

Premium Transit Study



October 2022



North Front Range
Metropolitan
Planning
Organization

Introduction

The North Front Range Metropolitan Planning Organization (NFRMPO) led a collaborative effort to expand premium transit service connecting North Front Range communities.

The project was branded 'LINKNoCo,' referencing the desire to efficiently link residential, commercial, employment, and activity centers across the North Front Range. This effort focused on enhancing existing transit operations by evaluating and prioritizing opportunities for a complete premium transit network for the region.

What Is Premium Transit?

Premium transit refers to reliable, comfortable, and user-friendly transit that connects communities across the North Front Range. This does not duplicate local transit service, but rather focuses on an express-style service to connect across greater distances to link towns, cities, and major activity centers where residents live, work, and recreate in Northern Colorado. Premium transit could include a range of transit technologies, like premium bus or passenger rail service, and typically provides additional amenities at stops specific to the needs of express transit users.



Premium transit is benefiting communities across the United States (Minneapolis, Seattle, and San Diego).



Why LinkNoCo?

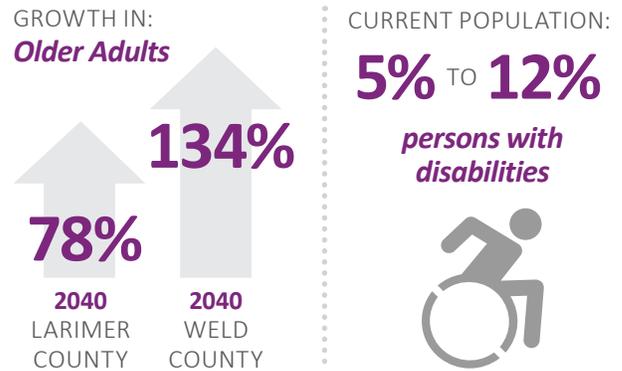
LINKNoCo is the next incremental step to advance the broad regional transit network envisioned in the NFRMPO's 2045 Regional Transit Element (RTE). Expanding regional premium transit will provide greater transit access and multimodal connection while supporting traffic congestion reduction, safety enhancements, and air quality benefits. LINKNoCo builds on successful local regional transit connections like the Poudre Express and FLEX services.

THE NEEDS FOR THE DEVELOPMENT OF LINKNOCO ARE INDICATED BY THE FOLLOWING:

Meet the transit needs of existing and future local/regional residents, businesses, and visitors



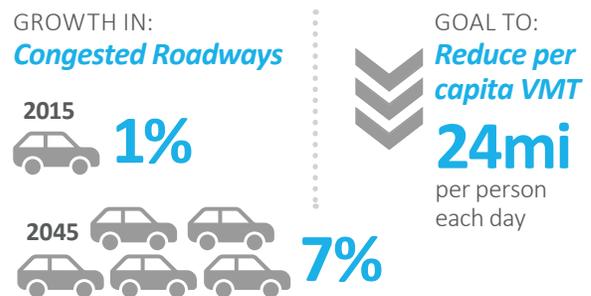
Meet the mobility needs of underserved communities



Enhance the connectivity between significant origin and destination points within the region



Reduce vehicle miles traveled (VMT) and support congestion reduction and air quality improvement





GET, COLT, and Transfort currently provide extensive local foundation service and will serve as a critical transfer for any new regional premium services.

What are the Study Outcomes?

The final outcomes of LINKNoCo include identification of the top three priority corridors to initiate the regional premium transit network. LINKNoCo also presents options for further consideration of the financial and governance structures necessary to implement the new services.



Planning Process

LINKNoCo followed a stepped planning process to develop the necessary understanding of transit needs that informed the prioritization of premium transit options. Throughout the process, input and guidance was provided by local jurisdictions and agencies as members of the project’s Guidance Committee and the Governance and Finance Policy Advisory Committee. Local stakeholders and residents were engaged through multiple project questionnaires and an online open house aimed at gauging local sentiments and guiding the recommendations.

A FEW COMMON THEMES WE HEARD FROM STAKEHOLDERS...

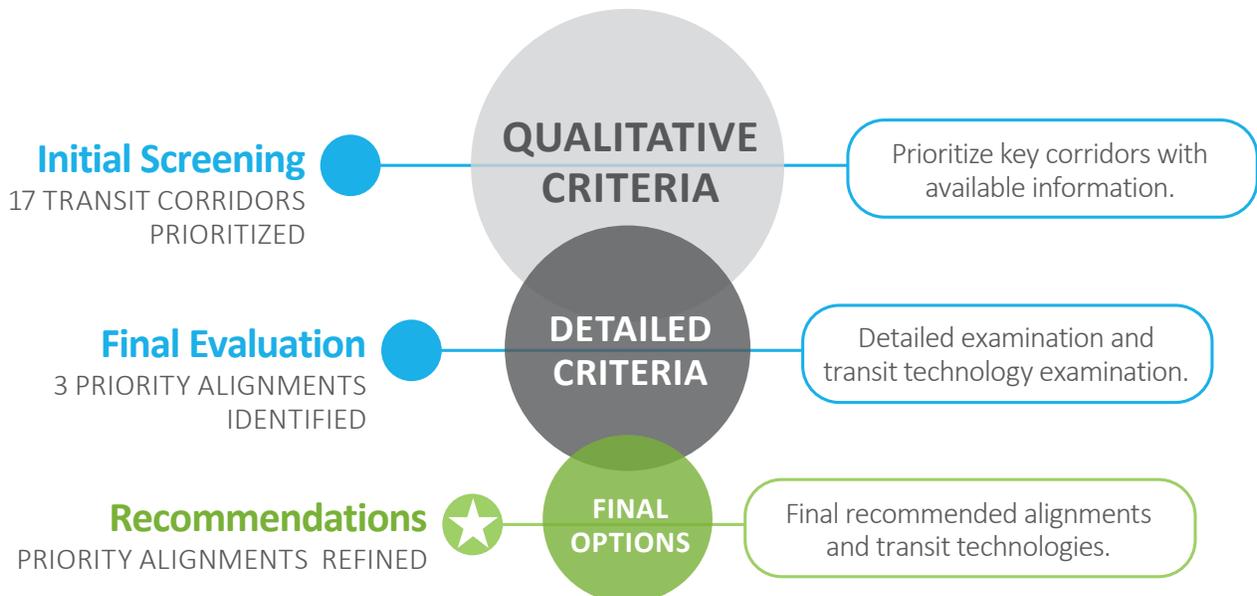
- + Build off successes of Poudre Express, MAX, and FLEX.
- + Prioritize connections that benefit communities of need.
- + Preserve right-of-way for improvements.
- + Prioritize bike and pedestrian connections to transit.

Prioritization

The initial screening used a range of criteria to narrow the initial 17 transit corridors. This step asked critical questions about connectivity to key destinations across the region, integration with existing local transit, potential infrastructure improvements, and overall public support.

In the final evaluation, the corridors were further refined to optimize their connectivity to key destinations. The final evaluation was not intended to eliminate any alignments, but served to enhance the strengths and improve upon any weaknesses. The alignments were then evaluated using more detailed criteria, including equity, multimodal access, regional considerations, transit performance, cost and economic development. The final evaluation also included an analysis of potential transit technologies, which ranged from enhanced bus to light rail and commuter/passenger rail. The goal of this effort was to match the right transit technology with each alignment.

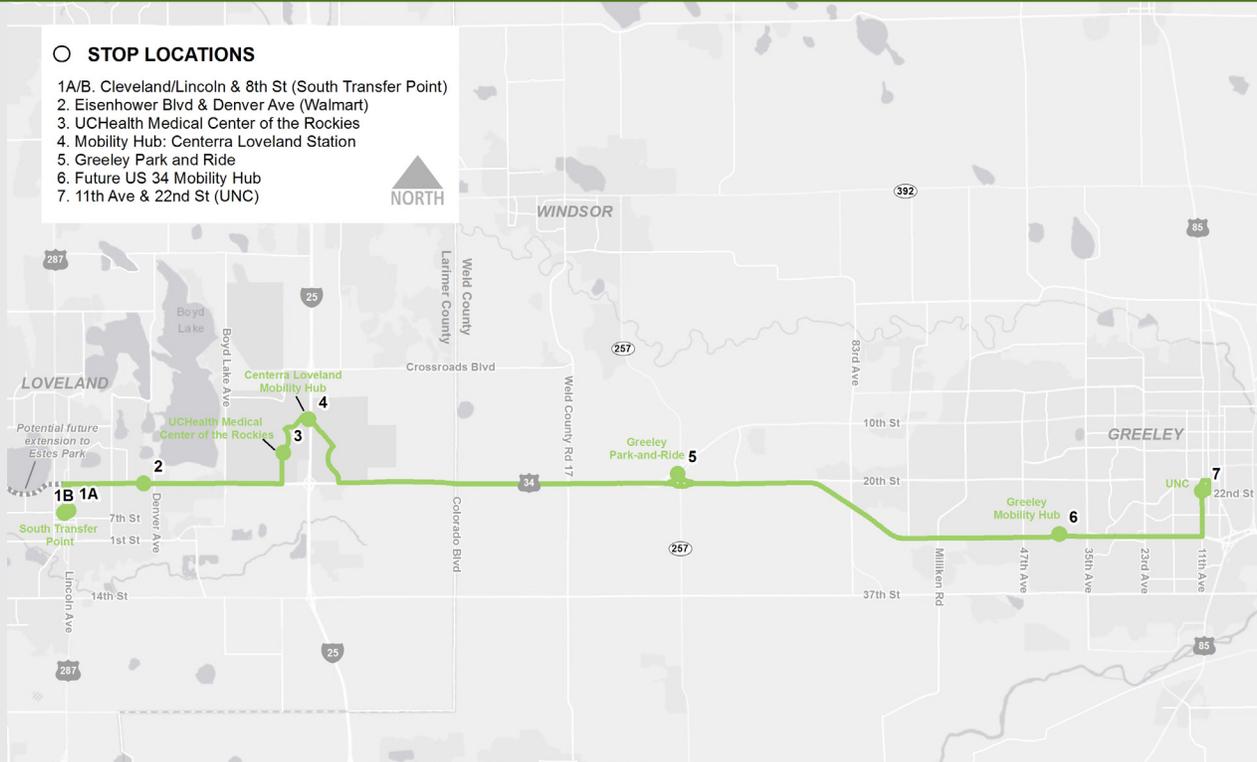
LINKNOCO PLANNING PROCESS



Priority Premium Transit Alignments

Loveland to Greeley (US 34)

This enhanced bus alignment would connect the University of Northern Colorado campus to central Loveland, with seven stops at key destinations. The service is proposed to operate within existing travel lanes with priority measures for buses at key intersections. This may include queue jumps to allow buses to move ahead of other traffic at signals. Additional priority will be considered, including Transit Signal Priority (TSP), Business Access and Transit (BAT) lanes, and exclusive Bus Rapid Transit (BRT) lanes. The service is tentatively planned to operate every 30 minutes.



TECHNOLOGY



Enhanced Bus

FLEET



6 Vehicles
\$3.0M - \$7.2M

FREQUENCY



Every 30
Minutes

TRAVEL TIME



52-57 Minutes
(entire route)

STOPS



7 Stops
Proposed

OPERATING COSTS



\$3.9M to \$4.1M
(annually)

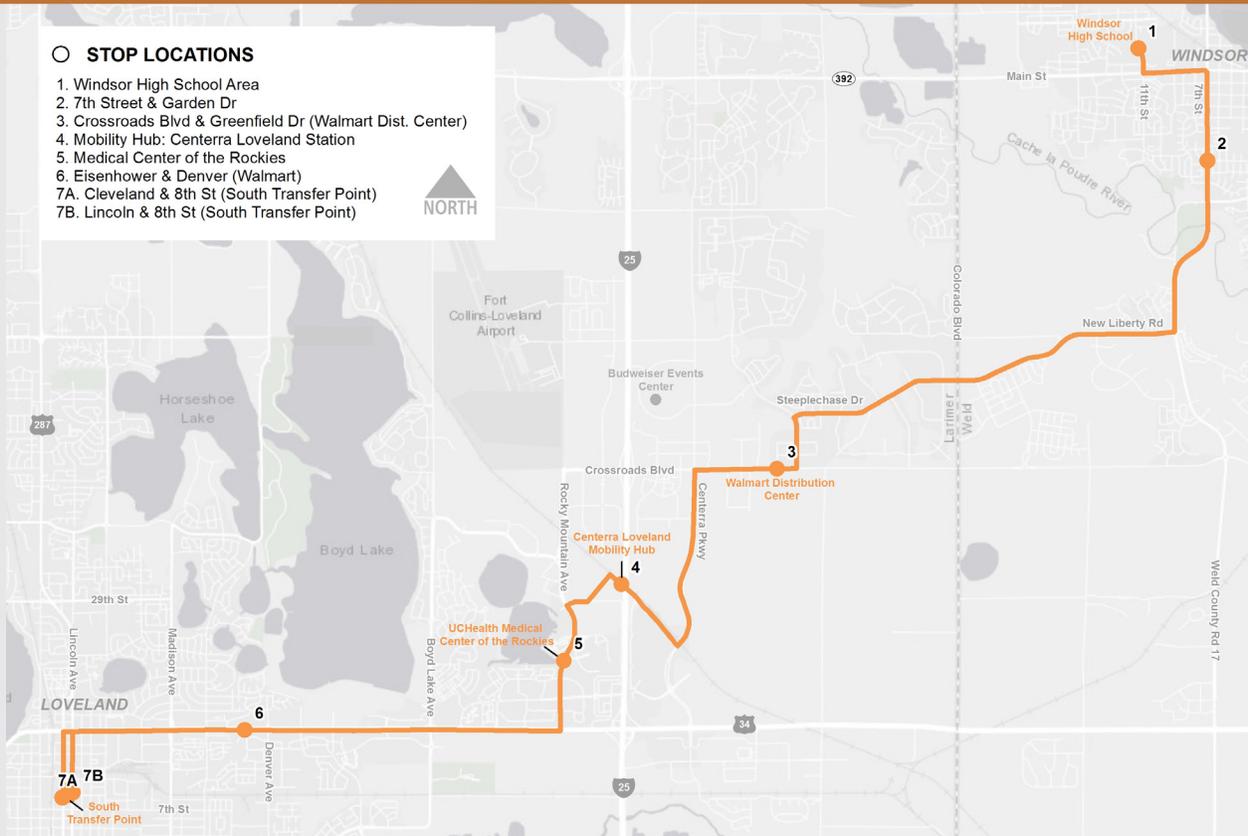


Context along the Loveland to Greeley (US 34) alignment.

Priority Premium Transit Alignments

Windsor to Loveland (WCR 17/US 34)

The Windsor to Loveland enhanced bus service would effectively link the emerging growth areas in central and southwestern Windsor to the rapidly developing Centerra area and the urban core of Loveland. The service is proposed to operate within existing travel lanes with priority measures for buses at key intersections. This may include queue jumps to allow buses to move ahead of other traffic at signals. Additional priority will be considered, including TSP, BAT lanes, and exclusive BRT lanes. The service is tentatively planned to operate every 30 minutes.



TECHNOLOGY



Enhanced Bus

FLEET



4 Vehicles
\$2.0M - \$4.8M

FREQUENCY



Every 30 Minutes

TRAVEL TIME



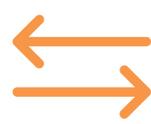
35-39 Minutes (entire route)

STOPS



7 Stops Proposed

OPERATING COSTS



\$2.7M to \$3.9M (annually)

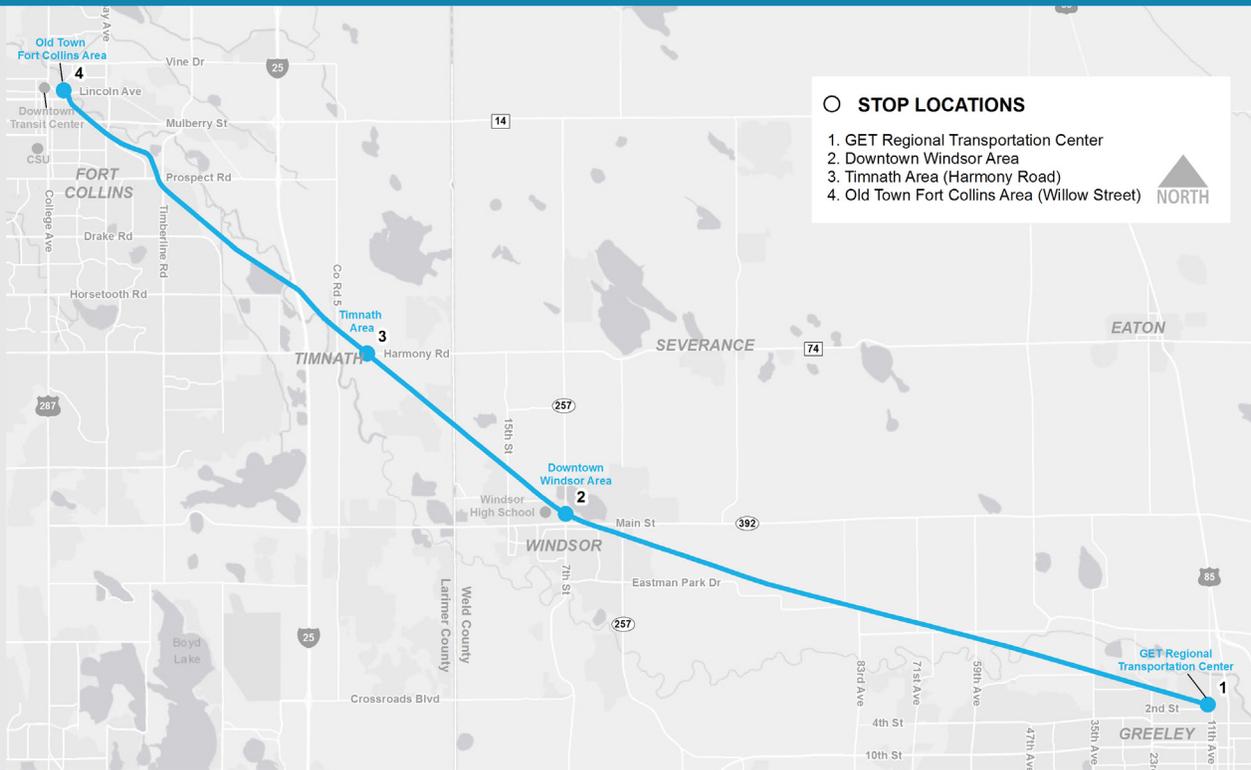


Context along the Windsor to Loveland (WCR 17/US 34) alignment.

Priority Premium Transit Alignments

Greeley to Fort Collins (Great Western)

The Greeley to Fort Collins commuter rail service would provide a direct connection between Greeley and Fort Collins along the Great Western Railway freight line. It would initiate service at the Greeley Regional Transportation Center (11th Ave and 1st St) and proceed northwest within the rail right-of-way through the towns of Windsor and Timnath before terminating in the vicinity of Lincoln Ave and Willow St in downtown Fort Collins. The service is tentatively planned to operate 16 trips per day. Additional service plans will be considered.



TECHNOLOGY



Commuter Rail
(long-term goal)

FLEET



3 Vehicles
\$12.0M - \$24.0M

FREQUENCY



16 Trips Daily

TRAVEL TIME



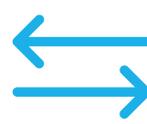
32 Minutes
(entire route)

STOPS



4 Stops/Stations
Proposed

OPERATING COSTS



\$472K
(annually)



Context along the Greeley to Fort Collins (Great Western) alignment.

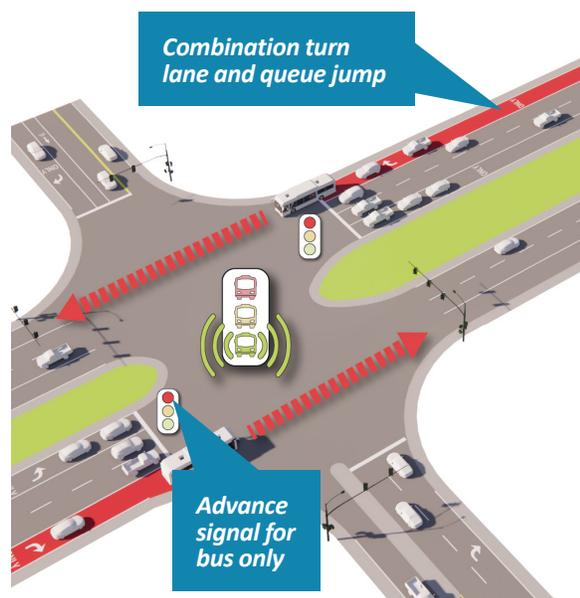
Infrastructure Improvements for Consideration

The priority enhanced bus improvements are intended to be a less infrastructure-intensive solution to move more people more efficiently. However, improvements to intersections and operational improvements can provide priority and more consistent reliability for buses as congestion continues to grow. The goal of LINKNoCo is to advance near-term bus improvements as rapidly as possible. Simultaneously, LINKNoCo recommends continuing to plan, design, fund, and implement more significant infrastructure improvements, such as the commuter rail along the Great Western alignment. More significant infrastructure should be evaluated in the next stage of planning, including the benefits and impacts of potential priority measures to improve the reliability and speed of transit. The visualizations below present examples of potential infrastructure improvements as a guide for future planning.

Bus Priority Infrastructure

Queue Jumps

Intersection improvements, such as **queue jumps**, provide priority for buses and reduce conflicts between buses and general traffic. Some existing right turn lanes could be modified to act as both a turn lane and priority for buses. As the vehicles turning right advance, the bus is moved forward. As the signal changes, a queue jump signal (specific to the bus) provides time for the bus to advance ahead of the general traffic.



Example of existing right turn lanes modified to serve as queue jumps.

TSP

Transit Signal Priority (TSP) is a transit operations tool that can improve bus reliability and speed through typically congested intersections. With an investment in TSP, transit alignments can be retrofitted to provide premium transit operations with limited changes to general traffic. TSP at traffic signals can detect approaching buses and adjust the signal phase to support efficient movement of buses and vehicles through the intersection (either lengthening or shortening the signal phases).



TSP systems include smart signals that can detect the location of buses and provide priority through signals.



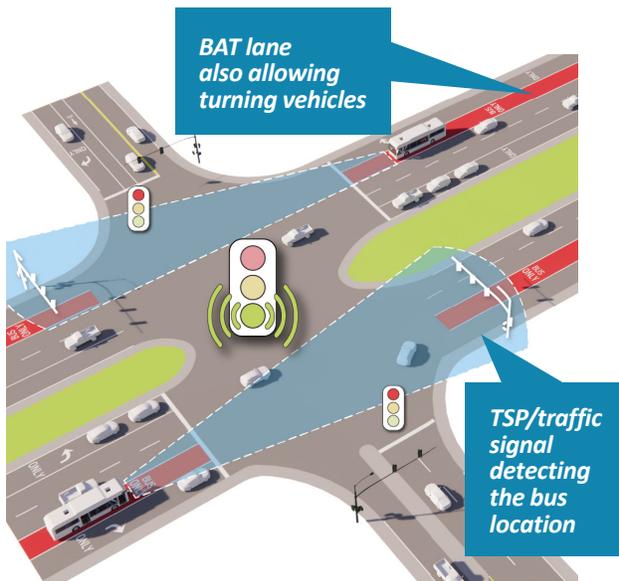


TSP and BAT Lanes

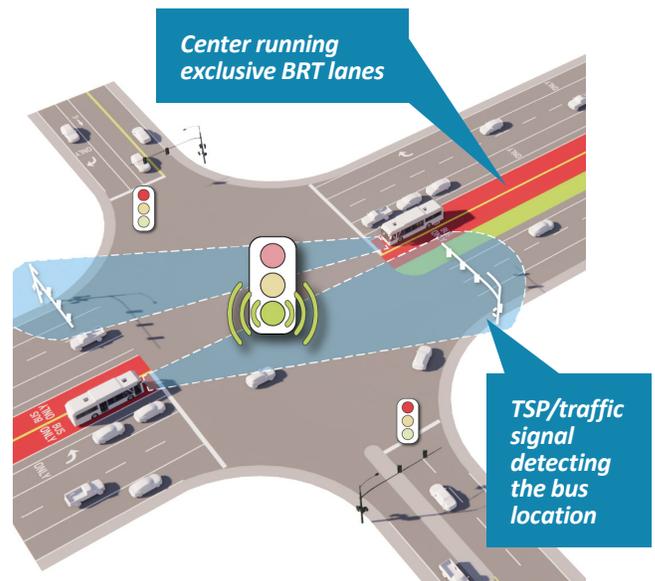
Business Access and Transit (BAT) lanes support more efficient movement of transit vehicles and other traffic by providing better access to businesses. BAT lanes are typically curbside lanes for use by buses and turning traffic accessing adjacent businesses or residences. The success of BAT lanes depends on the ability to develop reasonable access controls along the alignment.

TSP and BRT Lanes

Providing exclusive **Bus Rapid Transit (BRT) lanes** for buses can significantly improve transit travel times and reliability. Additional space is typically required beyond standard lane widths to provide physical separation barriers or painted buffers. The configuration of BRT can vary throughout a corridor depending on the right-of-way and the context of development along the alignment. Segments of US 34 include a wide center median that should be further evaluated for center running BRT.



The red, outside BAT lanes provide priority movement for buses while allowing traffic to access businesses and homes. BAT lanes can be paired with more advanced TSP signal systems.



Exclusive lanes for BRT could be considered along US 34 where there are wide medians.

Commuter Rail Infrastructure

Many communities in the United States are examining the potential of using existing freight rail corridors for passenger service. The Greeley to Fort Collins (Great Western) alignment is a good candidate; however, the existing track and rail signaling systems would need to be upgraded to meet passenger safety standards. With the introduction of passenger service, improvements at roadway crossings of the rail line may require enhanced protection. Any advancement of commuter rail service will require agreements with OmniTRAX, the owner of the Great Western Railway.

The Sprinter is a successful commuter rail service in northern San Diego County implemented on a freight rail corridor. Some Sprinter platforms were designed to uniquely accommodate the needs of both freight and passenger traffic.



Governance and Funding Options

Implementation of the three priority alignments will require a governance structure to support cross-jurisdictional decisions and the operation of premium transit services.

Working with policymakers and elected officials from local jurisdictions, LINKNoCo examined a range of potential governance structures tailored to the North Front Range. The governance options will continue to be evaluated in parallel with the future planning of the alignments. The recommended governance options focus on maximizing the use of Intergovernmental Agreements (IGA). IGAs can cover a range of potential funding and operational agreements. The IGA structures set the stage for partnerships to pursue and receive funding at the local, state, and federal levels. State and local funding could be pursued to support startup through programs like Colorado's Multimodal Transportation and Mitigation Options Fund. More significant investments could seek funding from the Federal Transit Administration, Federal Highway Administration, or other funding opportunities through the 2022 Bipartisan Infrastructure Law (Infrastructure Investment and Jobs Act).

The LINKNoCo plan is not defining the final governance structures, but providing information to inform future decision making by local partners. Local stakeholders created clear goals for governance:

- + Keep the approach simple.
- + Avoid creating more government entities.
- + The local entities (not the state legislature) should determine what is best for the region.
- + Take advantage of existing resources, prior investments, and build on current services.
- + Preserve options for future project delivery.
- + Provide flexibility.
- + Continue to work with the Colorado Department of Transportation (CDOT).





The ease of movement provided by premium transit can have a significant impact the quality of life for area residents.

Forward Momentum Next Steps

The opportunity exists now to build on the momentum generated through LINKNoCo's collaborative effort. Residents, employers/employees, and decision makers within the North Front Range can proactively shape the region's mobility future and improve the way people move. LINKNoCo's recommendations serve as a guide to the key next steps for the Loveland to Greeley (US 34), Windsor to Loveland (WCR 17/US 34), and Greeley to Fort Collins (Great Western) transit alignments.

Advancing these three priority transit alignments is just the start. The goal is to build on their successes and construct a complete regional transit network. The returns on these incremental investments have the potential to improve regional mobility for future generations.