STUDY SESSION
Tuesday, February 9, 2021
REMOTE MEETING
5:30 PM
To join the meeting: Register Here
(connect using either Chrome or Firefox web browser)
Or to listen by phone: 720-928-9299
Webinar ID: 818 3517 9175#
Webinar Passcode: 299917#

I. Call to Order

II. Northwest Rail Discussion
   • FasTracks History
   • Current FasTracks Status / Key Unfinished Elements
   • Northwest Rail
   • 2019 Unfinished Corridors Report
   • Federal Funding & Other Items
   • Open Discussion

III. Other Matters

IV. Adjourn
The following communication assistance is available for public meetings:

- Language Interpreters
- Sign-language Interpreters
- Assisted listening devices

Please notify RTD of the communication assistance you require at least 48 business hours in advance of a RTD meeting you wish to attend by calling 303.299.2307.

THE CHAIR REQUESTS THAT ALL PAGERS AND CELL PHONES BE SILENCED DURING THE BOARD OF DIRECTORS MEETING FOR THE REGIONAL TRANSPORTATION DISTRICT.
BOARD OF DIRECTORS DISCUSSION ITEM

Northwest Rail Update

Committee Meeting Date:
February 9, 2021

STAFF REPRESENTATIVE
Bill Van Meter, Assistant General Manager of Planning and Henry Stopplecamp, Assistant General Manager of Capital Programs

ATTACHMENTS:
- Northwest Rail Study Session 2-9-21 (PPTX)
- FasTracks Reference Materials-Links (DOCX)
- NWR Terms and Acronyms 2-9-21 (PDF)

Prepared by:
Nicole Carey, Administrative Specialist

Approved by:

Authorized:
Outline

- FasTracks History
- Current FasTracks Status / Key Unfinished Elements
- Northwest Rail
- 2019 Unfinished Corridors Report
- Federal Funding and Other Items
Key Points

Program faced challenges from early-on
- Cost escalation and revenue declines
  • Rapid commodities price increases
  • Sales tax declines - Great Recession
- Scope changes
  • Technology changes
  • New federal requirements
  • Local requirements

Comprehensive response to challenges
- Intensive internal and external oversight and response
- Public-Private Partnerships (P3)
Adopted Plan

- 119 miles new light rail (LRT) and commuter rail (CRT)
- 18 miles Bus Rapid Transit (BRT)
- 21,000+ parking spaces; 31 new Park-n-Rides and several expanded Park-n-Rides
- Denver Union Station Redevelopment
- 57 new rail and/or BRT stations
- Enhanced bus service – FasTracks financial support:
  - 1%/year increase in Base System bus hours through 2020
  - 1.5%/year 2021 - 2025
2004 - 2007

2004
- DRCOG reviewed and approved plan/financing/capital costs pursuant to SB 208 requirements
- RTD initiated design and environmental clearances for corridors

2006
- Responding to safety concerns, freight railroads mandated Federal Railroad Administration (FRA) compliant passenger rail vehicles operate in their rights-of-way (ROW)
  - Led to change in technology for Gold Line from LRT to CRT

2007
- Life cycle cost analysis of commuter rail technologies:
  - Electric Multiple Units (EMU) technology added significant up-front capital costs compared to Diesel Multiple Units (DMU) technology
  - EMU for East, North Metro and Gold Line
    - Lower projected operating and life cycle costs
  - DMU for Northwest
2007-2008

**2007**
- Commodities prices jumped, significantly increasing program costs by $1.2 billion
- Metro Mayors Caucus (MMC) FasTracks Task Force established to provide better understanding of construction issues and financial challenges
  - One mayor from each unfunded corridor met regularly allowing MMC to provide RTD with input into options for path forward
  - Direct and informal access to technical and financial information

**2008**
- Great Recession: sales tax receipts plummeted
- FRA required all passenger railroads install Positive Train Control (PTC) systems, adding additional capital costs
- RTD concluded that FasTracks could not be completed without significant funds infusion and/or extending schedule
Sales and Use Tax Projected vs. Actual

FasTracks and Base System Sales and Use Tax Comparison - Original Plan Projections vs. Actuals Through 2017
Cost Escalation
Response to Funding Gap

- Instituted Annual Program Evaluation (APE) - providing detailed cost and budget analyses
- Conducted extensive public outreach, presenting program delivery options given funding constraints
- Established the Fiscal Sustainability Task Force (2011) - identify opportunities for operating efficiencies and revenue enhancement to ensure RTD’s long-term fiscal sustainability
Response to Funding Gap (con’t)

Sales & Use Tax Review – Group of state and local government economic and financial advisors recommended Leeds School of Business prepare future sales and use tax forecasts.

Evaluated “Potential Critical Adjustments” – Included possible changes to original plan, while not altering corridor length location of stations or number vehicles.

Developed Risk Allocation Matrix – Identified cost saving/revenue enhancing measures resulting in additional short-term funding for the FasTracks Program.

Through today – Annual SB 208 report submittal to DRCOG.
2009-2011

2009
- RTD explored seeking tax increase to fill gap, opted not to after soliciting public input
- RTD began reaching out to private sector, seeking ideas for P3s

2011
- Held industry Forum *Transformation Through Transportation* seeking innovations for completing FasTracks
- Forum drew 200+ high-level executives from cross-section of large and small firms including engineering, construction and financial
2012

RTD Board established FasTracks Internal Savings Account (FISA):

- Beginning in 2014, cap FasTracks funding to support Base System operations at inflation rate*
- Reduce FasTracks Minimum Unrestricted Fund Balance once construction milestones reached
- Reduce FasTracks Operations and Maintenance (O&M) Fund Balance from 3 to 2 months
- Achieve project underruns on FasTracks projects currently under contract
- Sell or lease RTD properties, where possible
- Request stakeholders to increase financial participation above 2.5%
- Current FISA balance approximately $124 million

* Impact of cap on Base System Service described in Current FasTracks Status section of presentation
Private Sector Partnerships

Applied for Federal Transit Administration’s (FTA) Public Private Partnership Pilot Program (Penta-P)
- Ultimately led to $1.03 billion award in federal funds for Eagle P3 (East and Gold Line corridors)
- Eagle P3 award provided $305 million cost savings compared to RTD internal estimates
- Savings applied to remainder of program

RTD accepted unsolicited proposals for construction of I-225 and portion of North Metro

Local stakeholders contributed significant sums for local match of federal grant for Southeast Extension
Current FasTracks Status / Key Unfinished Elements
Key Points

- Substantial progress delivering program
- 4 projects unfinished and unfunded
  - Central Corridor extension
  - North Metro completion
  - Northwest Rail – Westminster – Longmont
  - Southwest Corridor extension
- Capital cost to complete $2.09 - $2.35 billion (2018 dollars, un-inflated)
- FISA action diverts funds from Base System service
To date, RTD has completed:
- 78 miles of rail
- 48 new stations
- 18 miles BRT
- 26,000 new parking spaces thru:
  • 31 new Park-n-Rides
  • 9 expanded Park-n-Rides
- Union Station Renovation
Central Corridor Extension

- Extend existing L-Line from 30\textsuperscript{th} & Downing to 38\textsuperscript{th} & Blake, adjacent to A-Line station
- Miles: 0.8
North Metro Completion

- Extend existing N-Line from 124th Ave. to SH 7
- Miles: 5.5
Northwest Rail

- Extend B Line from current terminus through Boulder to Longmont
- Miles: 35.3
Southwest Extension

Extend Southwest Corridor from existing Mineral Avenue Station to C-470 & Lucent Blvd

Miles: 2.5
### Unfinished Corridors Capital Cost Estimates

<table>
<thead>
<tr>
<th>Project</th>
<th>Cost Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northwest Rail Full Service (Westminster - Longmont)</td>
<td>$1,500 - $1,700</td>
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<tr>
<td>North Metro Completion (124th - SH 7)</td>
<td>$280 - $300</td>
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<tr>
<td>Southwest Corridor Extension</td>
<td>$170 - $190</td>
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<tr>
<td>Central Rail Extension</td>
<td>$140 - $160</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$2,090 - $2,350</strong></td>
</tr>
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</table>
**FISA Base System Bus Service**

2006 – 2013: $73.5 million from FasTracks was made available for Base System bus service (consistent with the 2004 FasTracks Plan)

2012 FISA capped post-2013 increases to the rate of inflation

- 2014 – 2025: estimated $166 million diverted from Base System bus service to the FISA

- 2019 Impact: 2019 FISA diversion ($13.4 million) represents 133,000 revenue service hours - equivalent to the service provided on routes 15 and 16 annually

- 2025 Impact: 2025 FISA diversion ($21.7 million) represents 185,000 revenue service hours - equivalent to all the local service in Boulder annually
## FasTracks Actual Capital Costs Through 2020

<table>
<thead>
<tr>
<th>Project</th>
<th>Total Project Budget (millions YOE)</th>
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<tbody>
<tr>
<td>Central Extension</td>
<td>$11.7</td>
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<tr>
<td>Denver Union Station</td>
<td>$314.2</td>
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<td>Eagle Project</td>
<td>$2,286.5</td>
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<td>Free MetroRide</td>
<td>$12.6</td>
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<tr>
<td>1-225</td>
<td>$677.1</td>
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<tr>
<td>Light Rail Maintenance</td>
<td>$17.2</td>
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<tr>
<td>Misc. Projects</td>
<td>$281.1</td>
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<tr>
<td>North Metro</td>
<td>$851.9</td>
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<tr>
<td>Northwest Rail*</td>
<td>$28.0</td>
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<tr>
<td>Southeast Extension</td>
<td>$232.4</td>
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<tr>
<td>Southwest Extension</td>
<td>$24.0</td>
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<tr>
<td>US 36 BRT</td>
<td>$190.1</td>
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<tr>
<td>West Corridor</td>
<td>$678.2</td>
</tr>
<tr>
<td><strong>Total Program</strong></td>
<td><strong>$5,620.9</strong></td>
</tr>
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</table>

* Does not include B-Line (DUS - Westminster), part of Eagle project. Includes planning, environmental and engineering work for corridor to date and funding commitment for Longmont Station.
## Snapshot of Unfinished FasTracks Corridors

<table>
<thead>
<tr>
<th>Corridor</th>
<th>Project Description</th>
<th>Miles</th>
<th>Opening Year Forecast (Daily Ridership)</th>
<th>Horizon Year Forecast (Daily Ridership)</th>
<th>Capital Cost (2018 dollars)</th>
<th>Annual O&amp;M Cost (2018 dollars)</th>
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</thead>
<tbody>
<tr>
<td>Central Rail Extension</td>
<td>30th &amp; Downing - 38th &amp; Blake</td>
<td>0.8</td>
<td>3,200</td>
<td>4,100</td>
<td>$140 M</td>
<td>$2.6 M</td>
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<tr>
<td>North Metro Completion</td>
<td>124th Ave - SH 7</td>
<td>5.5</td>
<td>3,100</td>
<td>3,900</td>
<td>$280 M</td>
<td>$3.6 M</td>
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<tr>
<td>Northwest Rail</td>
<td>Westminster - Longmont</td>
<td>35.3</td>
<td>4,100</td>
<td>5,400</td>
<td>$1,500 M</td>
<td>$20.6 M</td>
</tr>
<tr>
<td>Southwest Extension</td>
<td>Mineral Ave - C-470 &amp; Lucent Blvd.</td>
<td>2.5</td>
<td>3,700</td>
<td>4,100</td>
<td>$170 M</td>
<td>$3.2 M</td>
</tr>
</tbody>
</table>
Northwest Rail
Key Points

- Extensive Coordination with BNSF starting in 2003 through present

Studies and Initiatives

- 2010 Environmental Evaluation (EE) completed
- 2011 BNSF Planning and Support Agreement
- 2014 Northwest Area Mobility Study (NAMS)
- 2017 – present Peak Service Plan

- Studies confirm capital improvements and cost estimates
- Strong stakeholder support for Corridor
- Strong stakeholder interest in Peak Service Plan
Original Estimate

- 2004 FasTracks Plan cost estimate: $565 million (Year of Expenditure - YOE)
- Estimated completion date: 2015
- Service: 15-minute peak/30-minute off-peak Denver to Boulder; 30-minute all day Boulder to Longmont
- Double-track corridor Denver to Boulder; single-track Boulder to Longmont
- Technology: Locomotive-hauled coaches
Background

- Northwest Rail only FasTracks corridor where RTD not able to secure the ROW
- BNSF will continue to operate freight traffic on corridor
- Currently single-track operation
- Full corridor build-out requires double track
- Passenger service would require
  - Shared double track with BNSF operations
  - Crashworthy, FRA compliant vehicle
  - Signalization and PTC
  - Quiet Zones
2010 Northwest Environmental Evaluation

Scope
- Evaluated environmental impacts
- Completed preliminary engineering
- Updated cost estimates

Assumed DMU technology

Findings:
- Cost estimate: approximately $1 billion (YOE)
- Double-track required for entire corridor
- 30-minutes maximum frequency given system constraints at DUS “throat”
- 30-minute peak period service/1-hour off-peak service
- 55 trains per day/bi-directional service
2010 Northwest Environmental Evaluation Stations

Finalized station locations as follows:
- 72nd Avenue (Westminster Station)
- Church Ranch (Westminster)
- Flatiron (Broomfield)
- Downtown Louisville
- Boulder Junction
- Gunbarrel (Boulder)
- Downtown Longmont

Also evaluated additional stations to be paid by others as follows:
- 88th Avenue (Westminster)
- 116th Avenue (Broomfield)
- 63rd & Arapahoe (Boulder)
- SH 119 & Hover St. (Longmont)
BNSF Coordination

2003 - RTD and BNSF initiate formal discussions with Letter of Understanding

2009 - Memorandum of Understanding

2010 - Contract Agreement to allow for construction of G-Line and current B-Line to Westminster Station
   - $86 million for ROW and relocations Union Station to Pecos
   - $9 million Pecos to Westminster Station

2011 - Planning and Support Agreement to prepare 30% design for Westminster to Longmont section $650,000
2011 BNSF Planning & Support Agreement

BNSF analyzed two scenarios
- Peak-only Service: 18 trains per day, bi-directional service with 20-minute peak-period service, no off-peak service
- FasTracks planned service: 55 trains per day, bi-directional service with 30-minute peak frequencies and 1-hour off-peak frequencies

Costs provided by BNSF included the following:
- Upfront costs for purchasing operating time slots in perpetuity
- Double tracking entire corridor

Costs did not include annual operating and maintenance costs
2011 Planning & Support Agreement Corridor Cost Estimate

Cost Estimate – BNSF Access and Capital Improvements:

- Peak only service (18 trains/day): $410 million (2011$)
- Full Service (55 trains/day): $535 million (2011$)

Costs Estimate – Additional RTD-Required Capital Improvements

- RTD corridor improvements: $314 million (2011$)
- Stations/Park-n-Rides: $129 million (2011$)
- Vehicles & Maintenance Facility: $57 million (2011$)

2012 APE estimated total cost of $1.035 billion (2011$)
2014 Northwest Area Mobility Study (NAMS)

- Collaborative process with RTD, Northwest Stakeholders, Colorado Department of Transportation (CDOT) and DRCOG

- Scope evaluated feasibility:
  - Constructing Northwest Rail in segments
  - Reaching Boulder via extending North Metro Corridor through RTD-owned UP Boulder Branch
  - Reaching Longmont via extending North Metro Corridor to Longmont, generally along new ROW

- Validated cost estimates for Northwest Rail Corridor

- NAMS funded with base system dollars
2014 NAMS - Findings Related to Northwest Rail

Construct rail in segments: Feasible, but would require significant passing tracks to allow for end-of-line freight train storage

Alternate routing findings:
- North Metro Corridor to Boulder via UP Boulder Branch
  - Significantly lower ridership - bypasses many Northwest communities, parts of Westminster, Broomfield and Louisville
- North Metro Corridor to Longmont via new ROW
  - Significantly lower ridership - bypasses communities noted above and Boulder. Additionally, new ROW would have to be established in rapidly growing area

BRT network could provide considerable mobility benefits at lower price than rail
# 2014 NAMS Segment Results

<table>
<thead>
<tr>
<th>Source: NAMS Report, 2014</th>
<th>Weekday Ridership* (2035)</th>
<th>Capital Cost in millions of 2013 dollars</th>
<th>Annual cost per trip (Operating and Capital Cost)</th>
<th>Travel time from DUS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Westminster to 116th Street Broomfield</td>
<td>Broomfield to Louisville</td>
<td>Louisville to Boulder</td>
<td>Full Corridor</td>
</tr>
<tr>
<td>2014 NAMS Segment Results</td>
<td>2,100 – 3,400</td>
<td>1,700 – 1,800</td>
<td>2,000 – 2,100</td>
<td>9,300 – 10,800</td>
</tr>
<tr>
<td></td>
<td>$557 - $681</td>
<td>$159 - $194</td>
<td>$241 - $295</td>
<td>$1,156 - $1,413</td>
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<tr>
<td></td>
<td>$36.19</td>
<td>$15.34</td>
<td>$26.10</td>
<td>$23.42</td>
</tr>
<tr>
<td></td>
<td>27 min</td>
<td>38 min</td>
<td>52 min</td>
<td>71 min</td>
</tr>
</tbody>
</table>

*Ridership projections have been revised subsequent to the NAMS project and updated forecasts are now uniformly lower.*
2014 NAMS Consensus

In April 2014, Northwest Stakeholders approve Consensus Statement of Prioritized Improvements:

1. Completion of remaining US 36 commitments
2. Advance arterial BRT – SH 119 highest priority corridor followed by US 287 or SH 7
3. I-25 Reverse Commute solutions
4. Northwest Rail Completion
5. Remaining arterial BRT corridors
Northwest Rail Full Service Summary

- Full Corridor build-out from current B-Line terminus at Westminster Station to Longmont
- All-day service – 55 trains per day, bi-directional service
- Frequencies:
  - 30-minutes peak/60 minutes off-peak
- Infrastructure investments
  - Full double-track corridor
  - FRA compliant DMU vehicles
  - Signalization and PTC
  - Quiet Zones
  - New DMU Maintenance Facility

Stations as follows:
- Church Ranch (Westminster)
- Flatiron (Broomfield)
- Downtown Louisville
- Boulder Junction
- Gunbarrel (Boulder)
- Downtown Longmont

- Capital Cost: $1.5 billion (2018$)
- Forecast Daily Ridership: 4,100 (opening year)/5,400 (2035)
- Annual O&M Cost: $20.6 million (2018$)
2017 - Present: Northwest Rail Peak Service Summary

- 2017 - stakeholders requested RTD consider Peak Service scenario
- Intent to significantly reduce capital and operating costs and accelerate investment in Corridor
- Proposal: extend corridor from current B-Line terminus at Westminster Station to Longmont
- To minimize investment, corridor would retain single-track configuration with passing tracks for freight

- RTD Stations as follows:
  - 88th Avenue (Westminster)
  - 116th Avenue (Broomfield)
  - Downtown Louisville
  - Boulder Junction
  - Downtown Longmont

- Forecast Daily Ridership: 800 (opening year)/1,400 (2035)
- Capital Cost: $708.2 million (2018$)
2017 – Present: Northwest Rail Peak Service Summary

Peak service would provide:
- 3 one-way trains from Longmont to Denver in morning peak
- 3 one-way trains from Denver to Longmont in afternoon peak.
- Service frequency: 30 minutes – minimizes operational impacts to BNSF freight operations

Infrastructure investments
- FRA compliant DMU vehicles
- Signalization and PTC
- Quiet Zones
- New DMU Maintenance Facility
Current Status

BNSF/RTD/Stakeholder Meeting to discuss Peak Period Service: February 2020

Topics discussed:
- BNSF’s operational modeling assumptions
- Capital improvements required to run passenger service
- PTC requirements
- Potential passing track locations for freight

BNSF model indicates passenger service can work in corridor; however, RTD responsible for capital improvement costs to mitigate impacts to freight

RTD responsible for constructing stations, platforms, and pedestrian crossings, etc.
2019 Unfinished Corridors Report
Key Points

- Board Resolution confirms commitment to complete FasTracks
- Report tested funding scenarios
- Severe constraints on FasTracks budget absent new funding sources
FasTracks Board Resolution

April 16, 2019 - Reaffirmed Board commitment to completing FasTracks

Directed staff to research all reasonable cost-saving measures for construction and operations for unfinished corridors including creative funding mechanisms

Staff prepared multiple FasTracks funding scenarios based on Board’s direction
Assumptions in FasTracks Funding Scenarios

- Financial scenarios used most recent CU Leeds School of Business (March 2019) sales and use tax forecast
- Forecasts will change as future updates are prepared
- The forecasts presented focus on the FasTracks financial plan
- Financial scenarios subject to change as actuals and forecasts are updated
- Scenarios assume ongoing operations, maintenance and vehicle replacement costs
Observations

- No Base System funds are available to support the unfinished corridors.
- There is no capacity to support Base System bus or rail service increases.
- The projected Base System unrestricted fund balance under all scenarios presented was negative between the years 2021 and 2049.
## Snapshot of Unfinished Corridors

Capital, Annual O&M Costs, and Ridership of Unfinished Corridors

<table>
<thead>
<tr>
<th>Corridor</th>
<th>Project Description</th>
<th>Daily Ridership Opening Year Forecast</th>
<th>Capital Cost (millions in 2018$)</th>
<th>Annual O&amp;M (millions in 2018$)</th>
</tr>
</thead>
<tbody>
<tr>
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<td>30&lt;sup&gt;th&lt;/sup&gt; &amp; Downing – 38&lt;sup&gt;th&lt;/sup&gt; &amp; Blake</td>
<td>3,200</td>
<td>$140.0</td>
<td>$2.6</td>
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<td>124&lt;sup&gt;th&lt;/sup&gt; Ave – SH 7</td>
<td>3,100</td>
<td>$280.0</td>
<td>$3.6</td>
</tr>
<tr>
<td>Northwest Rail</td>
<td>Peak Service Plan</td>
<td>800</td>
<td>$708.2</td>
<td>$14.0</td>
</tr>
<tr>
<td>(Westminster – Longmont)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Full Service</td>
<td>4,100</td>
<td>$1,500.0</td>
<td>$20.6</td>
</tr>
<tr>
<td>Southwest Extension</td>
<td>Mineral Ave – C-470 &amp; Lucent Blvd.</td>
<td>3,700</td>
<td>$170.0</td>
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</tr>
</tbody>
</table>
## FasTracks Funding Scenarios

Three concepts modeled, each with various scenarios:

1. No New Bonding Authority or Funding
2. TABOR Election for Additional Bonding
3. TABOR Election with Bonding and Sales and Use Tax Increase

Notes:
- Scenarios with sales tax increase assumed 2021 election
- Scenarios tested various corridor sequencing
- Reference 2019 FasTracks Initial Unfinished Corridors Report for full details
Funding Scenarios Conclusion

Earliest Year Northwest Service Could be Provided:

- Without additional sales tax revenue:
  - 2042 Peak Service
  - 2046 Full Service

- With additional sales tax revenue (0.1% or 0.15%)
  - 2026 Peak Service
  - 2032 Full Service
FasTracks Cashflow 2021-2026

Assumes that no additional FasTracks projects enter revenue service
Reserves necessary to support program in 5 of 6 years
2021 Example: Expenditures exceed revenues by $42,106,000 – will be covered with reserves
Annual Debt Service represents between 65 and 70 percent of annual sales tax revenue
$18,520,000 FasTracks program deficit after using Reserves, options to cover:
- FISA funds
- Base System funds
Federal Funding and Other Items
Key Points

- No unfunded corridor competitive for federal New Starts/Small Starts grant funding
- Partnership opportunities
New Starts/ Small Starts Awards

New Starts/Small Starts are national, competitive grant programs providing matching funding support for major capital fixed guideway investments.

Initial financial plan anticipated federal funding through New Starts for East (A-Line), West (W-Line) and Gold (G-Line) lines:
- 2004 FasTracks financial projected $815 million in FTA funding for these projects.

RTD successfully competed for FTA New Starts funding for all 3 Corridors assumed in 2004:
- RTD was also awarded Small Starts funding for Southeast Rail Extension, in part due to significant local jurisdiction financial support.
- Actual FTA New Starts and Small Starts funding total to date over $1.4 billion.
2016 New Starts / Small Starts Analyses

- Staff analyzed unfinished corridors for potential FTA grant funding
- FTA rates projects on 5-point scale, from Low to High
- A project must have at least Medium rating for project justification and local financial commitment to qualify
- Based on current FTA criteria:
  - Central Corridor Extension: only corridor to potentially meet project justification criteria with Medium rating
  - North Metro Completion and Northwest Rail: Low ratings for project justification
  - Southwest Extension: Medium-Low project justification rating
  - All Corridors: Low rating for local financial commitment due to FasTracks budget constraints
Southwest Chief & Front Range Passenger Rail

Commission’s Purposes (SB 17-153)

- Work to preserve Amtrak’s Southwest Chief service across southeast Colorado
- Facilitate the development of Front Range Passenger Rail service

Recent Progress

- Recently completed Front Range Passenger Rail Study
  - Service Development Plan
  - Pre-National Environmental Policy Act (Pre-NEPA) planning
  - Policy and governing structure
  - Extensive public and stakeholder engagement
  - Partnership with CDOT
Front Range Passenger Rail Study

- Map depicts alignments recommended for further study
- NW Rail alignment strong candidate based on ridership and support
- Opportunity to advance NW Rail or North Metro alignments in partnership with CDOT and Commission
2020 Amtrak Proposed Service

Amtrak proposes new Network Modernization Program as part of federal transportation reauthorization. Funding up to 100% of capital and initial operating costs of new corridor service. Front Range Corridor identified as strong candidate. 3 round trips daily, Fort Collins—Boulder—Denver—Colorado Springs—Pueblo with intermediate stops.
Summary

- FasTracks impacted by cost escalation, scope changes, Great Recession
- Capital cost to complete 4 unfinished corridors: $2.09 - $2.35 billion (2018 dollars)
  - FISA action diverts funds from Base System service
- Northwest Rail presents unique challenges and opportunities
  - Unique constraints
  - Strong continued interest and support
- FasTracks financial constraints severe
  - Absent new funding, earliest RTD could open Northwest Rail is in the 2040s
  - Northwest Rail not eligible for FTA funding
- Partnership opportunities
Links to Reference Materials

- FasTracks Program Overview June 2018
- Unfinished Corridors Report June 2019
- Staff Q&A Responses to Unfinished Corridors Report June 2019
- Northwest Rail Corridor Final Environmental Evaluation
- Northwest Area Mobility Study
### Abbreviation or Term | Definition
--- | ---
APE (Annual Program Evaluation) | Annual effort started by RTD in 2007 to re-evaluate and adjust all FasTracks project cost estimates and financial forecasts to current market conditions.

Base System | RTD nomenclature for the bus and rail services that were existing and committed prior to FasTracks, generally supported by the then-existing 0.6% sales and use tax.

BRT (Bus Rapid Transit) | A bus transit mode that combines key operating qualities of rail transit with the flexibility of buses. It can operate on bus-only lanes, HOV lanes, expressways, or ordinary streets. Vehicles are typically designed to allow rapid passenger loading and unloading, often at multiple doors.

CDOT (Colorado Department of Transportation) | The state of Colorado’s department of transportation.

CRT (Commuter Rail Transit) | Commuter rail is a passenger train that can be operated by diesel fuel, overhead electrical wires or a combination of the two. This transit mode is used for local or regional service, typically of longer distances. Commuter rail vehicles have a heavier frame and larger body than light rail vehicles, and usually operate in an existing rail corridor.

DMU (Diesel Multiple Unit) | Diesel powered commuter rail trains.

DRCOG (Denver Regional Council of Governments) | Association of county and municipal governments in the Denver metro area working together to address regional issues. DRCOG serves as the designated metropolitan planning organization for the Denver area and oversees the planning process for federal transportation funds.

EMU (Electric Multiple Unit) | Electric powered commuter rail trains that operate in pairs.

Eagle P3 (Eagle Project) | The commuter rail project constructed through a Public-Private partnership that delivered and operates the RTD’s University of Colorado A-Line, the G Line and the B Line.

EE (Environmental Evaluation) | RTD’s name for a comprehensive study and documentation evaluating the social, environmental and economic impacts of a major capital project and identifying mitigation measures to be implemented. Used when there are no federal dollars associated with a project, to assure a level of analysis like that which would be performed under a federal National Environmental Policy Act action.

FRA (Federal Railroad Administration) | A federal agency (part of the U.S. Department of Transportation) that oversees certain aspects of rail services, especially safety and administers certain related funding programs.

FTA (Federal Transit Administration) | A federal agency (part of the U.S. Department of Transportation) that provides financial, safety and technical oversight and assistance to local public transportation systems. FTA is the primary federal oversight and funding administration for RTD.

FISA (FasTracks Internal Savings Account) | Adopted by the RTD Board of Directors in 2012, the FISA is a savings account comprised of eight revenue-generating and cost-saving items designated to provide funding to build unfinished FasTracks corridors.

LRT (Light Rail Transit) | Passenger rail cars singly or in short trains on fixed rails in right-of-way that is often separated from other traffic for part or much of the way. Light rail vehicles are typically driven electrically with power being drawn from an overhead electric line.
<table>
<thead>
<tr>
<th><strong>MMC (Metro Mayors Caucus)</strong></th>
<th>The Metro Mayors Caucus is a voluntary and collaborative regional association of mayors representing 38 cities and towns from across the Denver metropolitan region. MMC provides a forum for regional dialogue from which consensus solutions might emerge.</th>
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<tr>
<td><strong>NEPA (National Environmental Policy Act)</strong></td>
<td>National environmental law enacted in 1969. Established requirements for identifying environmental impacts and mitigation measures for projects which either receive federal funding or when a federal agency is a key participant in the project’s development. Increasing levels of complexity and analysis include: CatEx (Categorical Exclusion), EA (Environmental Assessment) and EIS (Environmental Impact Statement).</td>
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<td><strong>NAMS (Northwest Area Mobility Study)</strong></td>
<td>In 2013, RTD initiated NAMS. The purpose of the study was to develop consensus among RTD, the Colorado Department of Transportation (CDOT) and the Northwest area stakeholders, including local jurisdictions and businesses, on cost effective and efficient mobility improvements to serve the Northwest area. A NAMS Final Consensus Statement was accepted by the RTD Board in 2014.</td>
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<td><strong>O&amp;M (Operating and Maintenance)</strong></td>
<td>Term referring to the comprehensive operating and maintenance requirements for a project or system.</td>
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<td><strong>Penta-P (Public-Private Partnership Pilot Program)</strong></td>
<td>Penta-P was authorized by FTA in 2007 to explore the advantages and disadvantages of public private partnerships for new fixed guideway projects. One objective was to reduce time and costs associated with the New Starts program. The RTD Eagle project was one of three projects selected as a Penta-P pilot project.</td>
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<tr>
<td><strong>PTC (Positive Train Control)</strong></td>
<td>Communication/processor-based train control technology designed to prevent train-to-train collisions, over speed derailments, incursions into established work zone limits, and the movement of a train through a main line switch in the improper position.</td>
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<td><strong>ROW (Right of Way)</strong></td>
<td>An easement, a privilege to pass over the land of another.</td>
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<td><strong>SB 208 (Senate Bill 90-208)</strong></td>
<td>SB 90-208 states that the RTD Board shall take no action relating to the construction of a regional fixed guideway mass transit system until such system has been approved by the designated Metropolitan Planning Organization (DRCOG), including method of financing and the technology selected.</td>
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<tr>
<td><strong>TABOR (Taxpayers Bill of Rights)</strong></td>
<td>Article X, Section 20, of the Colorado Constitution, which limits governmental revenues and spending. Key provisions: limits year-to-year spending increases to specified growth rates, with provisions for voters to remove the limits; requires voter approval for all new taxes or rate increases for existing taxes; requires voter approval for all issuance of new debt; requires establishment of a contingency reserve equal to 3% of annual spending.</td>
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<tr>
<td><strong>YOE (Year of Expenditure)</strong></td>
<td>YOE describes the cost of an expenditure in the year it will be realized, rather than the year it is estimated. YOE typically includes inflation factors to incorporate the higher cost of project construction and project operations in a future year.</td>
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