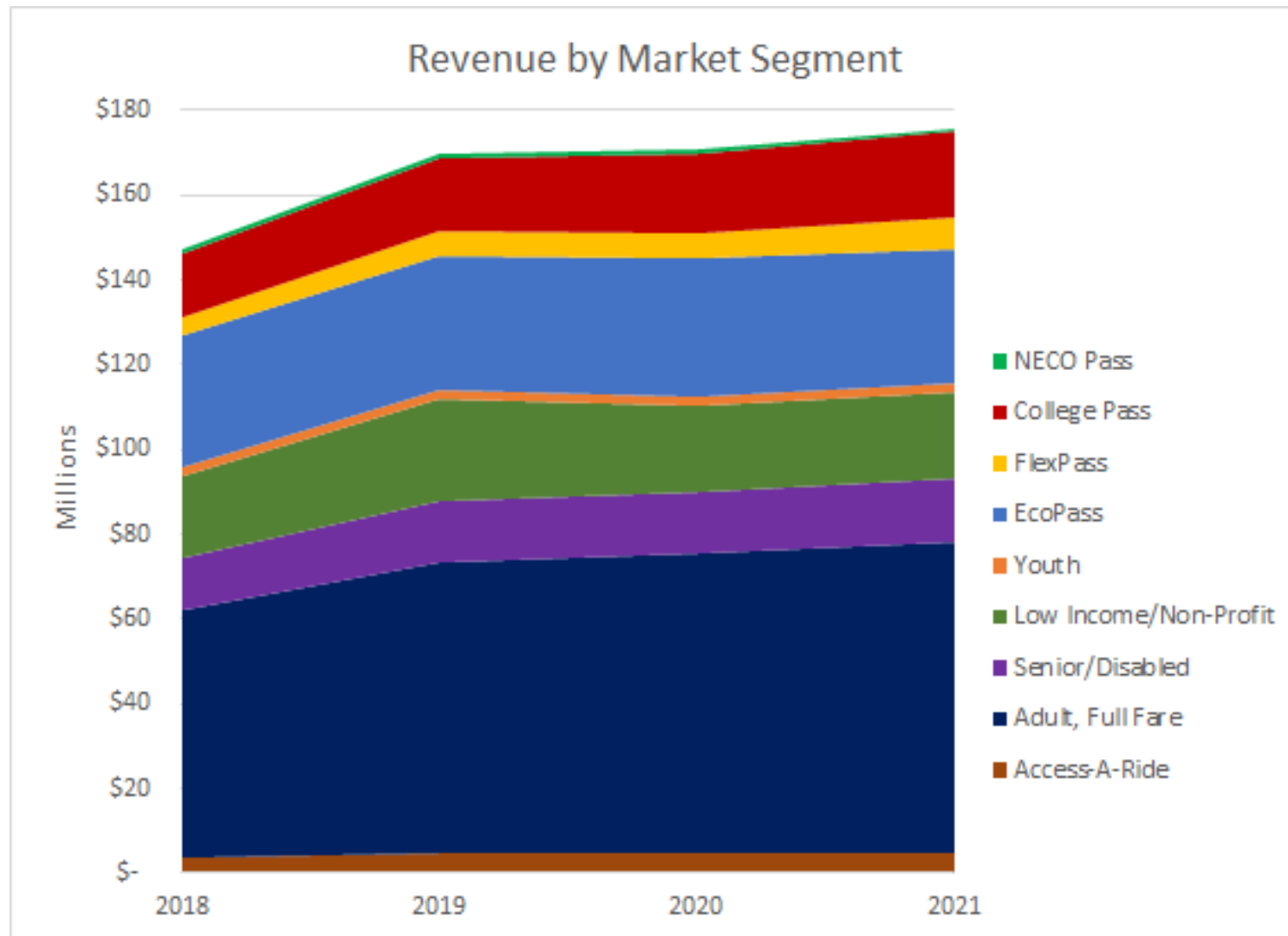
Linked Trip (millions)	2019	2020	2021
Baseline Model	58.7	60.1	60.9
Modeled Recommendation	58.2	59.9	59.9
	(1%)	(<0.5%)	(2%)



Note: Although the Recommendation is unchanged from Feb. 6, the results are slightly lower than previously reported due to past modeling error for Master EcoPass

# Overall Modeling Results

- In 2021, 59% of boardings and 80% of revenue made by Full Fare riders



# EcoPass Analysis

---

- Consultant conducted additional review of the following to determine the impacts on revenue:
  - Adjusted employer size buckets
  - Alternative phasing of price increases and decreases
- Summary of Findings:
  - No new revenue identified by adjusting employer size buckets
  - Increased revenue risk and revenue loss due to phasing in the pricing increases/decreases by less than 20%



# Employer Size Buckets

---

- Adjusted employer size buckets (shown below) do not result in a significant change in the revenue generated
- There maybe some marginal benefits from adjusting the employer size buckets:
  - Increased simplicity in pricing and administration of the EcoPass Program
  - Adjusted employer size buckets result in changes in the number of employers in an insurance pool for larger employers and thus the pricing of an SLA/employer size bucket. The greatest benefit of cross-subsidization is for employers with 500+ employees in SLAs A & B

## **Current Employer Size Buckets**

1-24 employees

25-249 employees

250-999 employees

1,000-1,999 employees

2,000+ employees

## **Adjusted Employer Size Buckets**

1-24 employees

25-99 employees

100-499 employees

500+ employees

# Phasing of Price Increases & Decreases

---

- PPWG members identified a few potential alternatives to phasing
- Proposal 1 (current assumption, Feb. 6 proposal): phase the price changes over three years with the maximum increase/decrease per year for Years 1 and 2 set at 20% with the remainder of the increase/decrease in Year 3
- Proposal 2: asymmetric phasing of the price increases and decreases (e.g., 20% increase cap with 10% decrease cap)
  - Findings:
    - The size of the increase impacts the revenue generated more than the size of the decrease
    - Allowing a 20% increase in price while limiting decreases in price to 10% results in revenue increases of \$450,000 in Years 1 and 2 and no change in Year 3

# Phasing of Price Increases & Decreases

---

- Proposal 3: cap the price increases/decreases at 10% per year
  - The analysis assumed that the phasing would still be completed within 3 years in order to complete the transition prior to next fare increase in 2022 per SBP
  - The analysis also assumed that the maximum increase/decrease would align with the average fare increase for general public fares (~16%) in Year 1, in order to avoid introducing a discount on the EcoPass compared to the general public fares
  - Findings: if the percentage increase/decrease cap in Year 1 were +/-16% and the cap in Year 2 were +/-10%:
    - In Year 1, the revenue impact is negligible
    - In Years 2 and 3, the phasing results in a revenue loss of **\$600,000** in Year 2 and **\$350,000** in Year 3
    - If the 10% cap were continued into Year 3 (rather than completing the transition to utilization pricing), revenue would be reduced by **\$3.6 million** in Year 3

# Phasing of Price Increases & Decreases

---

- Proposal 4, Part 1 (College Pass specific):
  - The maximum annual increase any College Pass program would see from face value pricing is an addition of \$20,000 to its current contract total
  - Once priced at face value, all College Pass program contracts would see a maximum 10% increase per year for future fare increases
  - Findings:
    - The components of Proposal 4 seem to be in contradiction with each other. For example, in 2016, the CU Boulder contract was \$4.1 million. At a maximum increase of \$20,000, this would result in less than a 0.5% increase per year, even if at utilization pricing currently
    - The revenue loss associated with Proposal 4, Part 1 increases over time since for some contracts the cap on the contract increases will prevent it from ever being right priced at face value of trips

---

<b>College Pass Revenue (millions)</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>
Modeled Recommendation	\$17.1	\$18.7	\$20.6
Proposal 4, Part 1	\$13.2	\$13.4	\$13.5
Diff. from Current Modeling	(\$3.9)	(\$5.3)	(\$7.1)

# Phasing of Price Increases & Decreases

---

- Proposal 4, Part 2 (College Pass specific):
  - College Pass members 19 & under receive cards that charge their trips at the youth rate until their 20th birthday, at which point their trips will be billed at the full fare face value of the trips taken
  - College Pass members who qualify as low income receive cards that charge their trips at the low income rate as long as they qualify as low income
  - Findings:
    - In 2016, the College Pass in aggregate received ~6% discount on the face value of recorded trips. Accounting for a youth or low income discount of 40%-70% would result in the reintroduction of a discount as most students would qualify for a youth or low income discount
    - In 2021, if right priced based on face value, offering a 40% discount results in a **\$7.9 million** revenue loss
  - Challenges: cost effective administration of applicable discounts and would require significant changes to the smart card system

# Airport Fare

---

- As part of the 2016 fare change, the Board adopted the policy of pricing the Airport fare based on the price Regional Day Pass, which is priced at twice the Regional fare
- Both before and after the fare change, riders were able to use their Regional passes for travel to and from the airport
- Accepting Regional passes offers affordable fare payment options for airport workers who work for an employer who does not participate in EcoPass
- As part of the fare change, the day pass multiple was reduced to twice the one-way fare from three times the one-way fare
- In order to simplify the fare structure and fare distribution, the new airport fare was proposed to be set at the Regional Day Pass instead of introducing a slightly different price for airport
- Prior to the fare change, SkyRide one-way fares were priced at \$9, \$11, and \$13. The pricing the Airport at the Regional Day Pass resulted in a flat \$9 Airport fare

# Airport Fare

---

- Introducing a separate Airport fare that is more than the Regional Day Pass would have a significant impact on the distribution of passes and fare products as a separate Airport fare would need to be introduced
- It would also prevent RTD from being able to accept the Regional Day Pass without charging an upgrade fare
- A variation of increasing the Airport fare would be the introduction of a surcharge for trips originating at the Airport. A few North American cities (Chicago, St. Louis, Vancouver) assess an additional fee for fares purchased at the airport

# Airport Fare

---

- There are challenges with implementing an airport surcharge:
  - In pricing the surcharge, it will be important to not discourage potential riders from using RTD, when considering alternative modes (e.g., taxi, ride hailing apps)
  - While it would be possible to charge a surcharge at the airport ticket vending machines, the smart card and mobile ticketing systems were not designed for location specific pricing and even if possible implementation would require significant investment and system changes
  - Since pre-purchased passes and fare paid via smart card or mobile ticketing would likely not be subject to surcharge, the surcharge would only apply to riders paying at an airport ticket vending machine
  - Currently, the number of day passes purchased at the airport ticket vending machines is 900,000/year. At a \$1.00 surcharge for adults and \$0.50 for discount fares, this option would generate **\$400,000-800,000** in additional revenue. Increased mobile ticketing and MyRide adoption would reduce revenue collected, especially as the surcharge increases



# Regional Fare

---

- Reducing the Regional fare from \$5.25 to \$5.00 would impact all Regional and Airport fares and pass programs
- Regional and Airport fares and passes account for 25% of trips in 2016
- While maintaining a 40% discount for low income riders and 70% discount for youth riders, reducing the Regional fare would result in a revenue loss of **\$2.3 million** in 2019, increasing slightly each year (-\$7.1 million cumulatively for 2019-2021)

# Low Income Fare

---

- The PPWG proposed three potential changes to the Low Income Fare Program recommendation:
  - Increasing the discount from 40% to 50% for stored value
  - Offering electronic day and monthly passes in addition to 2-hour passes
  - Enabling low income riders to purchase paper fare products with appropriate identification
- These potential changes would have an impact on the fare revenue loss associated with implementing a Low Income Fare Program

# Low Income Fare - Stored Value Only

---

- With a Local fare of \$3 and Regional fare of \$5.25, increasing the discount from 40% to 50% while still maintaining a 185% federal poverty level eligibility threshold results in an additional revenue loss of **\$2.4 million** per year, beginning in 2020 with the introduction of a Low Income Fare Program

	40% Discount (\$1.80, \$3.15, \$6.30)	50% Discount (\$1.50/\$2.60/\$5.20)	Additional Revenue Loss
Net Revenue Loss	<b>(\$3.4M)</b>	<b>(\$5.8M)</b>	<b>(\$2.4M)</b>

- Note: these revenue losses assume that only 3-hour passes on electronic fare media are available to participating low income riders (no day or monthly passes, no payment onboard/ticket vending machine with cash)
- It should be noted that the revenue loss associated with the 50/150 proposal from the Affordable Fares Task force with a 50% discount and a 150% federal poverty level eligibility threshold assuming the same 50% adoption rate and that only 3-hour passes on electronic fare media are available results in **\$4.4 million** loss in revenue in our modeling

# Low Income Fare - Electronic Stored Value, Day & Monthly

---

- The fare modeling conducted for the February 6, 2018 meeting assumed that the program would be implemented on electronic fare media and would enable a rider to only purchase 2-hour passes (now revised to 3-hours)
- The day and monthly pass are priced on the basis of the typical travel patterns of riders. Riders who make additional trips receive a discount
- Enabling low income riders to purchase low income day and monthly would result in additional revenue loss based on the discounts provided on these fare products for riders who exceed the breakeven number of trips
  - Day pass breakeven: 2 trips/day
  - Monthly pass breakeven: 38 trips/month
- Offering electronic day and monthly passes at a 40% discount would result in a net revenue loss of **\$4.9 million** per year, compared to the Baseline

# Low Income Fare - Paper Products & On-Board Purchases

---

- The fare modeling conducted for the February 6, 2018 meeting assumed that riders would be required to pre-purchase fares by loading stored value or tickets onto electronic fare media
- Enabling riders to be able to pre-purchase paper day and monthly passes as well as pay the low income fare and/or purchase low income day passes on board the bus or at ticket vending machines increases the revenue loss as the adoption rate will very likely increase
- The fare modeling initially assumed a 50% adoption rate. This was in part based on the upper end of adoption rate of other low income fare programs implemented on smart card
- Allowing riders to pay at time of boarding could result in a higher adoption rate and as a result greater revenue loss
- At an 80% adoption rate with a 40% discount, allowing riders to purchase 2-hour passes and day passes at time of boarding would increase the net revenue loss to **\$8.5 million** per year, compared to the Baseline
- It is also worth noting the the potential for fraud as riders purchase low income fares without proper identification

# Low Income Fare - 2021 Revenue Impacts

	Low Income 40% Discount				Low Income 50% Discount		
	Non-Low Income	Stored Value Only	Electronic Stored Value, Day & Monthly	Paper Products & On-Board Purchases	Stored Value Only	Electronic Stored Value, Day & Monthly	Paper Products & On-Board Purchases
Regional = \$5.25	~	(\$3.4M)	(\$4.9M)	(\$8.5M)	(\$5.8M)	(\$7.2M)	(\$11.8M)
Regional = \$5.00	(\$2.4M)	(\$3.3M)	(\$4.8M)	(\$8.4M)	(\$5.7M)	(\$7.1M)	(\$11.7M)

Note: in addition to revenue loss for Low Income riders from increasing the discount and/or changing the available fare products and payment methods, reducing the Regional Fare from \$5.25 to \$5.00 results in an additional revenue loss of **\$2.4 million** in 2021