

TECHNICAL MEMORANDUM

Date:	January 24, 2022	TG:	1.21322.00 TO 2
To:	Tim Wilder – WTA		
From:	Stefanie Herzstein and John Duesing – Transpo Group		
Subject:	Rapid Transit Corridor Study – Definition, Goals and Objectives		

This technical memorandum defines Rapid Transit and provides a summary of the goals and objectives that will be used to evaluate the WTA Rapid Transit Corridor alternatives. The intent of the WTA Rapid Transit Corridor study is:

- Identify and analyze the feasibility of transit infrastructure improvements to improve the speed and reliability of transit along key high frequency corridors
- Assess alternatives and opportunities, including land use initiatives along corridors to identify a Locally Preferred Alternative for potential bus rapid transit system
- Prepare work and documentation that would enable WTA to obtain local, state and federal funding, including entering into the FTA's Project Development phase for a possible Capital Investment Grant (Small Starts) (Purpose and Need, Alternatives, LPA, etc.)

The definition of rapid transit and goals and objectives provide a guideline to meet the intent of the study. Measures are also identified to evaluate how well the alternatives meet the goals and objectives.

The definition of rapid transit, goals and objectives for the study area is rooted in WTA's mission. The mission is to enhance the community by:

- Delivering safe, reliable, efficient and friendly service
- Offering environmentally sound transportation choices
- Providing leadership in creating innovative transportation solutions
- Partnering with our community to improve transportation systems

Definition

This step defines what rapid transit means for the WTA and service in Whatcom County providing a clear understanding for coordination with the Federal Transit Administration (FTA) and the community. Working with the WTA staff and the Technical Advisory Committee (TAC) for this study and considering the WTA Long Range Transit Plan (WTA 2040), WTA Mission and the existing conditions report (Task 1) of this study, the following is the proposed definition of rapid transit in Whatcom County that will drive the goals and objectives.

WTA 2040 adopted February 2022 describes the current GO Lines as high frequency transit with 15-minute headways on weekdays. WTA 2040 also provides a definition of bus rapid transit (BRT) characteristics:

- **Very Frequent Service.** Buses arrive as often as every 5 to 10 minutes throughout the day, creating a backbone network of frequent service which improves the ability to transfer to different routes.

- **Specialized Vehicles.** Custom buses have unique designs and provide more capacity, more doors, and lower floors for easier loading and unloading.
- **Efficient Boarding Process.** Bus dwell times are minimized and passengers load without waiting in line using treatments such as off-board fare collection or no fare, level boarding bus ramp required, and multidoor loading. , **Additional Elements.** Transit priority treatments to improve speed and reliability plus enhanced stations to improve the rider experience such as real-time arrival signage.
- **Special Branding.** Unique designs make buses and stations more visible, raising awareness of Bus Rapid Transit and increasing customer expectations for higher levels of service.

This definition of BRT from WTA 2040 provides the foundation for a definition of Rapid Transit for the alternatives evaluation portion of the study. In addition, WTA may consider implementing Rapid Transit features at different levels within the system. The following provides the definition of 3 tiers of Rapid Transit implementation with Tier 1 being a full corridor and Tier 3 being localized improvements. The intent of the 3 tiers is to guide the phase 2 of the Rapid Transit study, which will identify some near-term transit priority improvements and develop conceptual designs. The tier rapid transit definitions are:

- Tier 1 – This tier provides for the most rapid/fast and frequent services and includes all the features for enhancing transit. It is considered full implementation of rapid transit.
 - Service frequency of 10 minutes or less during the day, provision of late night service and minimum frequency of 30 minutes on weekends.
 - Increased bus stop spacing
 - Branded rapid transit vehicles, bus stops and other facilities
 - Level boarding
 - Dedicated transit lanes or business access transit (BAT) throughout most of the route
 - Transit signal priority enhancements and queue jump lanes
 - Transit amenities enhancements along the routes such as bike lockers/bike share, pedestrian scale lighting, enhanced pedestrian crossings, mobility hubs
 - Off-Board or No Fare Payment
 - Proximity to transit-oriented development/mixed uses
 - Real-time bus information at stations and stops
- Tier 2 – This tier provides some enhancements to increase frequency and efficiency of service but not full dedicated bus lanes
 - Service frequency of 10 or less for the majority of the day
 - Increased bus stop spacing
 - Branded rapid transit vehicles, bus stops and other facilities
 - Some areas of dedicated lanes, business access transit lanes (BAT) or bus/bike lanes along the route
 - Enhanced pedestrian crossings

- Transit signal priority enhancements and queue jump lanes
- Off-Board, Zero Fare Payment, Multiple on-board readers for both door loading
- Proximity to transit-oriented development/mixed uses
- Real-time bus information at station and stops
- Tier 3 – This tier provides local improvements at points along the route. The improvements are considered rapid transit features but this is not considered full implementation of rapid transit.
 - Transit signal priority enhancements and queue jump lanes
 - Off-Board Payment or Multiple on-board readers for both door loading
 - Real-time bus information at stations and stops
 - Spot improvements at key intersections to provide dedicated lane such as bus/bike lanes or business access transit lanes (BAT)

Goals, Objectives and Measures

The goals and objectives consider the rapid transit definition and build on the WTA mission. The intent of the alternative analysis is to determine the alternative that is best most feasible for full implementation of rapid transit. Table 1 provides a summary of the goals, objectives, and measures for use in the rapid transit corridor alternatives analysis. There are three goals for this study to determine which corridor is the most appropriate for rapid transit.

- Improve safety and comfort for bus transit operations, riders and other users of the transportation system (pedestrians and bicyclists)
- Provide for more efficient transit operation along the proposed rapid transit corridor
- Use transit to increase access to opportunities (i.e., higher density/activity land uses) along the corridor

For each goal there are objectives, which provide guidance on what needs to be addressed to accomplish the goal. For each objective there are a list of measures that can be developed into policies, operational improvements, safety improvements and rapid transit alternatives.

Table 1. Summary of Goals, Objectives and Measures

Goal	Objective	Measure
Improve safety and comfort for transit along the corridor for buses, riders, pedestrians and bicyclists	Meet all ADA requirements for stop/station locations	<ul style="list-style-type: none"> • ADA compliant loading area (8 feet from bus by 5 feet wide) • Address existing ADA issues related to accessing the stops • Sufficient sidewalk width
	Improve accessibility along the corridor specifically targeting to/from transit	<ul style="list-style-type: none"> • Sidewalk in good condition, able to provide ADA accessibility, sidewalk continuous near the stop • Signalized or controlled pedestrian crossing within close proximity of stop location
	Improve the quality of stops along the corridor	<ul style="list-style-type: none"> • Provision of amenities at shelters based on type • Availability of waiting areas at stops • Provide real-time bus information at stops

Goal	Objective	Measure
	Reduce conflicts between buses and other modes along the corridor	<ul style="list-style-type: none"> • Locate stops far side, where possible • Reduce conflicts with bike lanes
Provide for more efficient transit operation along the proposed rapid transit corridor	Reduce bus dwell time at stops	<ul style="list-style-type: none"> • Ability to provide off board or no fare payment • Level boarding
	Maintain or improve on-time performance for transit	<ul style="list-style-type: none"> • Stops with limited use are consolidated • Evaluation of current TSP and its current state of operations • Flexible parking on street during peak periods, consider business access/transit (BAT) lanes, where applicable
	Optimize the bus travel route to minimize delays related to congestion	<ul style="list-style-type: none"> • Stop spacing (between 0.25 and 0.5 miles) • Introduce corridor-based signal TSP to manage bus headways and potential “bunching”
	Explore bus rapid transit treatments (e.g., managing lanes, queue jumps, transit signal priority, etc.)	<ul style="list-style-type: none"> • Route contains locations suitable for BRT treatments • Intersections are present where queue jumps could be added
Use transit to increase access to opportunity (i.e., higher density/activity land uses) along the corridor(s).	Increase ease of transit use to and from key land uses and specifically those with higher activity such as grocery stores, Mall, medical facilities etc.	<ul style="list-style-type: none"> • Connectivity to existing high activity centers • Preserve ROW for Rapid Transit Operations • Broader transit network can be realigned and enhanced to support BRT service
	Consider existing and future land use patterns in the placement of transit stops	<ul style="list-style-type: none"> • Proximity of transit to growth areas served (high/low densities)
	Ensure partner agencies have coordinated plans that consider transit accessibility in future corridor improvements and redevelopment of parcels	<ul style="list-style-type: none"> • Agencies are planning for transit
	Ensure that land use regulations along the corridor reflect/supports/ requires transit oriented communities	<ul style="list-style-type: none"> • Align Land use Code to support transit oriented communities

The review of measures for the alternatives analysis will identify challenges within the corridors and consider the ability to address them. The key challenge to consider for the rapid transit corridor alternatives analysis is the ability to achieve frequencies that are less than 10-minutes allowing for virtually requiring no published schedules.

Next Steps

The alternatives will be defined based on the goals and objectives as well as the definition of rapid transit. The measures outlined in Table 1 will be used to verify that the alternatives meet the goals and objectives and select a preferred alternative.