Welcome to Greater Denver Transit

September 14th, 2022

RTD FasTracks – Union Station Redevelopment
Denver
In 2014, the Denver Union Station (DUS) redevelopment project was completed with 8 new heavy rail tracks connected to the newly relocated light rail platforms to the north via an underground concourse and bus hub.

Campaigns Update

E-Bikes on RTD

Read about our 'E-Bikes on RTD' campaign & sign the petition.

E-Bikes on RTD

RTD Advert Watch

Read about our 'RTD Advert Watch' campaign & sign the petition.

RTD Advert Watch

RTD Bike Shelters

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RTD Bike Shelters

Boulder Bus Station

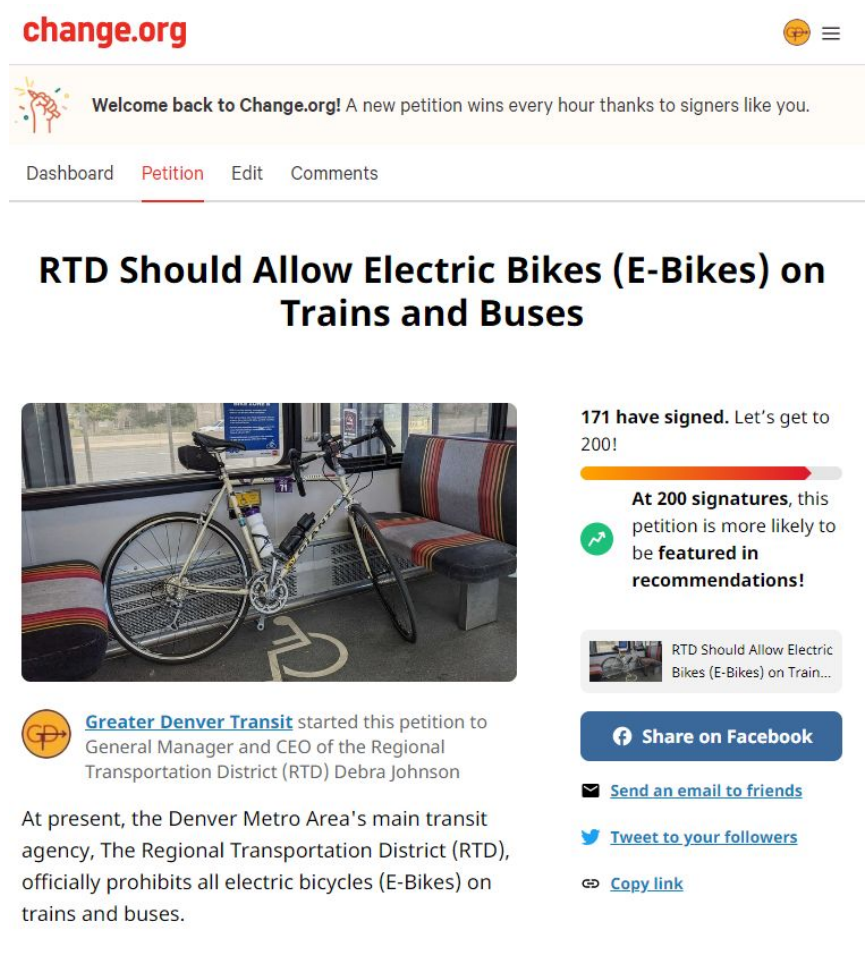
Read about our 'Boulder Bus Station' campaign & sign the petition.

Boulder Bus Station

RTD Commuter Rail Displays

Read about our 'RTD Commuter Rail Displays' campaign & sign the petition.

RTD Commuter Rail Displays



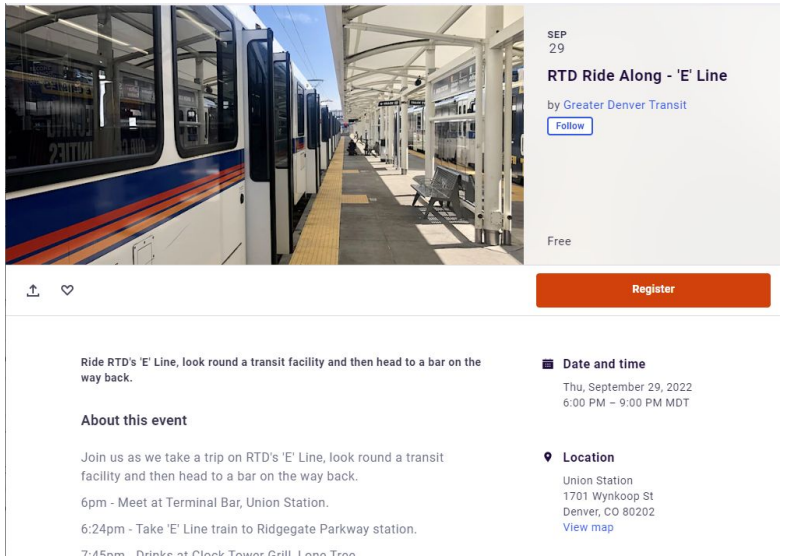
Events Update

Key Events:

1. Park(ing) Day - FRIDAY, Sep 16th, 12pm - 7:45pm
2. E Line Ride-Along - Thu Sep 29th, 6pm
3. Monthly Meetings - 6pm, 2nd Wed of the month

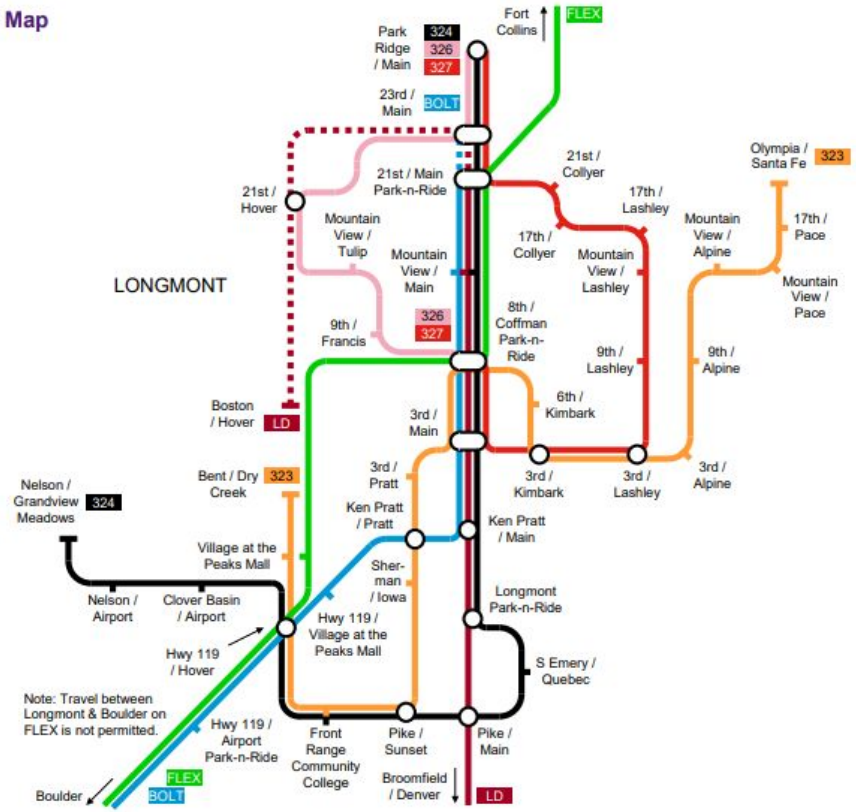
Other:

1. RTD Rail Challenge
2. Details Soon: Downtown Denver Bus Relay



Projects Update

Longmont Transit Map



RTD Bus Services

- BOLT Boulder / Longmont
- LD Longmont / Denver
- 323 Skyline Crosstown
- 324 Main Street
- 326 Westside Crosstown
- 327 Eastside Crosstown

Transfort Services

- FLEX Boulder / Fort Collins

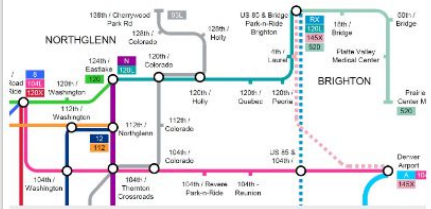
www.greaterdenvertrainsit.com

Note: This map is unofficial & is not endorsed by RTD. For clarity, not all stops or lines shown.

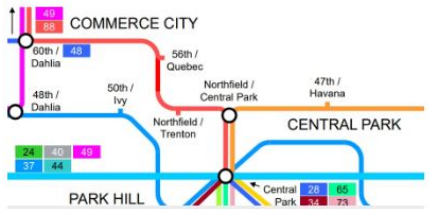
August 2022

RTD System Maps

The rail and bus systems on one easy map, broken down by area. Produced by Greater Denver Transit.

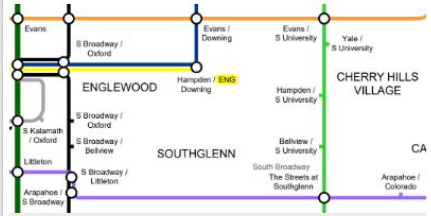


Thornton, Northglenn & Brighton Map



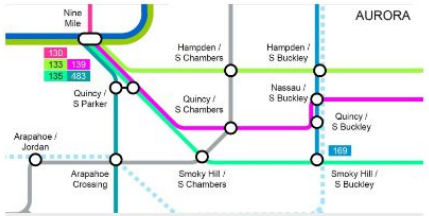
Central Park Map

Montbello & Green Valley Ranch Map



Englewood & Highlands Ranch Map

Aurora Map



South East Denver Map

Denver – Golden Schedule

Combined W and 16 schedule.

To Golden

From Golden

Visit Golden

Things to do and see in Golden.

Visit Golden

Front Range Passenger Rail Through Denver Union Station and Boulder

RTD FasTracks – Union Station Redevelopment
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September 2022

About Front Range Passenger Rail

CDOT is leading the development of an $2-15B+ intercity rail route that connects the Front Range, but has yet to select a preferred route.

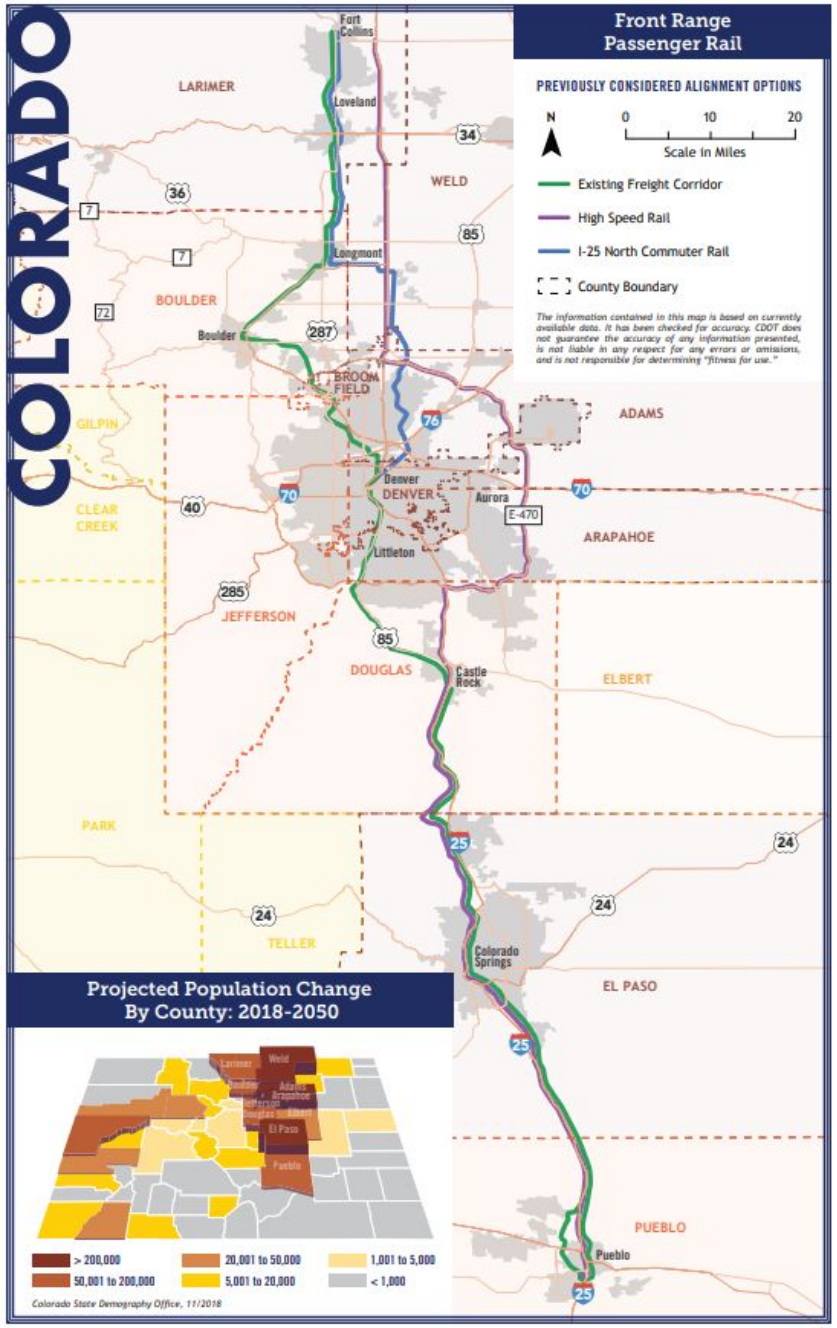
Heavy rail from Fort Collins - Denver Metro - Pueblo.

Possible extensions to Cheyenne & Greeley.

3 primary route alternatives are being explored.

One of these bypasses Central Denver and Boulder which adds substantial risk to ridership potential & political support.

Study work so far has separate work streams for rail north vs. south of Denver.

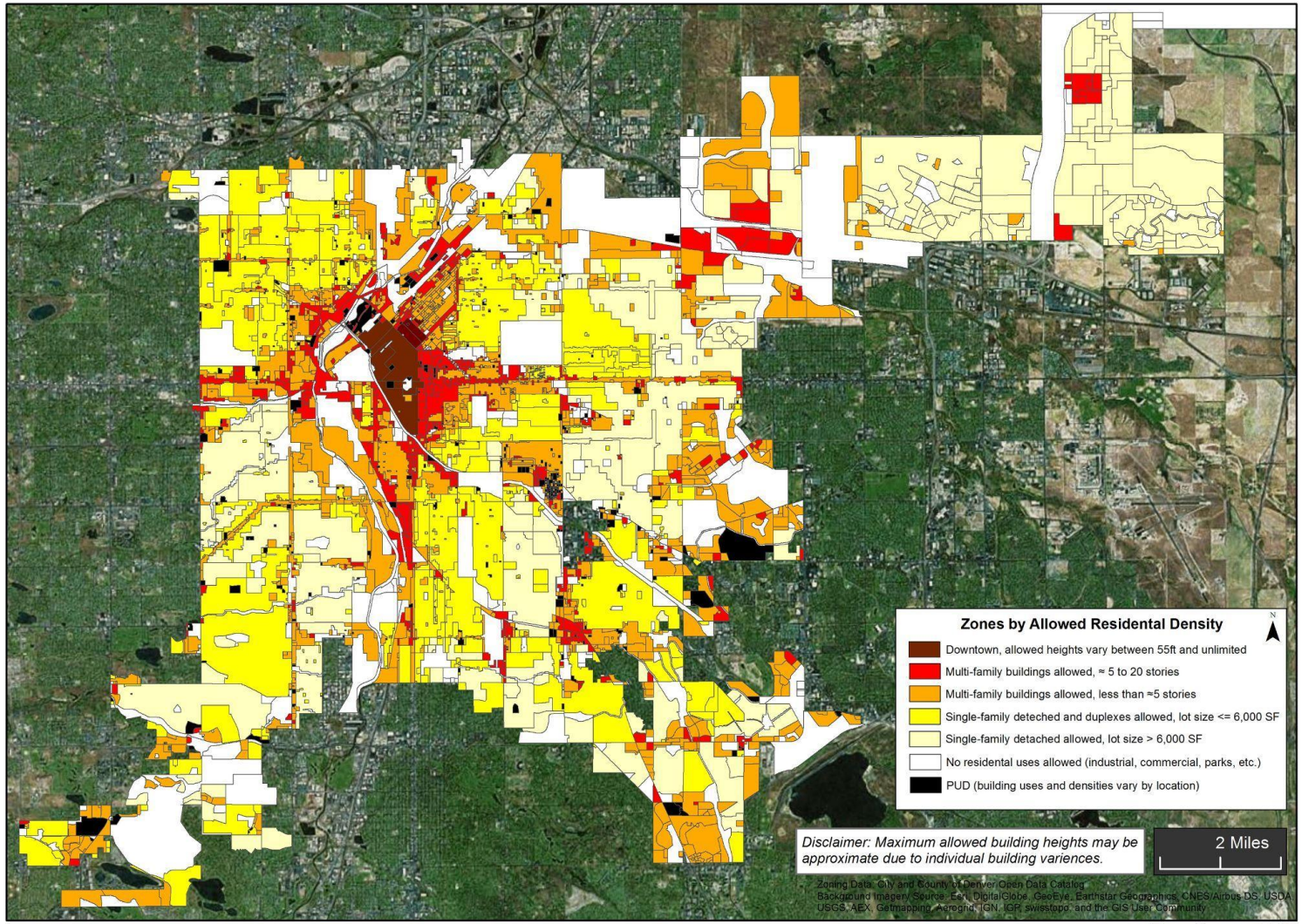


The Density Problem

Given that Denver's non-auto mobility infrastructure is limited to certain areas, it is essential that FRPR selects the right connection points.

Key Questions

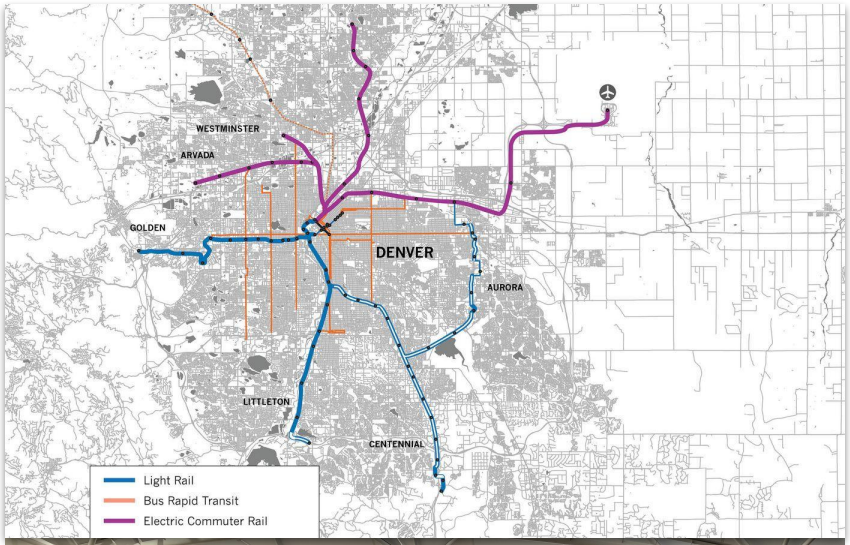
1. How will FPRP connect with the densest Front Range neighborhoods?
2. Will FRPR be easier for riders to access via private autos or transit?
3. Will FRPR allow for seamless north/south journeys through Denver or will it require transfers along the same right-of-way?
4. Will FRPR serve Boulder?
5. Will FRPR be successful in taking cars off the road for non-Denver residents to access Denver International Airport?



Ryan Keeney 2016

Why does FRPR need to run *through* DUS?

The proposed Front Range Passenger Rail (FRPR) route must serve the region from Denver's main transit hub of Denver Union Station (DUS) to deliver sufficient mobility benefits to justify the multi-billion capital investment being proposed.



Key Points

1. Denver has, by far, the densest concentration of people, jobs, and man-made attractions in the Front Range region.
2. Denver has the one and only transit hub that is directly connected to each corner of the Denver–Aurora combined statistical area: DUS.
3. DUS is already connected with heavy rail to the Front Range's only gateway to destinations beyond North America: Denver Airport.
4. Downtown Denver adjacent neighborhoods have the highest concentration of residents in Denver living without a car and would be most likely to choose public transportation to travel to other Front Range cities.

Introduction to Denver Union Station

Denver Union Station (DUS) reopened in 2014 after a transformation into a multimodal facility, but one with some key limitations.

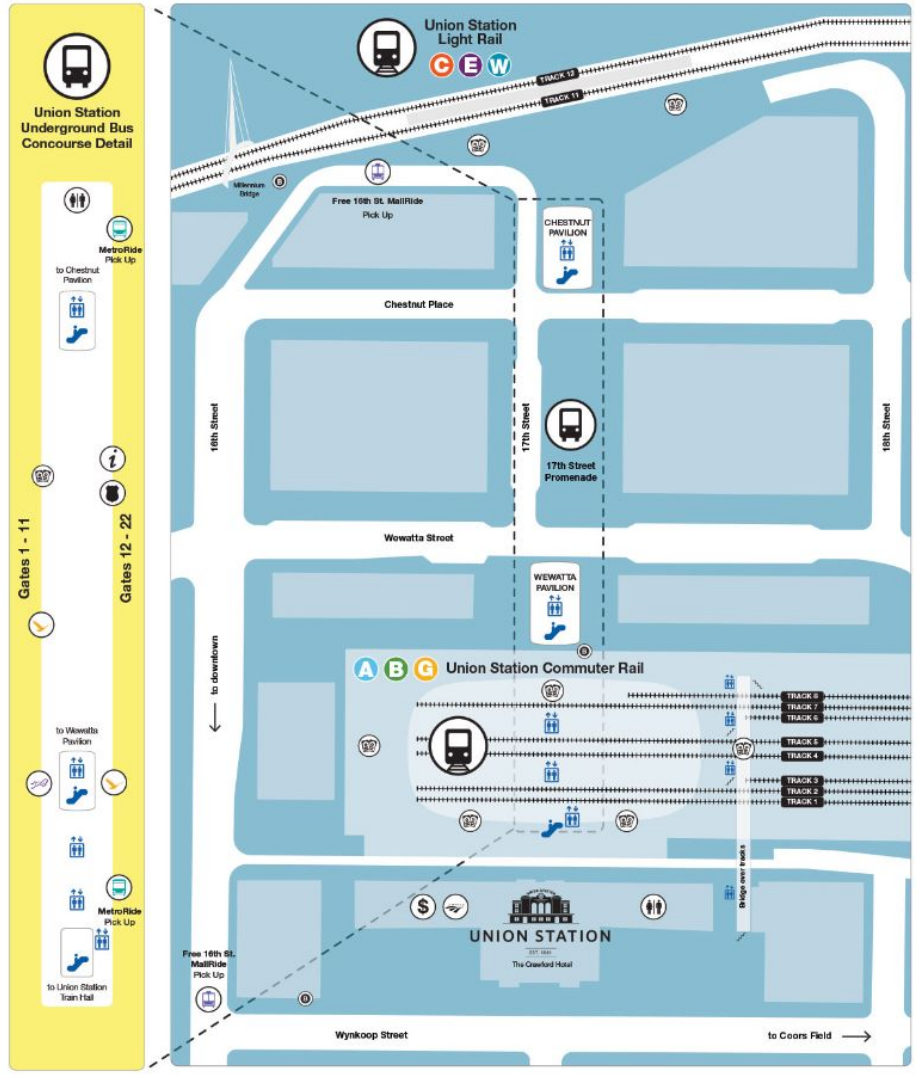
Transit Modes

1. Heavy Rail (Tracks 1-8)
2. Underground Bus Concourse (22 Gates)
3. Light Rail (Tracks 11-12)

Key Points

2 separate rail technologies.

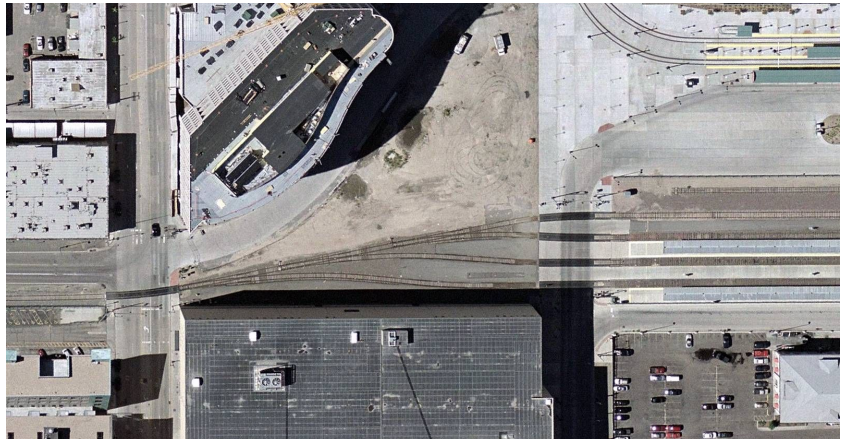
Rail platforms have a stub-end configuration where tracks end.



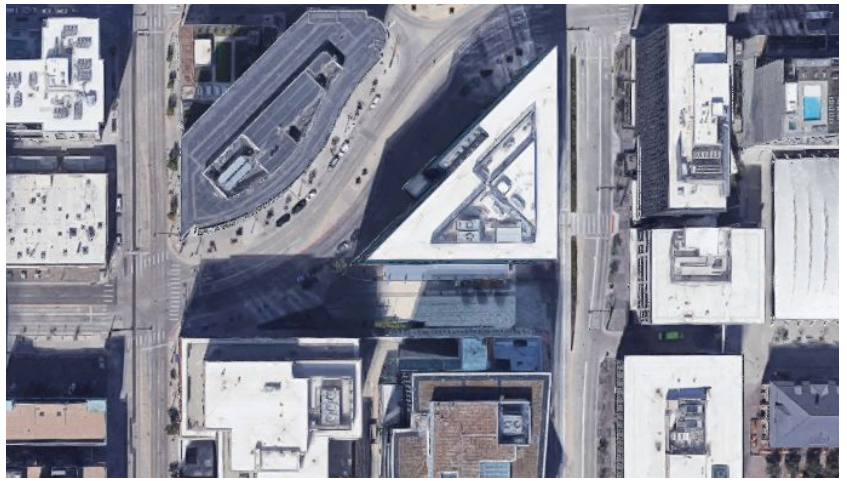
How DUS became a “Stub” and Why it Matters

DUS was once a “*through*” station but was later disconnected from lines to the west and south, severing north / south potential.

- In 1986, the freight rail lines through Downtown were moved which cut DUS off from lines running south and west.
- In 2001, RTD purchased DUS and opened the Central Platte Valley light rail line on a separate alignment (parallels freight tracks).
- By the time of FasTracks in 2004, RTD still had no plans to connect any heavy rail from the west or south.
- After discussions between RTD, Amtrak, and the DUS redevelopment team, the tail tracks were decided to be unnecessary for any future transit services.
- The sale and redevelopment of the SW approach right-of-way (RoW) eliminated the possibility for any at-grade extension of DUS’ heavy rail tracks to the west and south.
- Since then, any continuous, north / south connection for Denver would need to use an aerial (bridge) or underground (tunnel) alignment which would require new infrastructure.



Denver Union Station circa 2002 - Google Earth



Denver Union Station circa 2022 - Google Earth

The Plan: Through DUS and Boulder

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Step 1 (Essential): Denver Union Station and the Central Platte Valley

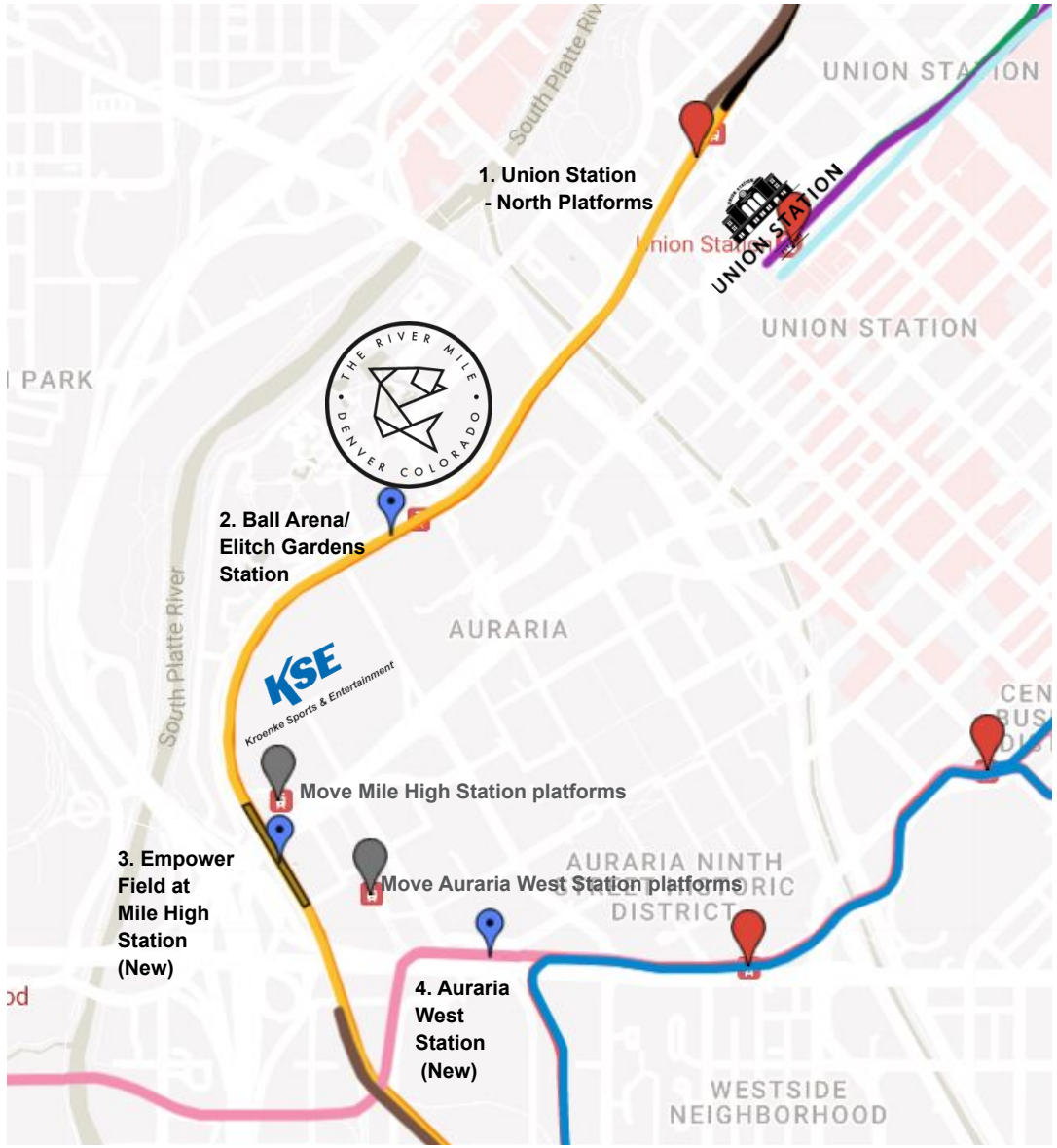
Convert RTD's Central Platte Valley (CPV) Line and DUS North Platforms to RTD's Heavy (Commuter) Rail Specification electrified at 25kV AC at 60Hz.

Upgrade Denver Union Station and Ball Arena / Elitch Gardens Station Light Rail Platforms to heavy rail specification.

Build a new Empower Field at Mile High Station.

Divert the W Line (Light Rail) to serve the Central Downtown Loop.

Divert the E Line (Light Rail) to serve the Central Downtown Loop. (In affect, this becomes the F Line).



Step 2 (Essential): Burnham Yard

Build Alternative E of CDOT's Burnham Yard and I-25 Central Planning & Environmental Linkages (PEL).

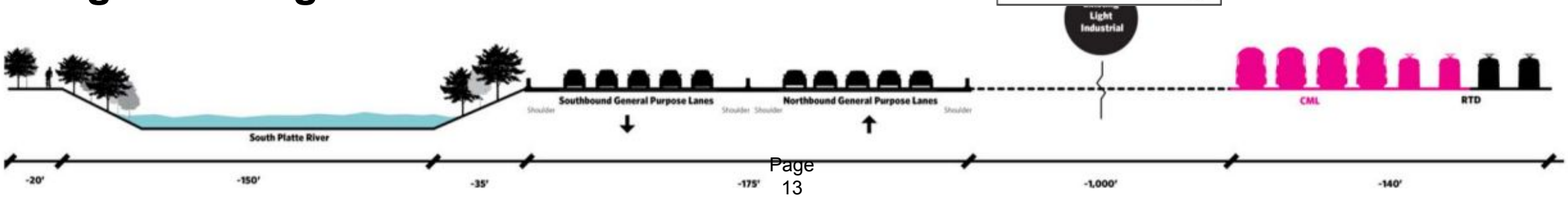
This will provide:

2x Freight Railroad Tracks

2x Commuter / FRPR Tracks

2x Light Rail Tracks

Sidings for Freight & FRPR Trains



Step 3 (Essential): RTD's Southwest Light Rail Branch

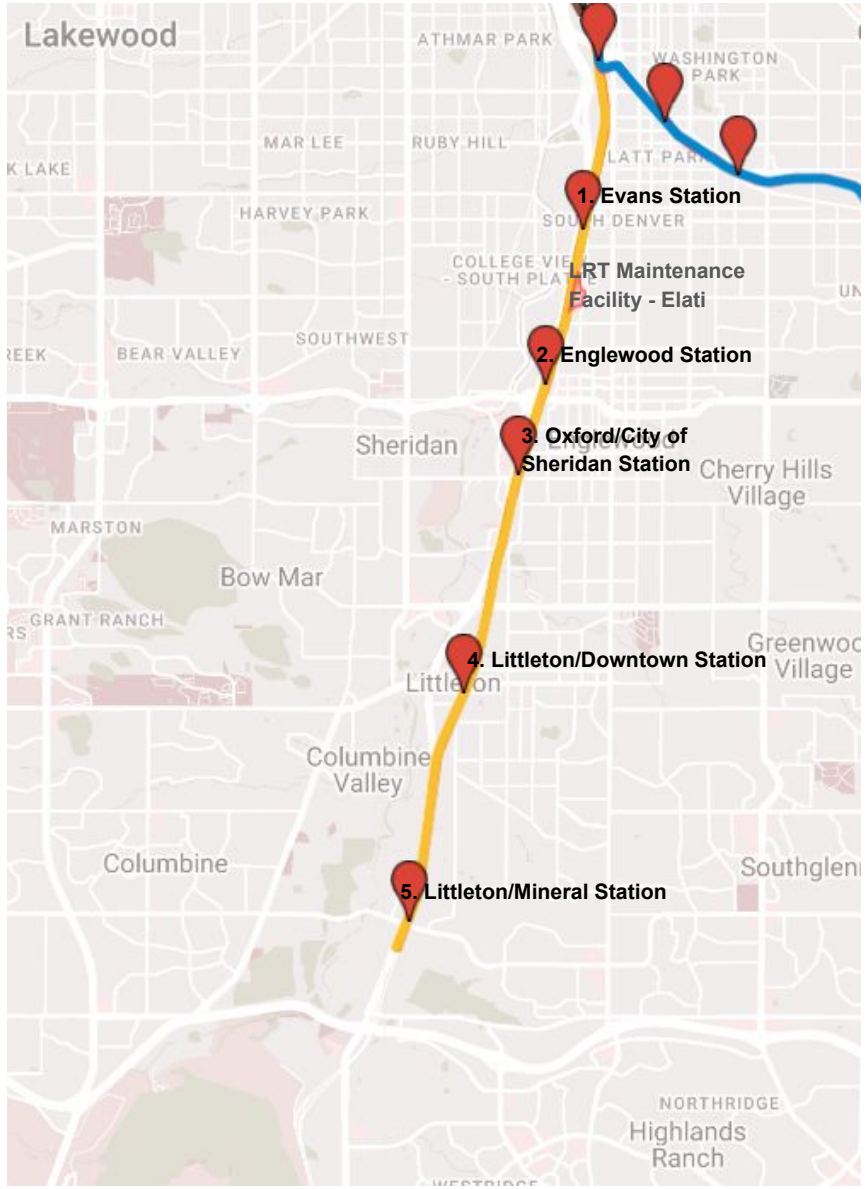
Convert RTD's Southwest Light Rail Branch (between I-25 & Broadway and Littleton / Mineral) to the Heavy (Commuter) Rail specification.

This will require:

Existing light rail stations to be rebuilt with high-level platforms.

(Re)Electrification to 25kV AC at 60Hz.

One existing light rail track along this SW branch (~2 miles in length) retained from I-25 & Broadway station southbound for access to the RTD Light Rail Maintenance Facility at Elati.



Step 4 (Essential): DUS North to Boulder Line Connection

4. **Build a grade-separated junction to connect DUS' North Tracks to the existing B and G Line tracks north of the Platte River with a bridge/viaduct design.**

   a. Denver Union Station northern light rail platforms will be converted to 2-4 heavy rail platforms embedded into a shallow cut to facilitate pedestrian access to each track

   b. Due to engineering challenges of navigating around existing BNSF freight and highway infrastructure on 20th Street and RTD's I-25 Flyover Viaduct, approach will:

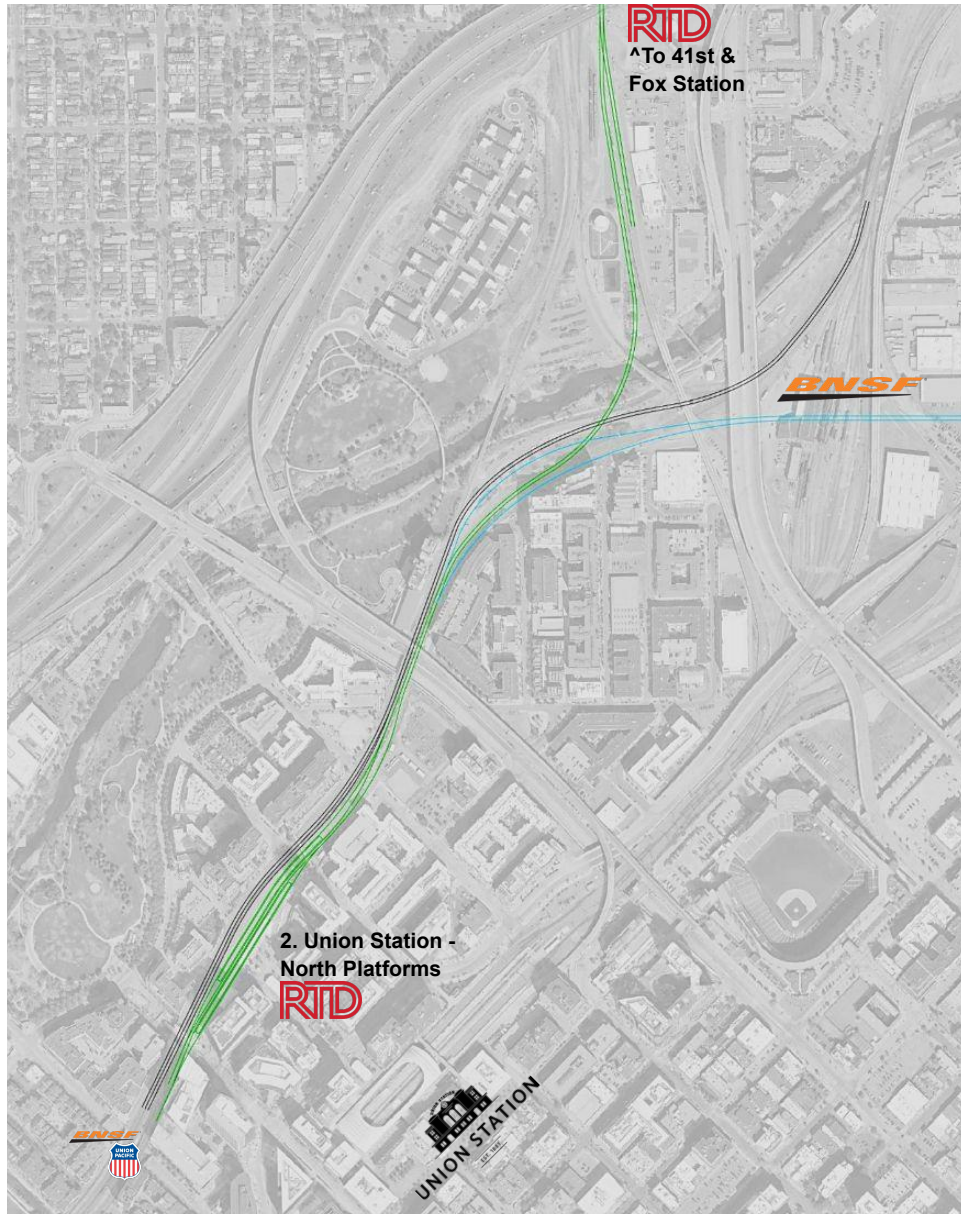
      i. Acquire 2/4 southern tracks of BNSF's existing 20th street rail bridge (one of which is currently unused)

      ii. Widen the radius of the BNSF curve and comp for a new top-of-the-line track

      iii. Build a junction that preserves room for RTD trains to climb north over the Platte but also for another RTD line to continue East (passing under the BNSF yard)

   c. Outcome(s):
      i. <u>FRPR becomes a through service:</u>
         1. Allows Front Range rail to operate through Denver via Denver Union Station without a complex or time-consuming circuitous configuration

      ii. RTD N/S connections through Denver improve significantly
         1. Allows through-running for RTD between the C/D Lines of the south and the B/G lines to the north (S-Bahn/RER-style service)



Step 5 (Priority): DUS North to Denver Airport Line Connection

5. **Build a grade-separated tunnel junction for a direct rail connection from Pueblo, CO Springs, and Castle Rock with the A Line to Denver International Airport: the Front Range's only gateway to Canada, Latin America, Europe, and Asia-Pacific.**

    a. This would build a secondary connection between DUS' northern platform tracks and the A Line as it passes Coors Field

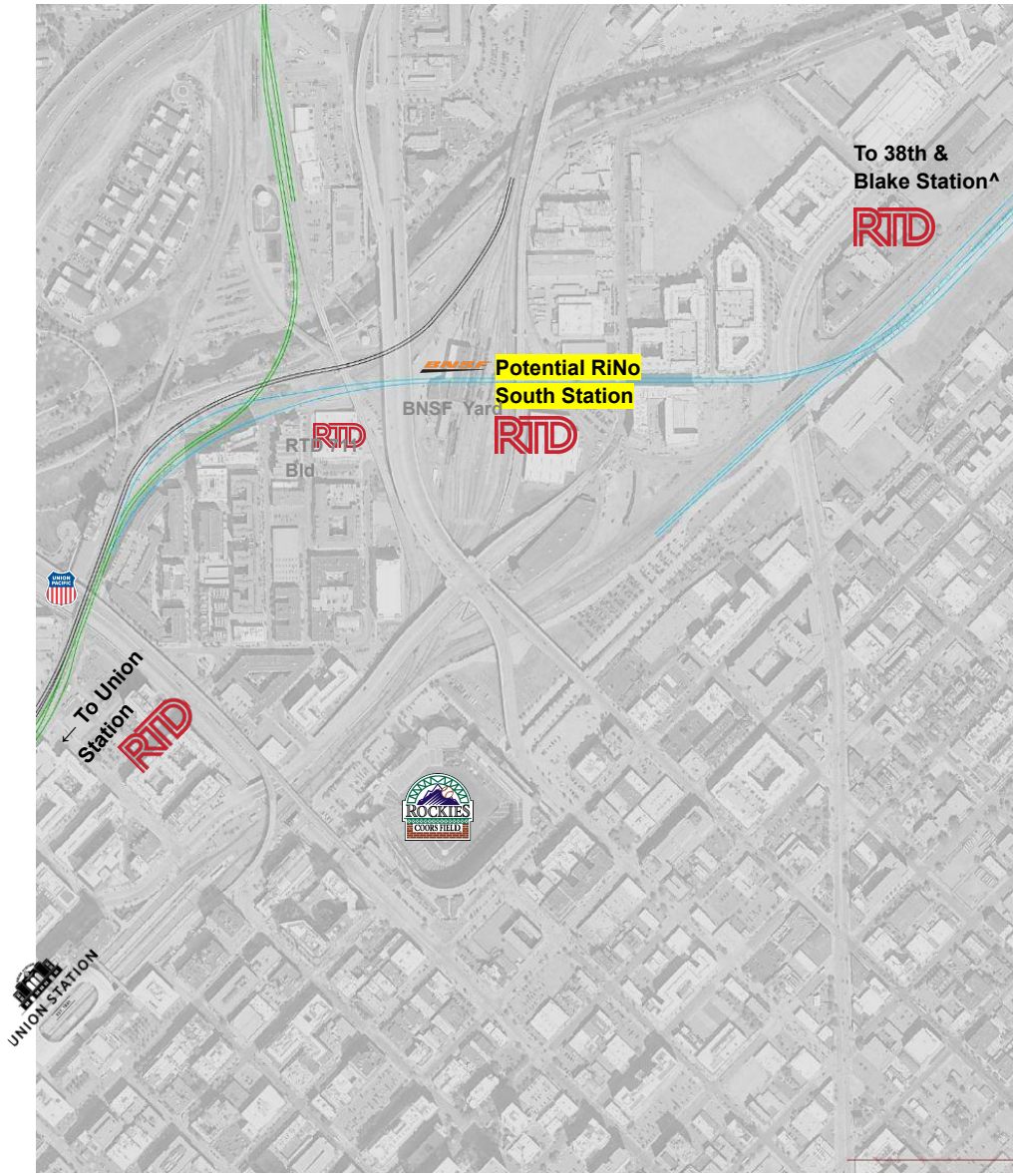
    b. As part of the previous negotiation with BNSF, CDOT will finance a new freight track to the north of BNSF's existing three freight tracks, rebuild the next two directly south with new infrastructure, and buy access to the RoW for two southern tracks that are to be electrified for RTD and FRPR to run at-grade from the new Union Station platforms over the 20th street bridge to Huron Street before descending underground and surfacing southeast of the A Line at Coors Field's excess parking lots and connecting with that corridor at-grade.

        i. CDOT and RTD should consider adding a subway station along this route directly under Wewatta Way to serve southern RiNo which is in need of transit connections.

    c. Outcomes(s):

        i. Allows RTD to merge some A and C/D line services to connect Littleton and Denver Airport, castle improving timetables to/from Littleton to Downtown and Denver Airport.

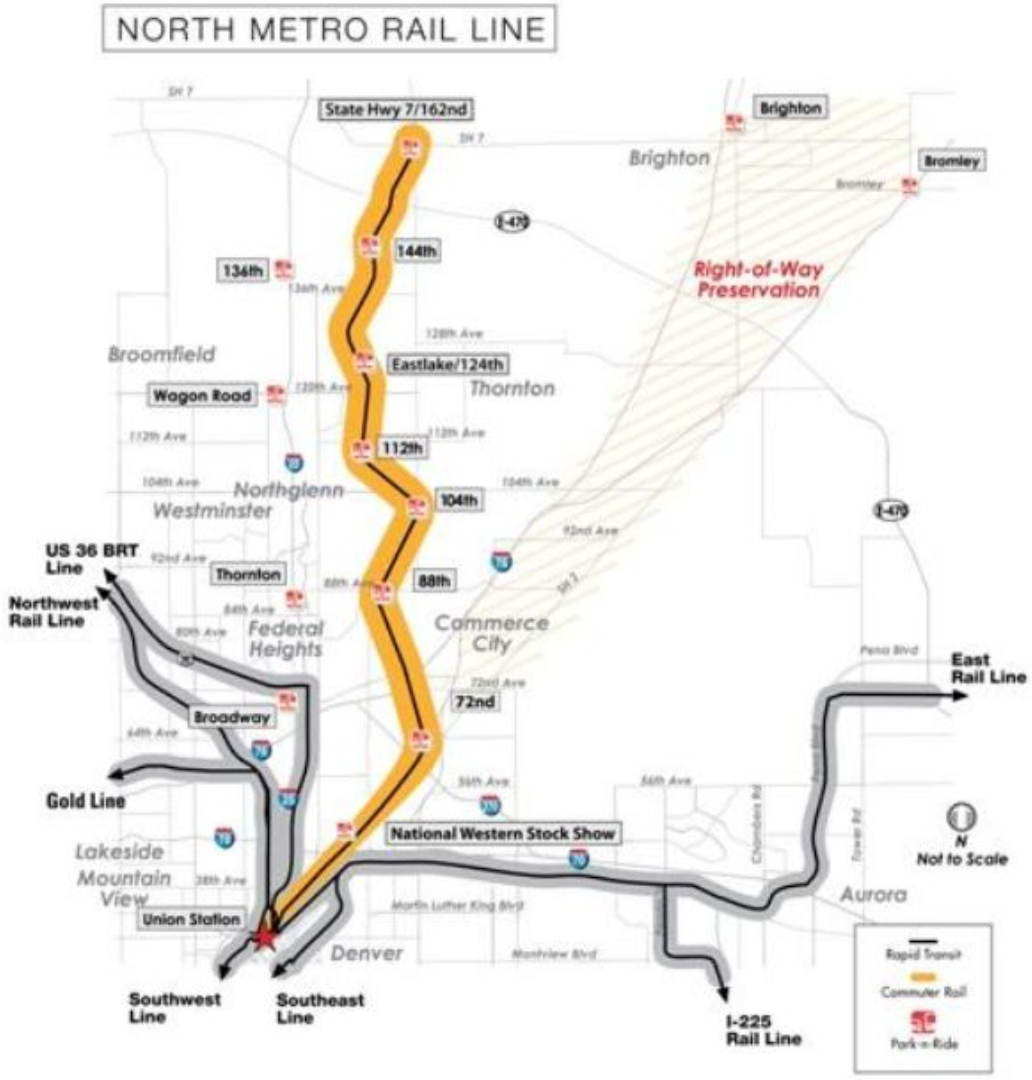
        ii. Allows Front Range Rail to serve Denver Airport directly from Colorado Springs without transfer.



Step 6 (Potential): DUS North to Weld County / Greeley Connection

6. **Consider a grade-separated junction to connect DUS' North Tracks to the existing A Line tracks at 38th & Blake or the N Line tracks north of the Platte River.**

   - While this connection would cover a smaller population with fewer existing transit connections compared to the previous through-running connections, it would help make future connections to Weld Country easier to expand as those cities grow.
   - Would likely be most economic to break off of the new spur connecting DUS' North Platforms and the existing A Line at Huron Street with a new bridge viaduct
   - Outcomes:
     - Allows through-running for RTD between southern lines and the existing N line to the north with higher-speed future connections possible with the cities of Weld County.

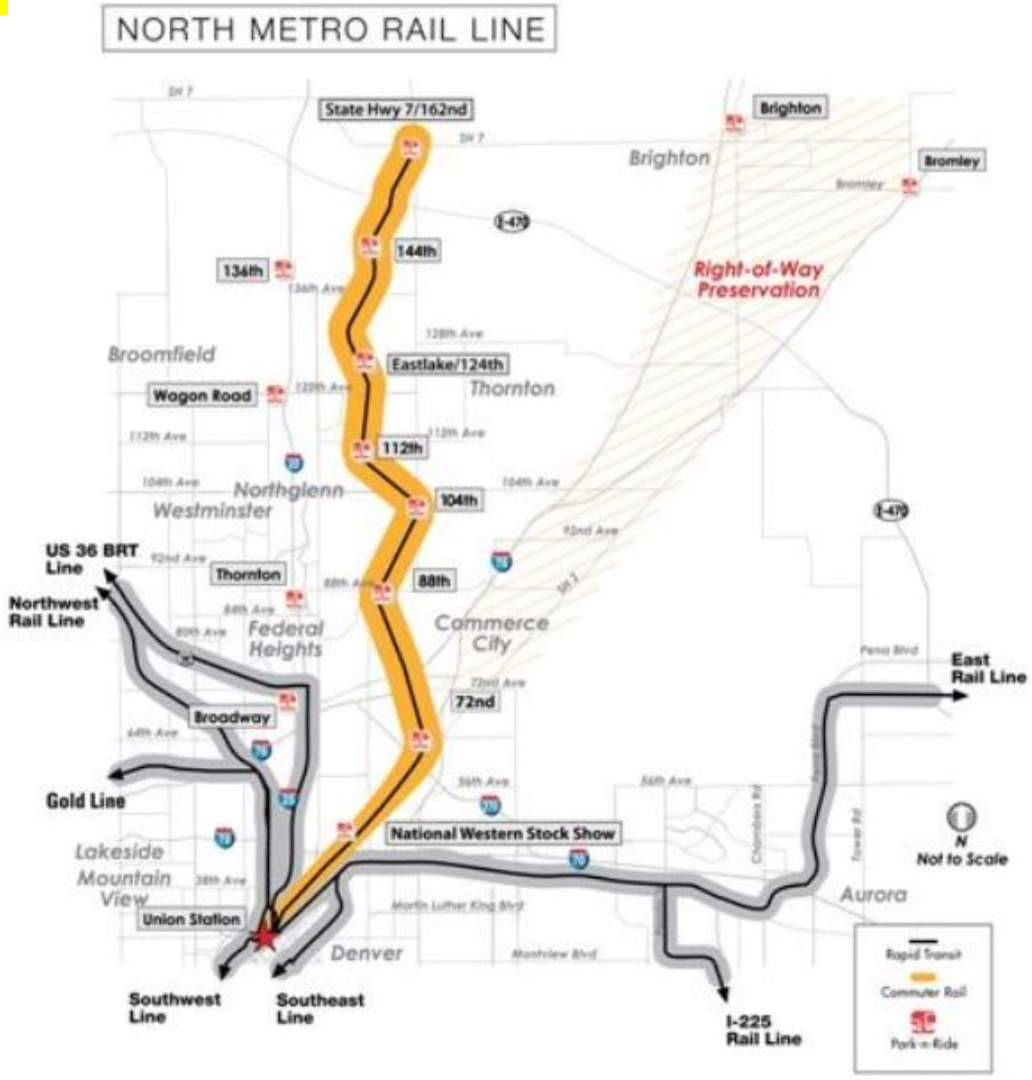


Step 6.5 : DUS North to Weld County / Greeley Connection

6. **Greeley has been incorporated in to the Front Range Passenger Rail district by ways,**

The UP Greeley Subdivision is the “Fast track” to Cheyenne and beyond for long-distance services. Cheyenne to Denver should also be evaluated and incoudded in a built-out Front Range Passenger Rail system.

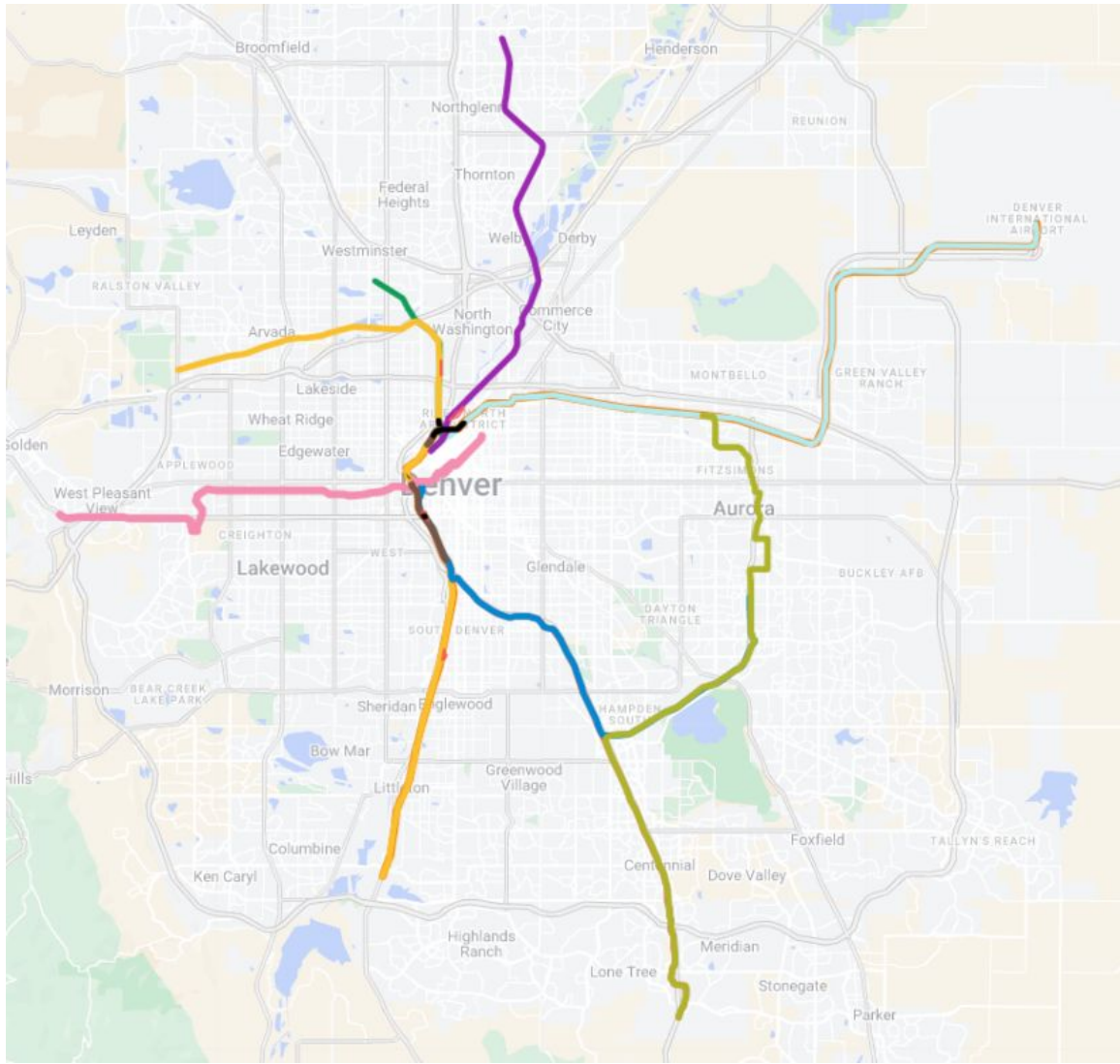
Greeley has already and leadership must proactively work with this fact if they



RTD Operational Possibilities

Denver's existing A, B, and G lines will have the opportunity to be connected to the C line for through service.

- If Steps 1-5 are completed, RTD will be able to operate trains from Wheat Ridge, Westminster, and/or Denver Airport direct to Littleton without any transfer via DUS.
- At present, we think the largest benefit would be to operate the more built-out A and G lines all the way south to Littleton.
- Given the lack of frequency and unique coverage of the B Line, it can either:
  - Continue to operate into DUS' main stub platforms
  - Operate to I-25 & Broadway
  - Operate ll the way down to Littleton
- While the W Line can use the existing central downtown loop like the F and H Lines, there are regional benefits from merging with the the Downing Street corridor to facilitate better E/W connections, especially after the pending extension to 38th & Blake.



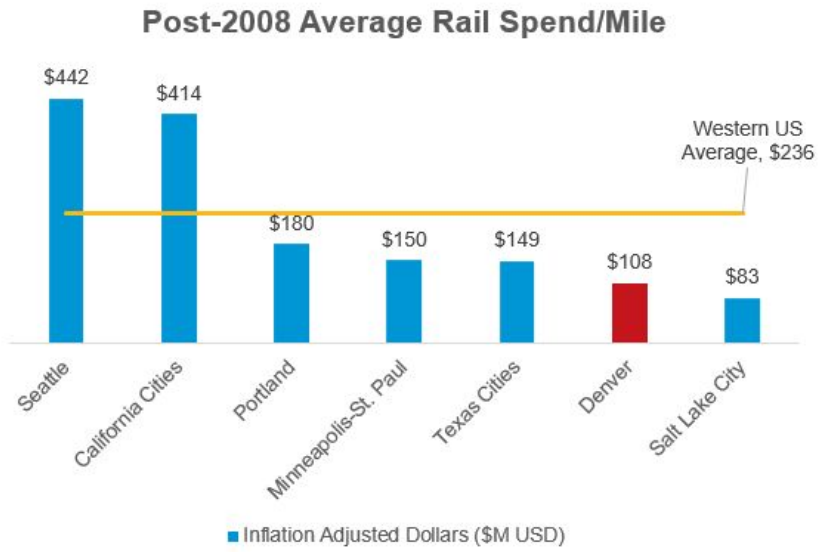
Costs and Context - PRELIMINARY

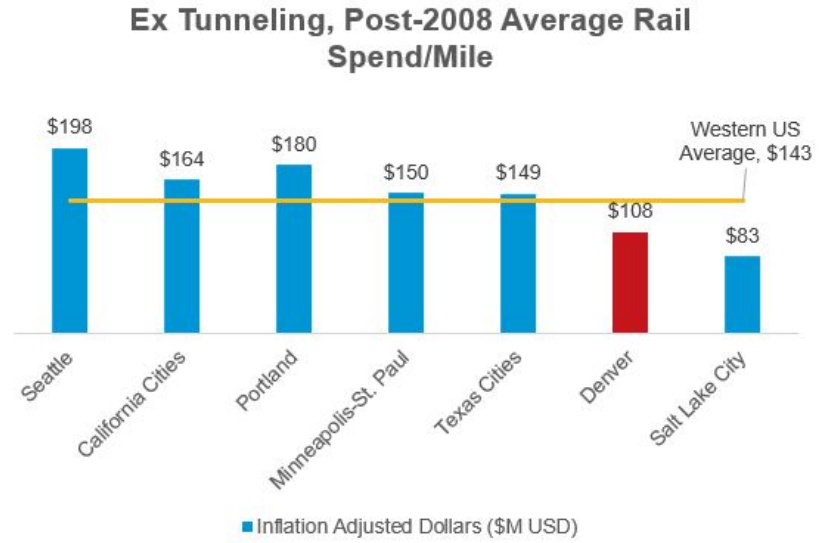
The Core FRPR Capital Spend will be approximately $500-$600M with the Airport Connector adding another $400M-$450M on top of that.

1. When factoring in elevated costs from ROW acquisition, private railroad compensation, and tunneling, we expect the per mile spend on 5 miles of new and rebuilt track will be higher than the $108M/mile RTD has spent on FasTracks.
   a. Anticipate $143/mile for the core FRPR spine (non-tunnel)
   b. However, the $108M/mile spend on FasTracks is lower than that of peer cities

1. Analysis shows nearly all peer cities are spending more per mile on rail than Denver is
   b. We looked at almost every new rail transit project built west of the Mississippi River since 2008, and after adjusting for inflation
      i. Average total cost/mile is $236M
      ii. Tunneling cost/mile is ~$640M
      iii. Non-tunneling cost/mile is ~$143M

1. <u>Denver has significantly under-spent on rail installation per mile compared to peers</u> by:
   b. 25% as much as Seattle
   c. 26% as much as California Cities
   d. 60% as much as Portland
   e. 72% as much as Minneapolis-St. Paul
   f. 73% as much as Texas Cities (Texas spends more on rail than Denver 🤯)

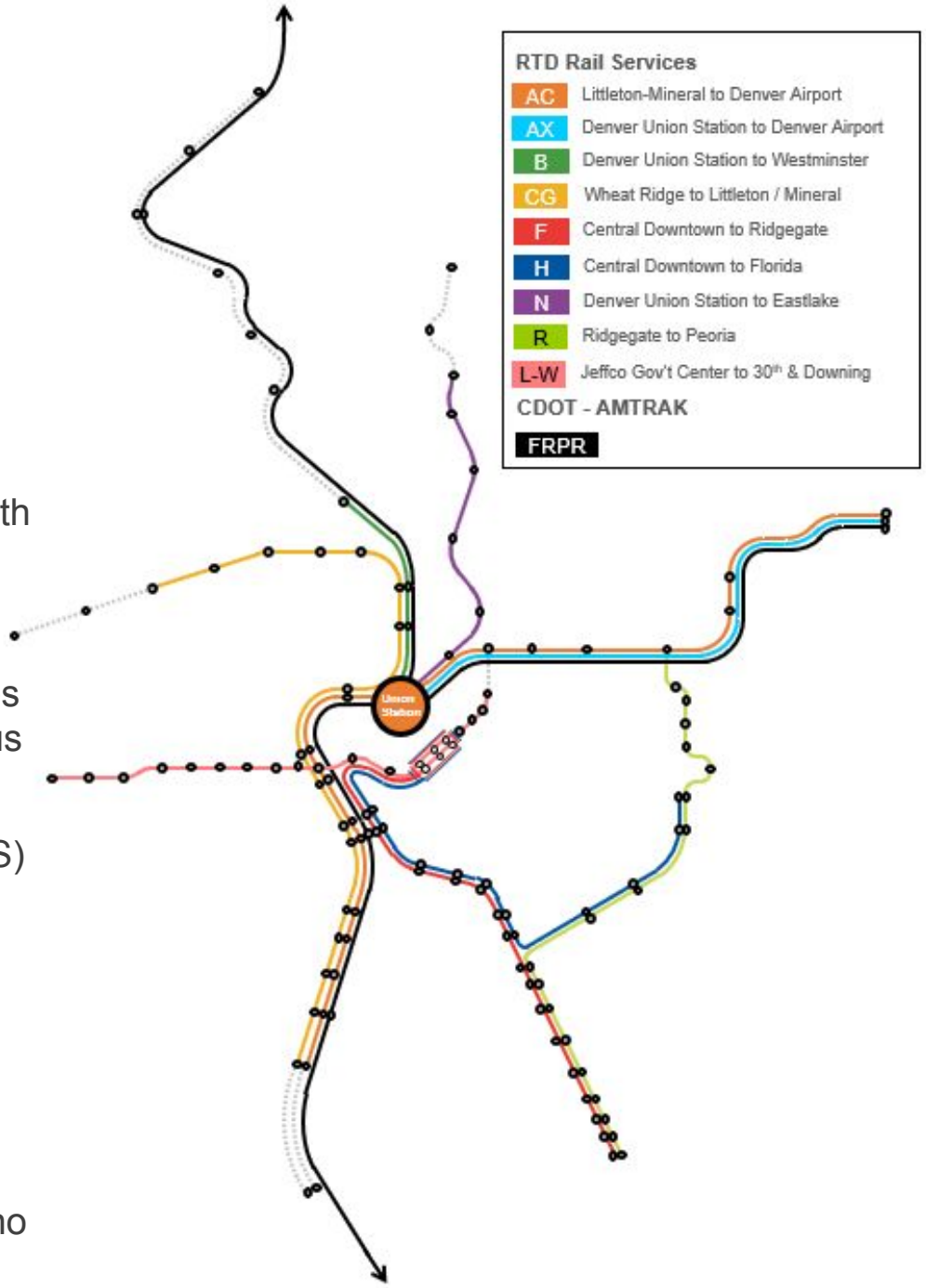




Result

CDOT will enable a high-functioning north-south intercity trunk route that spans the Front Range corridor and optimizes connections for Denver and Boulder.

- In line with the FRPR plan, non-Denver residents still stand to gain the most with direct access to the densest concentration of people, jobs, and man-made attractions in the Front Range region.
- RTD and Denver-area transit riders will benefit from an upgrade of existing lines to high-performing and very fast trunk rail routes that will make existing E/W bus connections far quicker and reduce the amount of 3+ leg, 2+ transfer journeys.
- The focal point of the system centers around the one and only transit hub (DUS) that is directly connected to each corner of the Denver–Aurora combined statistical area.
- Pueblo, Colorado Springs, and south Denver residents will gain a direct and higher-speed link to Denver International Airport that is not exposed to auto traffic.
- FRPR ridership will benefit from direct connections to the Downtown Denver adjacent neighborhoods with the highest concentration of car-free residents who are most likely to choose public transportation to travel to other Front Range cities.



Advocacy Summary

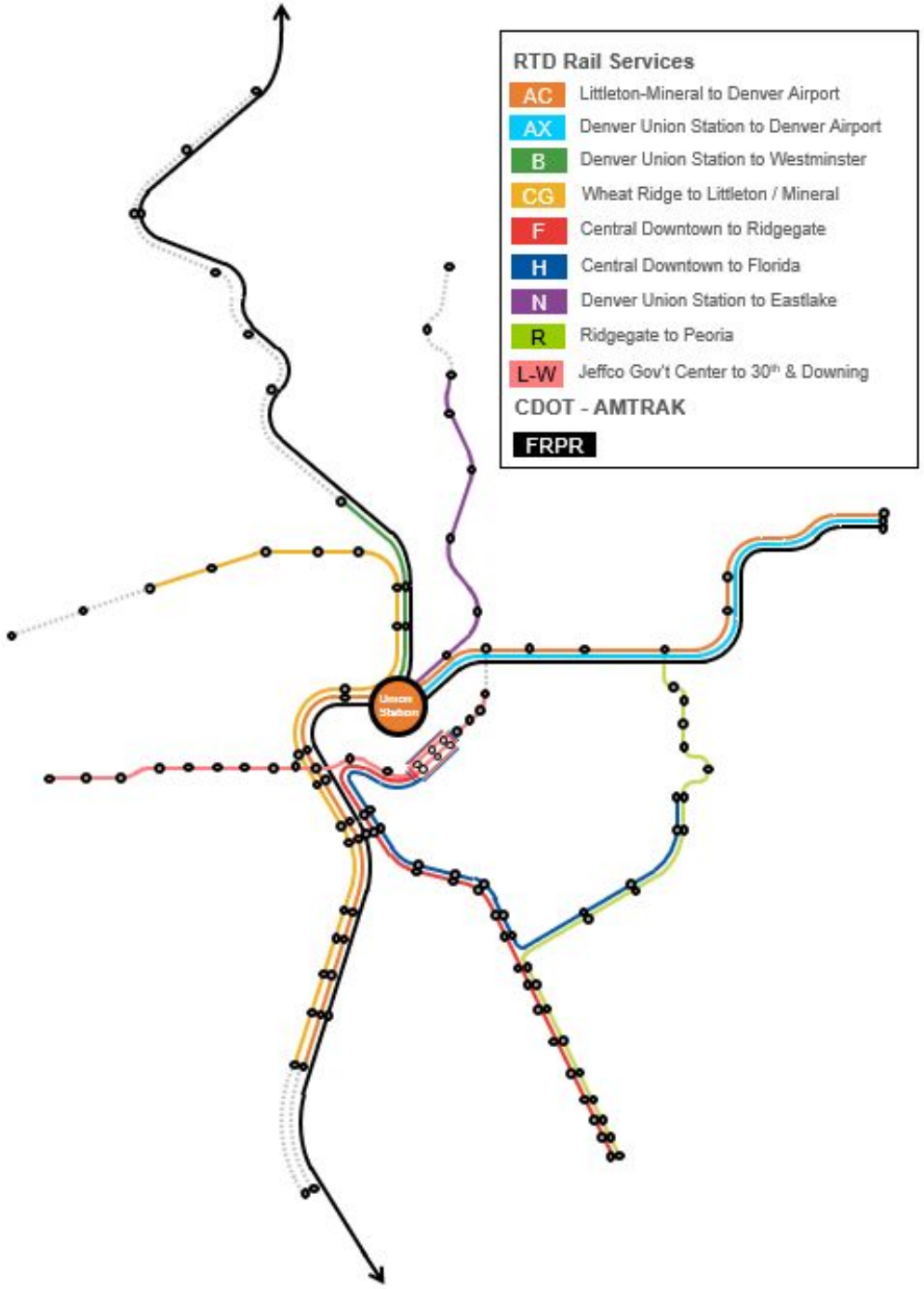
If the State of Colorado will be investing $8-15B+ in intercity rail along the Front Range, it is essential for trains to run through Denver Union Station and serve Boulder.

We must aggressively discourage routes that bypass Denver Union Station (DUS) and Boulder

It is not enough for the route to *reach* Union Station: it must go ***through* it.**

In planning, we must consistently prioritize transit equity principles.

We call on HNTB, the consultant providing study work for the Front Range Passenger Rail corridor, to dedicate the resources required to rigorously review a through connection for Denver and Boulder.




Q&A

Get Involved…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Thank You!