



Downtown Rail Reconstruction Project

PHASE ONE: 2024





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Downtown Loop Light Rail Service

Light rail service began in Denver on October 7, 1994, with 5.3 miles of track connecting 30th and Downing to Interstate 25•Broadway Station.

Much of today's downtown track infrastructure, commonly referred to as the Downtown Loop, has been in place since the line was first constructed. This corridor has expanded over the years to now serve 10 rail stations on the D, H, and L lines, with street-level trains operating adjacent to pedestrians and vehicular traffic. In 2023, the D, H, and L lines saw a combined total of more than five million customer boardings.



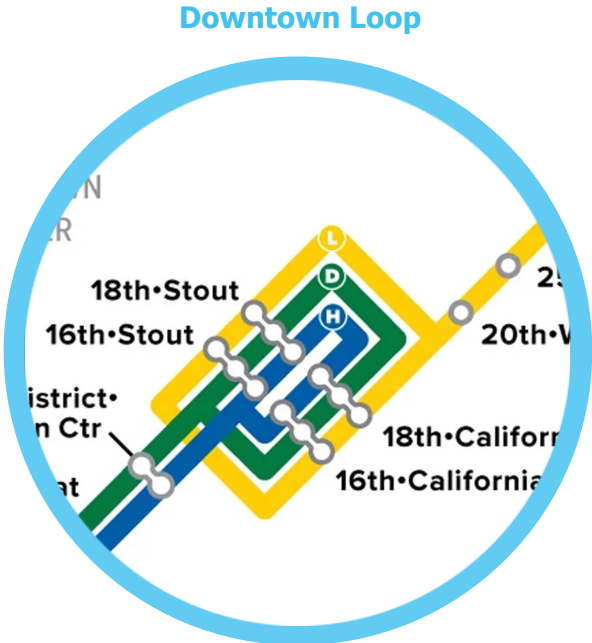
Members of the public gather at the I-25•Broadway Station to celebrate the opening of RTD's first light rail service in Denver



Light rail ribbon cutting ceremony on October 7, 1994

After more than 30 years of daily rail service in the Downtown Loop, RTD is continuing its investment in the long-term integrity of the network. A full-depth reconstruction of this section of rail will commence in summer 2024 to improve safety and mobility, address deteriorating transit infrastructure, and extend the design life of the agency's key transportation assets.

RTD is reconstructing this section of rail to improve safety and mobility, address deteriorating transit infrastructure and extend the design life of the agency's key transportation assets.



State of Good Repair

- **Ensuring assets are in a state of good repair is one of the agency's highest priorities**
 - Guarantees previous investments in the system remain intact
 - Supports operationally safe, accessible, and dependable services
 - Preserves investment in a reliable transit infrastructure
- Required by regulatory oversight entities
- **RTD has more than \$9 billion in fixed assets**
 - Includes facilities, vehicles, rail track, signals, bridges, stations, etc.

Agency's First Reconstruction Project

- For nearly 30 years, RTD primarily focused its efforts on building and expanding its rail system
- This is the first time the agency will undertake a major reconstruction project of this nature (see page 9)
 - Previous rail-related construction projects were aimed at specific segment enhancements and repairs
 - Reconstruction improves the customer experience by mitigating service disruptions and unscheduled maintenance



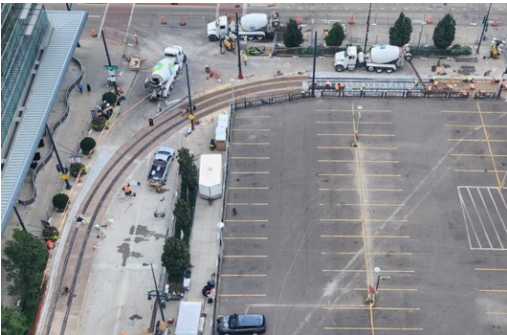
Previous Downtown Projects

- **\$19M spent on 17 isolated projects between 2012 and 2023**
 - Replaced targeted segments of curved rail, switches, crossings, signals, and other infrastructure
 - Work paused due to the opening of new rail lines (e.g., W Line in 2013 and A Line in 2016)

2012 – 2013
3 replacement projects

2013 – 2016
work temporarily paused

2016 – 2023
14 replacement projects



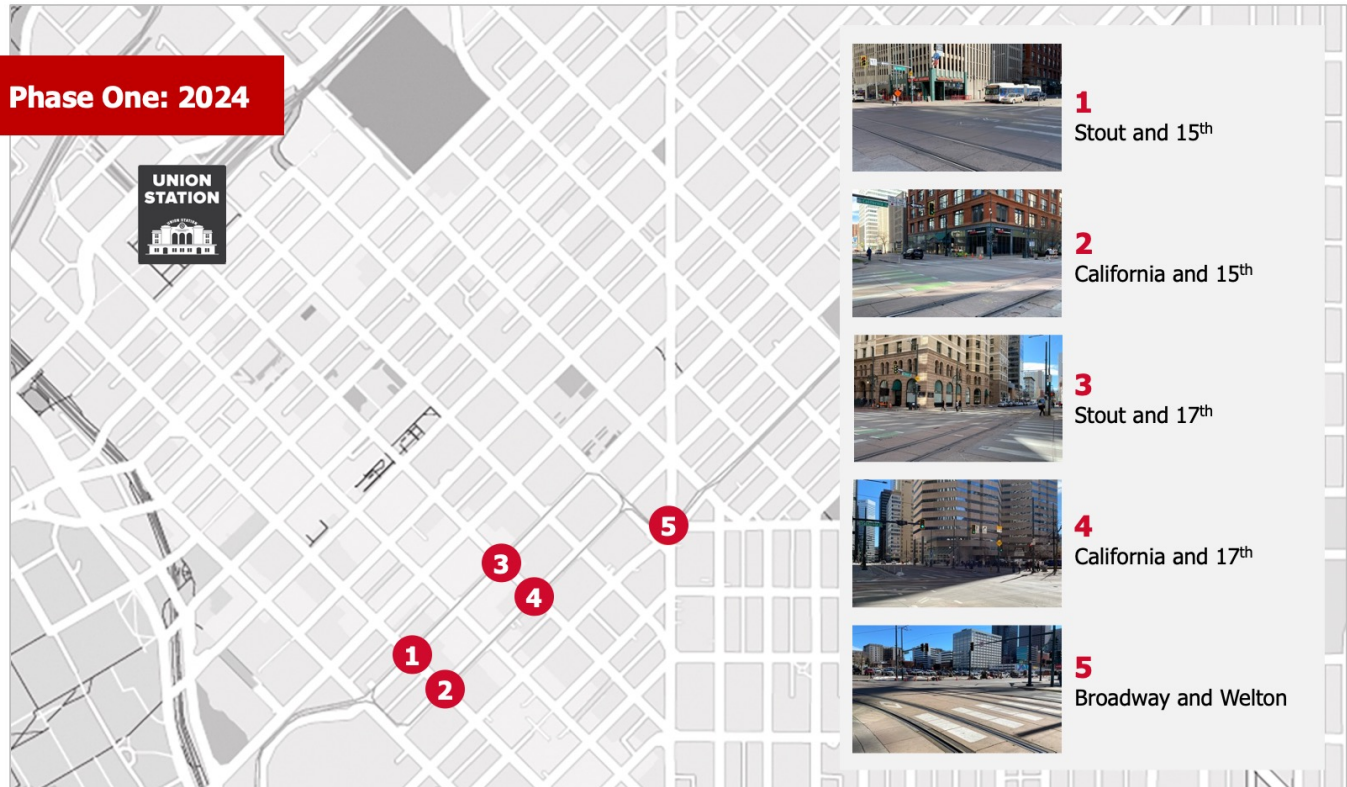
Project's Four Phases

1 Five Intersections
SUMMER 2024

3 Colfax Avenue
2025

2 Midblock Reconstruction
2025

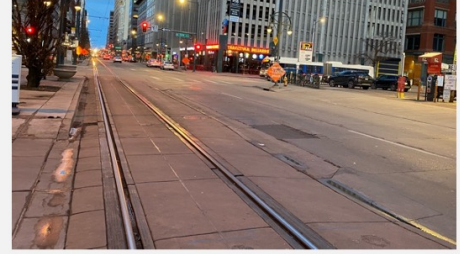
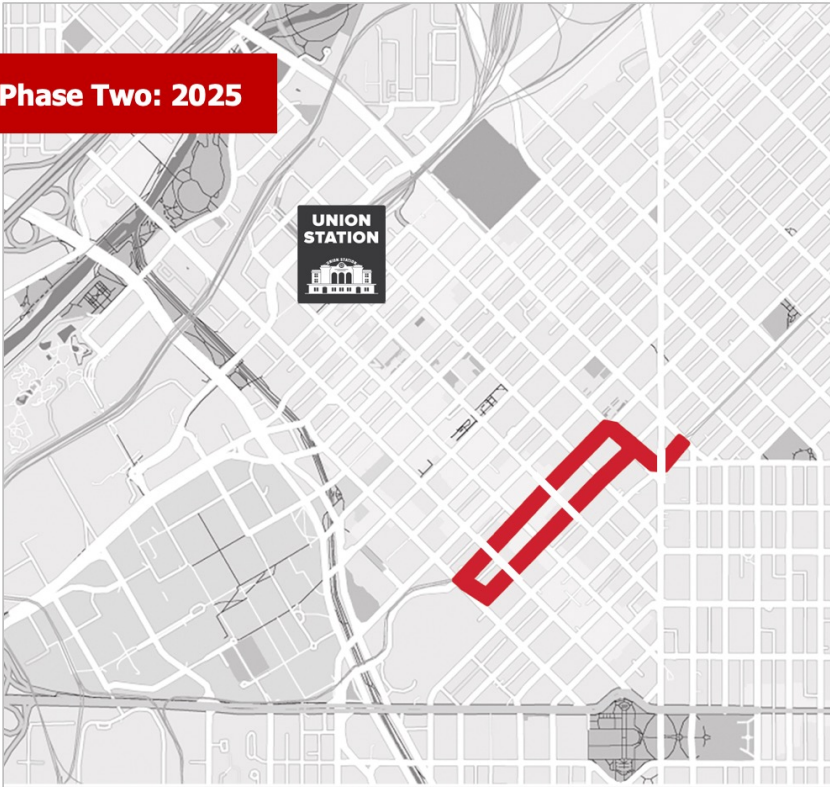
4 Welton Street Corridor
2025



Phase One Quick Facts

- Five intersections in the Downtown Loop will be reconstructed in 2024
- The five intersections will not be reconstructed at the same time
 - Project will progress between May 26 and mid-September
- Trains operate in a street-running capacity in lieu of a dedicated right-of-way
- Public utilities exist under the rail alignment (see page 7)
- The light rail system uses paved track in the Downtown Loop
- RTD has been meeting with the City and County of Denver (CCD) to develop traffic detour plans
- Light rail will not operate in the Downtown Loop during the project work

Phase Two: 2025



**Phase Two:
Downtown Loop Midblock**

- Full-depth reconstruction of the midblock tangent tracks not previously replaced
- Impact to D, H, and L lines

Phase Three: 2025

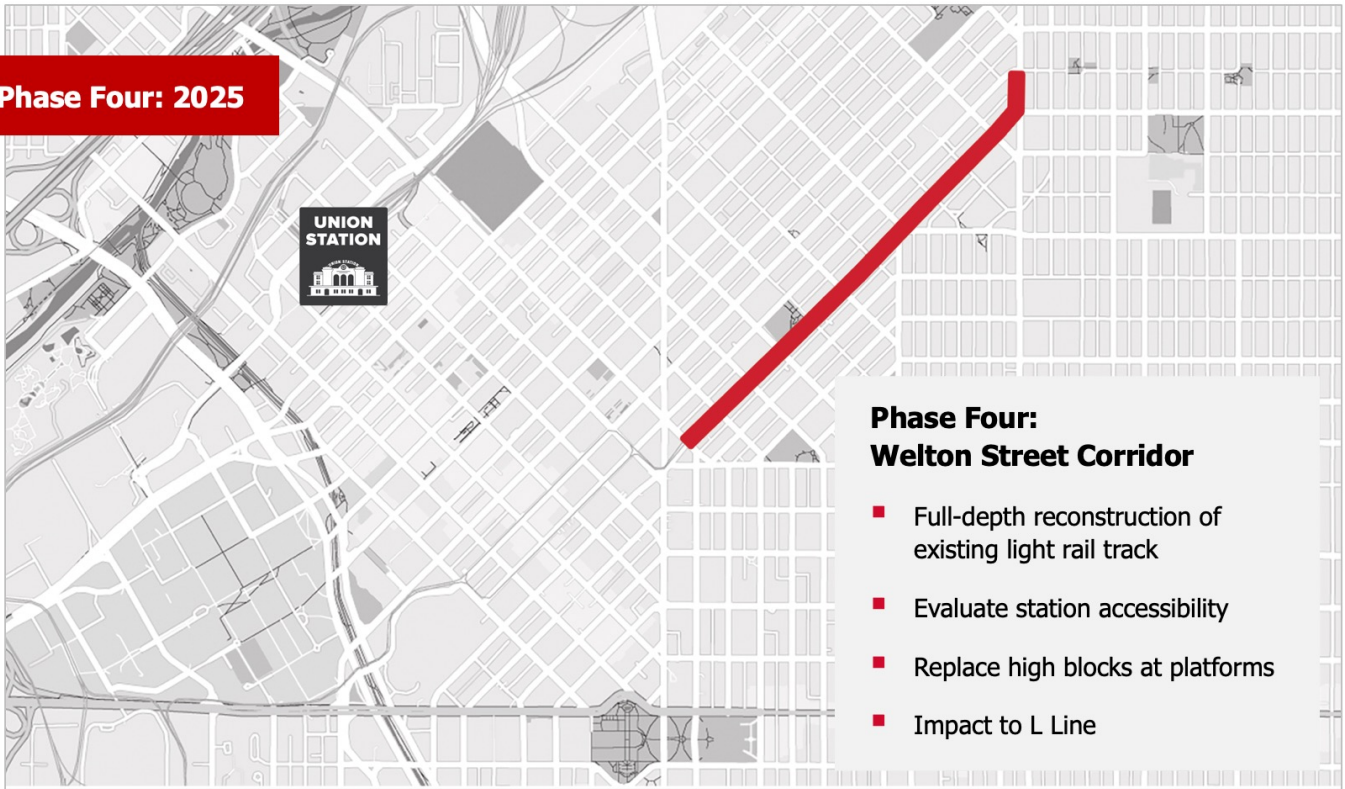


**Phase Three:
Colfax Alignment**

- Full-depth reconstruction of existing light rail track
- Excludes track near the Colorado Convention Center
- Impact to D and H lines











Phase Four: 2025

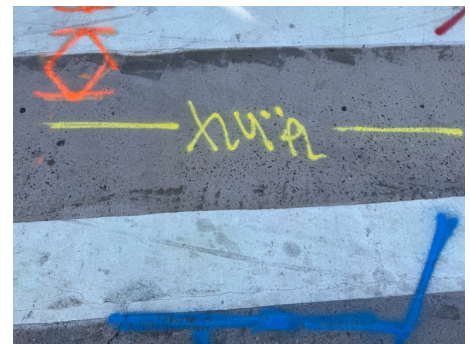


**Phase Four:
Welton Street Corridor**

- Full-depth reconstruction of existing light rail track
- Evaluate station accessibility
- Replace high blocks at platforms
- Impact to L Line

Underground Utility Lines

-  **White** – Proposed excavation
-  **Pink** – Temporary survey markings
-  **Red** – Electric power lines, cables, conduit and lighting cables
-  **Yellow** – Gas, oil, steam, petroleum or gaseous materials
-  **Orange** – Communications, alarm, or signal lines, cables or conduit
-  **Blue** – Potable water
-  **Purple** – Reclaimed water, irrigation and slurry lines
-  **Green** – Sewers and drain lines



Glossary of Terms

Assets: RTD resources, including facilities, vehicles, rail, track, signals, bridges, stations, etc.

At-grade crossing: an intersection where a railway line crosses a road at street-level

Ballast: the foundational rocks beneath rail tracks

Curved rail: track that is designed to allow trains to maneuver through a curve

Downtown Loop: RTD's light rail service in the Central Corridor serving the D, H and L lines through downtown Denver between Colfax at Auraria and 30th•Downing stations

Full-depth reconstruction: removal and replacement of current rail infrastructure including concrete, rail, ties and ballast; average depth is 24 inches for full-depth reconstruction (see page 9)

Open-ballasted track: track where one can see the ballast and ties and can easily access them to conduct maintenance

Paved track: uses cast-in-place concrete and required where rail track will be shared with other street traffic, including vehicles and pedestrians

Rail switch: a mechanical switch that enables trains to be guided from one track to another

State of good repair: managing and maintaining assets to ensure the long-term integrity essential for delivering safe and reliable transit service

Street-running rail: rail services that runs alongside vehicular traffic and share at-grade crossings

Track panels: track that is embedded in the roadway



Paved Track



Open Ballasted Track

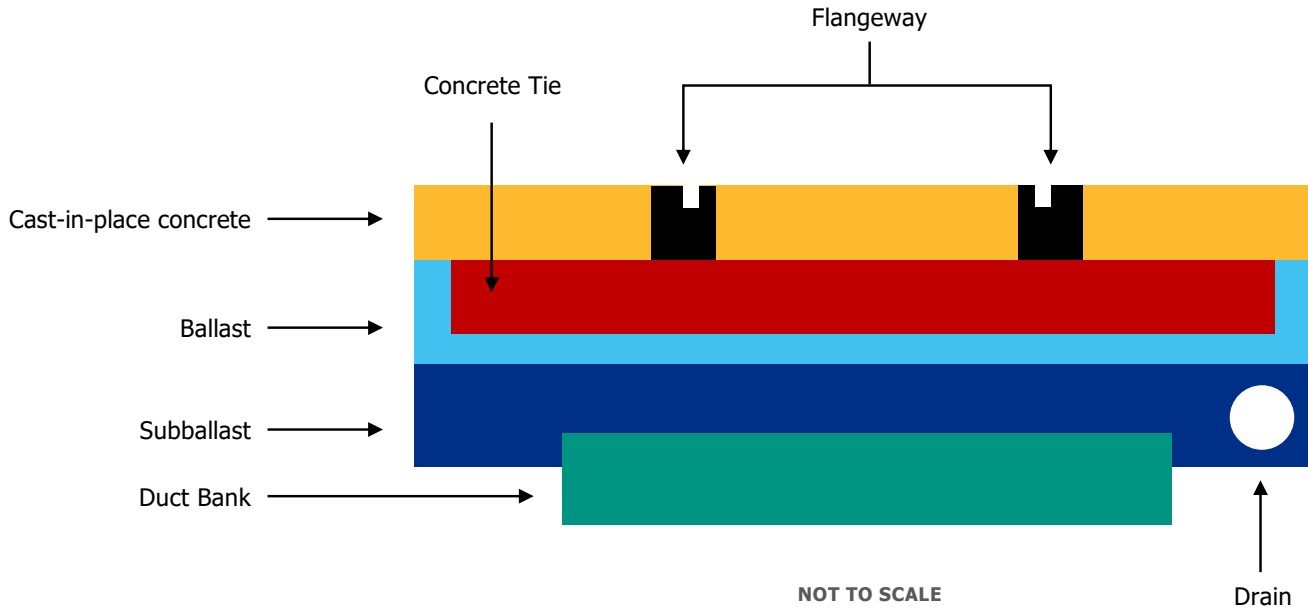
RTD's light rail system uses paved track in the Downtown Loop

- Paved track reconstruction work needs to be outsourced
- Open ballasted track is easier to continuously replace than paved track



Paved Track Illustration

Full-Depth Reconstruction



Boardings by Year, Month, and Mode

2023 RIDERSHIP/BOARDINGS (in Thousands)																
	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	YTD 2023	YTD 2022	Change	% Change
Fixed Route	2,818	2,760	3,133	2,991	3,204	3,023	3,637	4,156	3,586	3,650	3,367	3,204	39,528	34,174	5,354	15.7%
Flatiron Flyer	80	87	96	99	91	96	112	128	122	118	102	87	1,219	1,070	149	14.0%
FlexRide & Special Services	21	21	24	22	23	23	21	25	21	22	21	19	262	235	26	11.2%
Total Bus Service	2,920	2,867	3,253	3,112	3,319	3,142	3,769	4,309	3,729	3,789	3,490	3,311	41,009	35,479	5,530	15.6%
D Line	194	195	222	211	236	228	242	254	247	229	211	196	2,666	2,674	(8)	-0.3%
E Line	284	280	323	318	290	282	308	259	234	233	217	204	3,233	3,981	(748)	-18.8%
H Line	205	204	233	242	246	165	169	163	167	156	144	139	2,232	2,472	(239)	-9.7%
L Line	26	31	38	36	33	30	25	24	23	23	23	25	339	354	(15)	-4.2%
R Line	79	78	94	44	44	88	103	120	105	117	112	112	1,097	1,098	(1)	-0.1%
W Line	210	203	243	221	252	267	307	315	303	308	273	272	3,174	3,026	148	4.9%
Total Light Rail	998	991	1,153	1,072	1,101	1,061	1,154	1,135	1,081	1,066	980	948	12,740	13,605	(864)	-6.4%
A Line	433	402	452	437	522	538	639	652	545	548	505	510	6,184	5,776	408	7.1%
B Line	10	10	11	13	13	17	17	15	14	13	11	11	157	152	5	3.3%
G Line	73	70	80	84	90	100	114	113	105	93	81	82	1,085	1,018	67	6.6%
N Line	86	74	85	88	90	103	113	115	116	101	92	90	1,153	990	162	16.4%
Total Commuter Rail	602	556	629	622	715	757	883	894	780	755	690	694	8,578	7,936	642	8.1%
Access-a-Ride	46	44	50	45	46	45	44	53	43	45	43	40	544	529	14	2.7%
Access-on-Demand	18	21	26	29	32	34	38	46	42	45	45	42	418	134	284	212.7%
Vanpool	11	10	11	12	11	11	11	10	11	13	11	12	133	120	12	10.4%
Total Revenue Service	4,595	4,488	5,123	4,891	5,224	5,049	5,899	6,447	5,686	5,714	5,258	5,047	63,422	57,803	5,619	9.7%
Mail Shuttle	135	127	143	140	155	149	166	163	156	140	135	143	1,753	3,800	(2,047)	-53.9%
MetroRide	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0%
Total Non-Revenue Services	135	127	143	140	155	149	166	163	156	140	135	143	1,753	3,800	(2,047)	-53.9%
Total System	4,730	4,615	5,266	5,032	5,378	5,198	6,066	6,611	5,842	5,854	5,393	5,190	65,175	61,603	3,573	5.8%

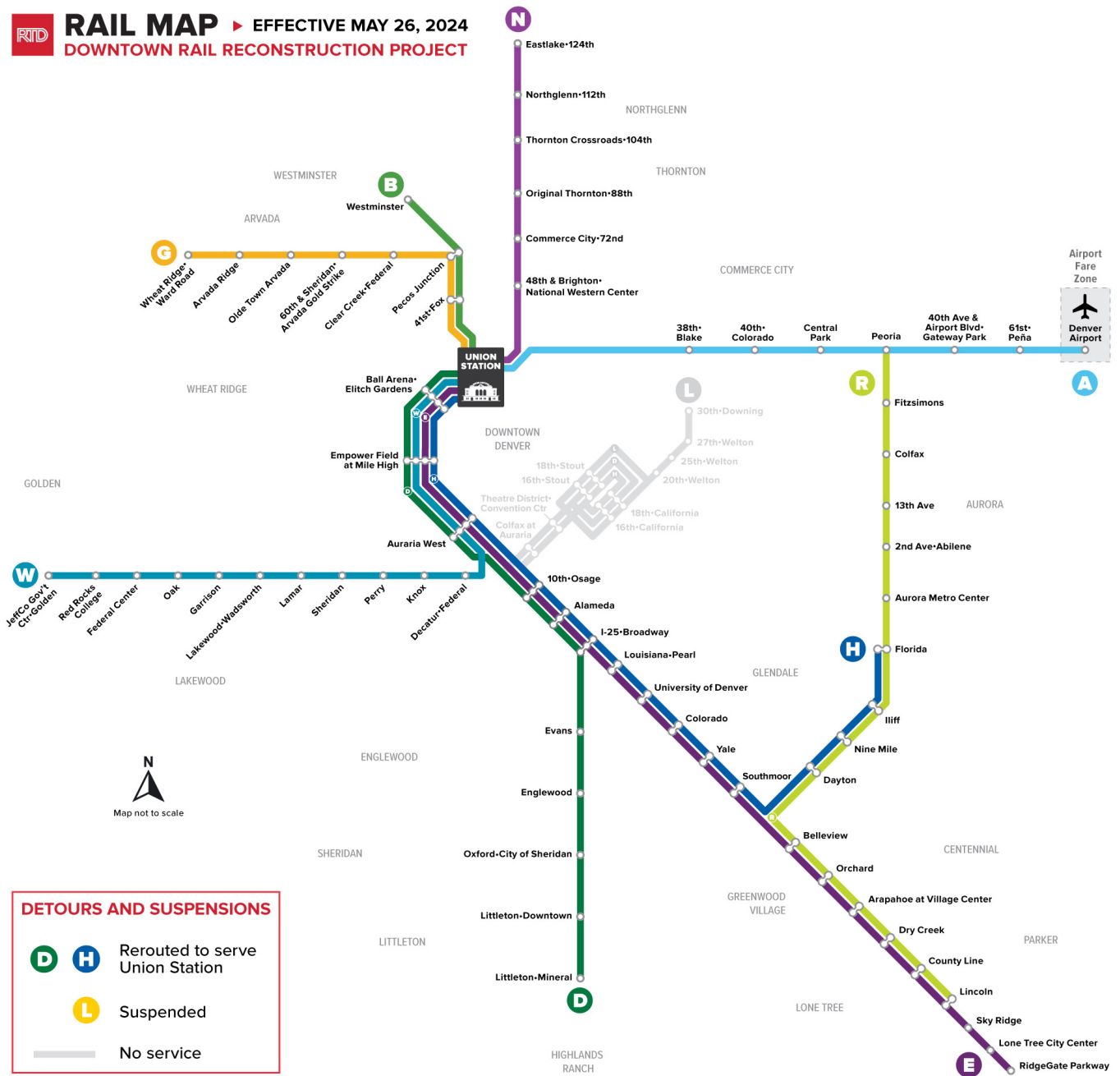
2023 % Change from 2022 by Month	11.1%	12.2%	8.2%	1.5%	6.1%	-5.9%	16.4%	3.9%	2.3%	3.6%	8.0%	6.0%	5.8%
2023 % Change from 2021 by Month	53.7%	62.2%	53.2%	41.9%	43.7%	25.4%	35.3%	41.6%	16.0%	17.0%	18.5%	15.4%	32.9%
2023 % Change from 2020 by Month	-45.1%	-44.3%	-12.1%	73.5%	73.1%	48.9%	77.4%	89.5%	69.4%	63.9%	75.4%	69.1%	23.9%
2023 % Change from 2019 by Month	-42.8%	-40.8%	-36.1%	-44.0%	-41.0%	-39.8%	-32.2%	-31.2%	-37.6%	-40.0%	-36.8%	-39.4%	-38.4%

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	Total
2018 Ridership	8,849	8,348	9,220	9,009	8,931	8,519	8,496	9,314	8,850	9,360	8,591	7,901	105,388
2019 Ridership	8,270	7,792	8,244	8,986	9,111	8,640	8,952	9,609	9,358	9,759	8,534	8,568	105,824
2020 Ridership	8,775	8,281	5,991	2,899	3,107	3,492	3,419	3,488	3,448	3,572	3,075	3,070	52,617
2021 Ridership	3,078	2,845	3,438	3,546	3,742	4,146	4,482	4,669	5,036	5,001	4,553	4,497	49,033
2022 Ridership	4,258	4,112	4,868	4,956	5,070	5,522	5,209	6,360	5,708	5,650	4,993	4,897	61,603
2023 Ridership	4,730	4,615	5,266	5,032	5,378	5,198	6,066	6,611	5,842	5,854	5,393	5,190	65,175



Light Rail Detour Map

RTD RAIL MAP ▶ EFFECTIVE MAY 26, 2024
DOWNTOWN RAIL RECONSTRUCTION PROJECT



Free MallRide and Free MetroRide

► **Free MetroRide** service returns with the May 26, 2024 Service Change.

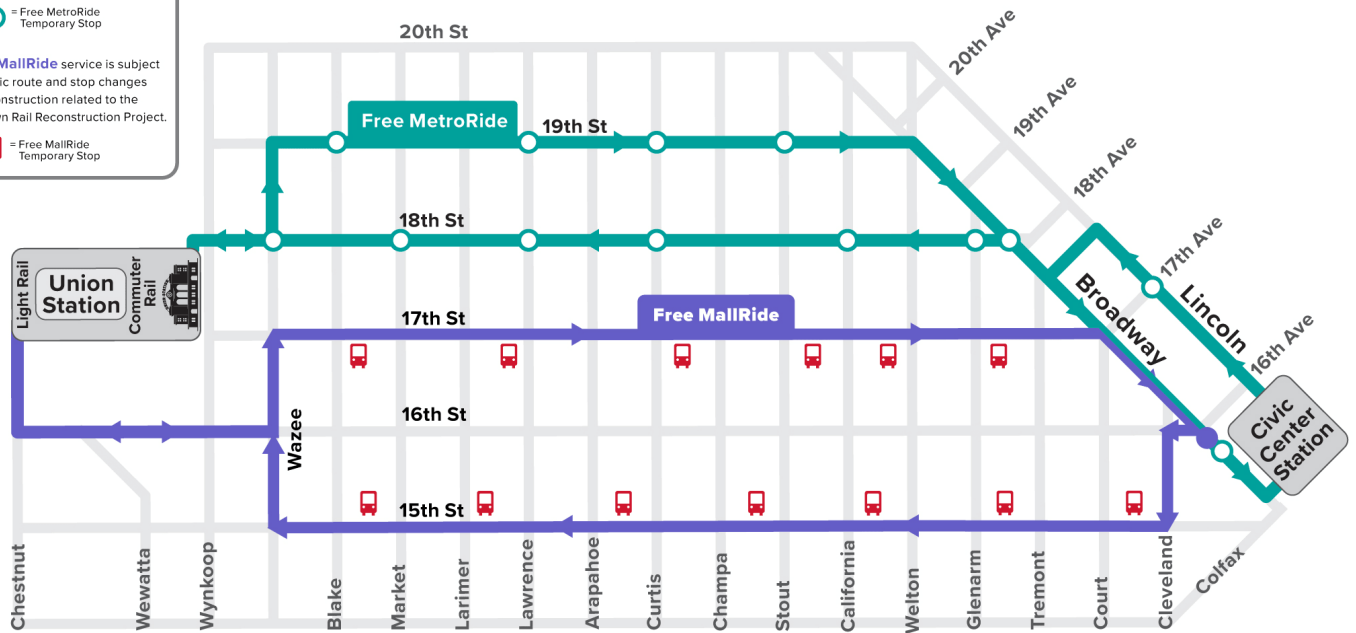
○ = Free MetroRide Temporary Stop

► **Free MallRide** service is subject to periodic route and stop changes due to construction related to the Downtown Rail Reconstruction Project.

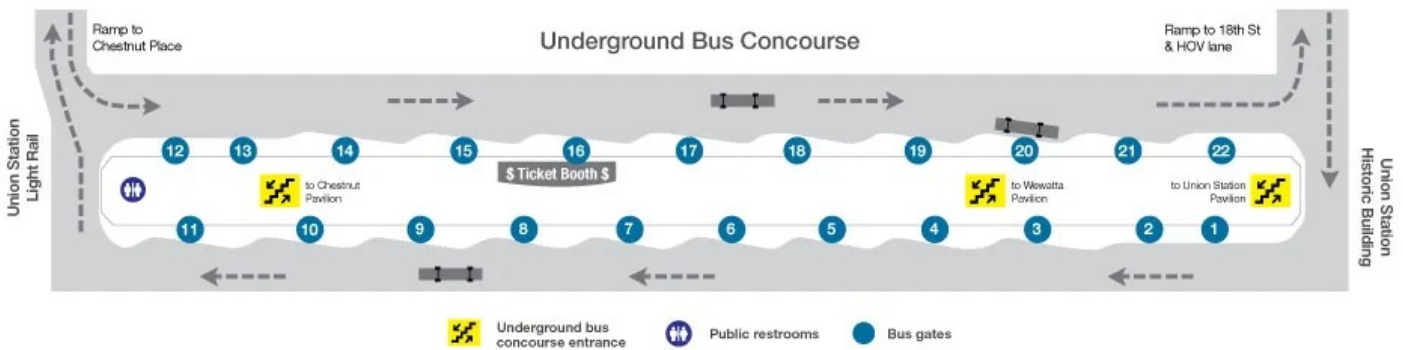
🚏 = Free MallRide Temporary Stop

Free MetroRide and Free MallRide Map

Last Updated May 6, 2024



- **Free MallRide** will provide 10-minute frequency between May 26 and September 15, 2024
- **Free MetroRide** will temporarily provide service during the reconstruction project
 - Seven stops between Denver Union Station's underground bus concourse and Civic Center
 - 10-minute frequency from 5:45 a.m. to 7:00 p.m.
 - Operates out of three dedicated gates in the underground bus concourse
 - Gate 11: drop-off only; nearest gate to the light rail station
 - Gate 13: boarding and drop-off; nearest gate to the light rail platform
 - Gate 22: boarding only; near the historic building and commuter rail platform



Downtown Bus Routes

- The reconstruction project will potentially affect several bus routes
- Not all downtown bus routes will be impacted at the same times

15 th Street		
Free MallRide*	10	38
0	15/15L	43
6	19	44
8	28	48
9	32	52

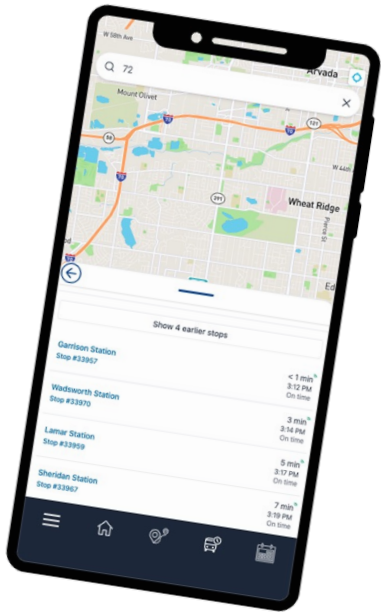
17 th Street		
Free MallRide*	10	32
0	15/15L	48
6	19	52
8	20	
9	28	

*Currently detoured due to the 16th Street Mall Project

Customer Tools and Resources

Next Ride App

- Available in multiple languages
- Service Alerts displayed by bus route, rail line, station, or facility
- Real-time vehicle locations and fare-purchasing options
- Plan trips for future dates and times
 - Trip planning considers service disruptions in arrival estimates
- Averages more than 300,000 unique users a month



Customer Care Call Center

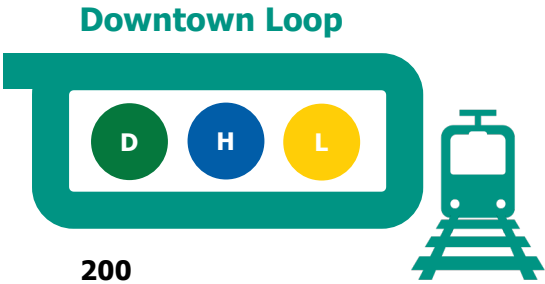
- Assist with trip planning, provide real-time updates, and answer questions
 - 6 a.m. – 8 p.m., Monday – Friday
 - 9 a.m. – 6 p.m., Saturday, Sunday, and Holidays
- Call 303.299.6000
- Language assistance available

Impact Team

- Agency ambassadors dispatched during large events, service disruptions, and peak service times
- Available to answer frequently asked questions, provide trip information, and show customers how to sign up for Service Alerts and purchase fare
- Focused on enhancing the customer experience and creating a welcoming transit environment



Downtown Rail Reconstruction Project



200
TOTAL DAILY TRAIN TRIPS

2023 Ridership

D Line 2,670,000	H Line 2,230,000	L Line 340,000
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Train Headways

D Line 15-MINUTE FREQUENCY	H Line 15-MINUTE FREQUENCY	L Line 15-MINUTE FREQUENCY
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Project's Four Phases

- 1 **Five Intersections**
SUMMER 2024
- 2 **Midblock Reconstruction**
2025
- 3 **Colfax Avenue**
2025
- 4 **Welton Street Corridor**
2025

Appropriated Total Amount

\$152 MILLION

RTD's Board of Directors appropriated \$152 million in FY2024 for planning, design, construction, legal consultancy, and project management

Five At-Grade Crossings

15th•Stout, 15th•California, 17th•Stout, 17th•California, and Broadway•Welton

Vehicle Weights



Articulated Bus
65,000 POUNDS



Sanitation Truck
50,000 POUNDS



Fire Truck
50,000 POUNDS



Free MallRide Bus
45,000 POUNDS



40-Foot Bus
40,000 POUNDS



Delivery Truck
12,000 POUNDS



Ambulance
10,000 POUNDS



Single Occupancy Vehicle
3,000 POUNDS



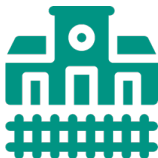
FIXED ASSETS
More than \$9 Billion
BRIDGES, FACILITIES, VEHICLES,
TRACK, SIGNALS, ETC.



Public Utilities
Under the Rail Alignment
WATER, GAS, SEWER,
AND TELECOMMUNICATIONS



5.3 Miles of Track
Between I-25•Broadway and 30th•Downing
RTD'S LIGHT RAIL SYSTEM HAS 60.1 TOTAL MILES OF TRACK



Downtown Bus Routes
17 Bus Routes
CROSS THE DOWNTOWN LOOP

Frequently Asked Questions

What is the Downtown Rail Reconstruction Project?

The Downtown Rail Reconstruction Project features full-depth replacement of rail that has served RTD's central downtown corridor for 30 years. This major construction initiative will improve safety and reliability of the metro area's light rail system.

Why is RTD undertaking the Downtown Rail Reconstruction Project now, especially while the 16th Street Mall project is underway?

Managing and maintaining assets in a state of good repair ensures the long-term integrity of the rail network for all individuals who entrust RTD to deliver them to their destinations. After more than 30 years, RTD is investing in its oldest rail infrastructure to ensure the long-term integrity of the network. The paved sections of track in the downtown loop are underneath concrete, so the rails and underlying ballast materials are more difficult to maintain. Years of increasing vehicular and train traffic, along with chemicals like deicing salts, have taken a toll on the downtown tracks, making this project a priority. RTD and the City and County of Denver are working together to minimize impacts to customers and the public. The project is focused on using best practices for maintaining access through the crossings while minimizing disruption for downtown businesses, transit customers, and the public.

How is this project different from previous downtown rail projects?

This major reconstruction project is the first of its kind in RTD's history. Previous rail-related construction projects were isolated and aimed at specific segment enhancements and repairs. For instance, during previous isolated projects, RTD prioritized high-risk areas like switches and at-grade rail crossings, completing one or two projects per year. This multi-phased project will improve five intersections in downtown Denver that serve as at-grade crossings for D, H and L light rail lines.

How will the Downtown Rail Reconstruction project affect travel in downtown?

Beginning May 26, all D and H line trains will be rerouted to Denver Union Station, and L Line service, which connects 30th•Downing Station to the downtown loop, will be suspended. No light rail service will operate in RTD's central corridor through September 2024. RTD's bus routes that operate along 15th and 17th streets may also be temporarily impacted during the project, and the agency is working to limit any detours in the downtown area. With the D and H lines rerouting to Denver Union Station, RTD is planning to temporarily reintroduce its Free MetroRide service, which will operate along 18th and 19th streets. Both the Free MallRide and MetroRide provide multiple stops between Union Station and Civic Center Station. RTD will also operate expanded service on the Route 0L from I-25/Broadway Station to central downtown via Civic Center Station to provide the option for customers not traveling to Lower Downtown.

What about access to RTD's services and downtown businesses during construction?

RTD is committed to providing safe and accessible services, preserving a reliable transit infrastructure, supporting previous investments, and extending design life of agency assets. The downtown area will remain accessible by transit during all phases of construction. Customers and the public will still have access to transit, businesses, and downtown events during the construction project. RTD's website and apps are the best ways for customers to plan a trip and reach their downtown destinations.



How will the construction impact and service impact be communicated to the public?

RTD is working with numerous downtown partners and the media to provide advanced information and communications about the Downtown Rail Reconstruction Project. In advance of the work, RTD has crafted and disseminated clear messages highlighting the benefits of the project and its impact to services. The agency is using in-system assets such as signage, community engagement and outreach events, media relations, partner and stakeholder collaboration, web, digital, and social media. Project-specific materials and resources will be developed to explain the project details and support external engagement opportunities with customers, partners, and local stakeholders. This comprehensive approach aims to effectively manage expectations by informing and engaging customers and the community with consistent, accurate and timely communications while emphasizing the project's long-term benefits.

What are the impacts to traffic lanes and businesses adjacent to the construction sites? Will the project involve full closure of intersections?

The work will be sequenced such that not all intersections will be impacted at the same time. In most instances while the project is underway, vehicular traffic will be able to travel through impacted areas. However, some full closures may be required for limited periods of time to support work crews. Access will be maintained to all businesses adjacent to the work areas.

Why is RTD sending all the trains to Union Station and not turning them around at the Convention Center?

Staff considered the option of turning D and H line trains at the Convention Center. However, the staffing required to support the Coping Panels Project and operate switches at the Convention Center, while also performing routine maintenance across the entire rail system, is not possible. RTD's Rail Operations does not have the supervisory staff available to have a controller at Convention Center to monitor train movement in that

area. Additionally, there are people power limitations in the Supervisory Control and Data Acquisition (SCADA) group to support and monitor the Coping Panels Project and normal train operations across RTD's entire light rail system.

What are the main impacts to RTD service during the downtown rail work?

Beginning May 26, all D and H line trains will be rerouted to Denver Union Station, and L Line service, which connects 30th•Downing Station to the downtown loop, will be suspended. No light rail service will operate in RTD's central corridor through September 2024. Following completion of the project's first phase in September, crews will pause reconstruction work until 2025, and all light rail services will resume its normal operations.

RTD's bus routes that operate along 15th and 17th streets may also be temporarily impacted during the project, and the agency is working to limit any detours in the downtown area. Also, with the D and H lines rerouting to Denver Union Station, RTD is planning to temporarily reintroduce its Free MetroRide service, which will operate along 18th and 19th streets. Both the Free MallRide and MetroRide provide multiple stops between Union Station and Civic Center Station. In addition, RTD will introduce all-day service through September 2024 on the Route 0L South Broadway Limited bus to reduce the impact of the Downtown Rail Reconstruction Project on customers using light rail.

Will the H and D lines stop at Auraria West this summer?

Four light rail lines (D, E, H, and W lines) plus the Platte Valley FlexRide will serve the Auraria West Station during the downtown work. L Line service, which connects 30th•Downing Station to the downtown loop, will be suspended, and customers are encouraged to use Bus Route 43. No light rail service will operate in RTD's central corridor through September 2024.

