

BEST FRIEND EXPRESS – TRANSIT IMPROVEMENT STUDY

BUS STOPS

MARCH, 2024



Presentation Overview

- Flag-Stops vs Fixed-Stops
- Stop Hierarchy
- Placement
- Examples
- Transitioning to Fixed-Stops



Flag-Stops versus Fixed-Stops

- There are tradeoffs to both flag-stop and fixed-stop systems.

Flag-Stops

- Advantages
 - Convenience and ease-of-access to the service
 - Can help close gaps between designated bus stops
- Disadvantages
 - Unexpected stopping increases the risk of vehicle collisions
 - Increased risk of conflicts between automobiles and pedestrians

Fixed-Stops

- Advantages
 - Enhance system performance and reliability
 - System awareness and legibility
- Disadvantages
 - Additional infrastructure and right-of-way (e.g. costs)
 - Added routine maintenance costs (e.g. routine cleaning/maintenance, trash collection)

Bus Stop Hierarchy, Location, and Design Factors

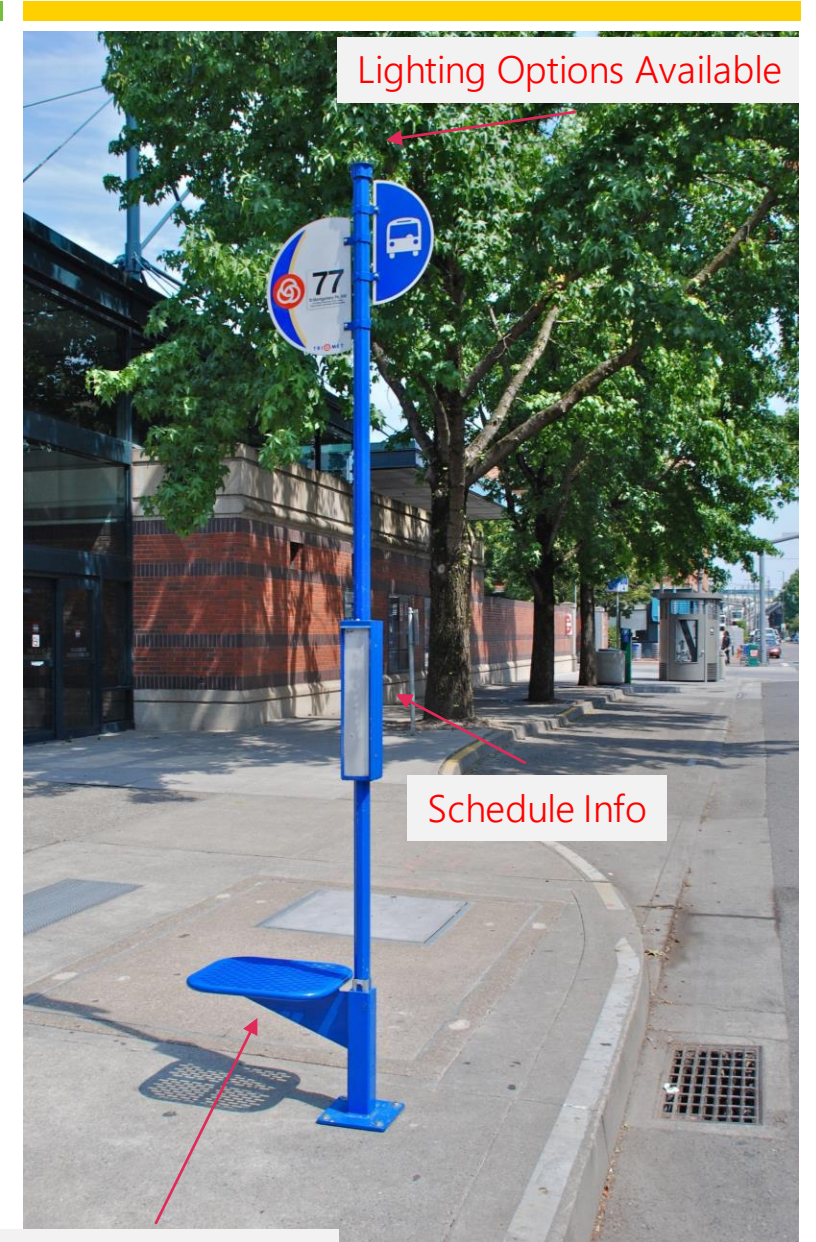
- Stops can be comprised of many features:
 - Signage and wayfinding information
 - Safety/security features
 - Public furniture
 - Accessibility features
- A bus stop hierarchy is a policy and planning tool that helps define and prioritize stop resources to be implemented at bus stop locations



Photo Credit: NYC Street Design Manual

BUS STOP HIERARCHY, LOCATION, AND DESIGN FACTORS

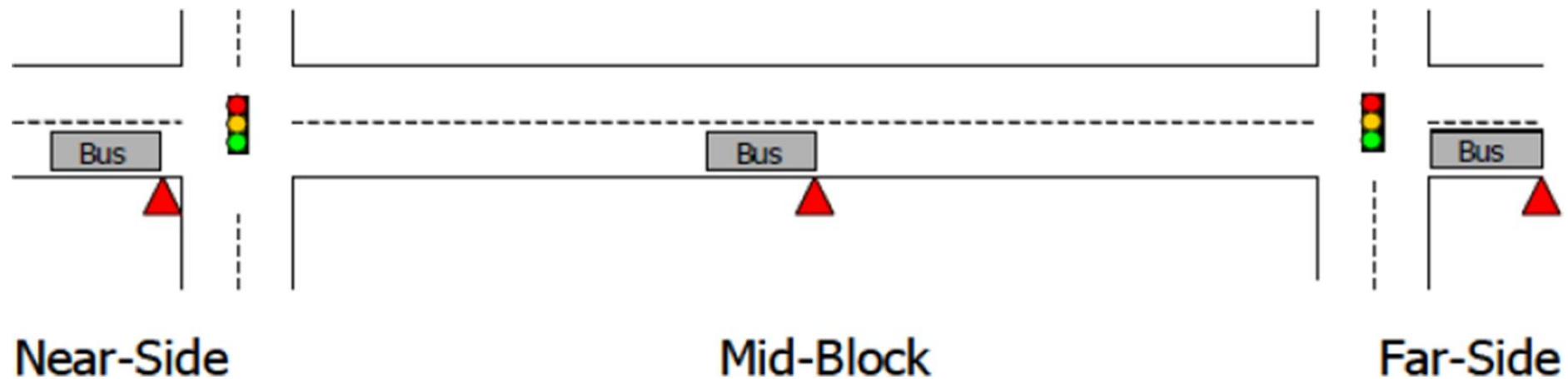
- Stop Hierarchy
 - Transit/Transfer Centers – Off-street transfer centers allowing passengers to connect with multiple bus routes or other transportation services.
 - Park-and-Rides: Facilities usually served by two or more bus routes typically making express peak-period trips for commuters.
 - Enhanced Transit Stop – Bus stops at major trip generators or attractors such as shopping centers, apartment complexes; often include sheltered seating, public furniture, route information, and/or other passenger amenities.
 - Basic Bus Stop – Bus stop signs without seating or shelters, common in lower density locations.



ADA-Compliant Seat

Bus Stop Hierarchy, Location, and Design Factors

- Stop Placement
 - Far-side (located immediately after an intersection)
 - Near-side (located immediately before intersection)
 - Mid-block (located between intersections)



Bus Stop Hierarchy, Location, and Design Factors

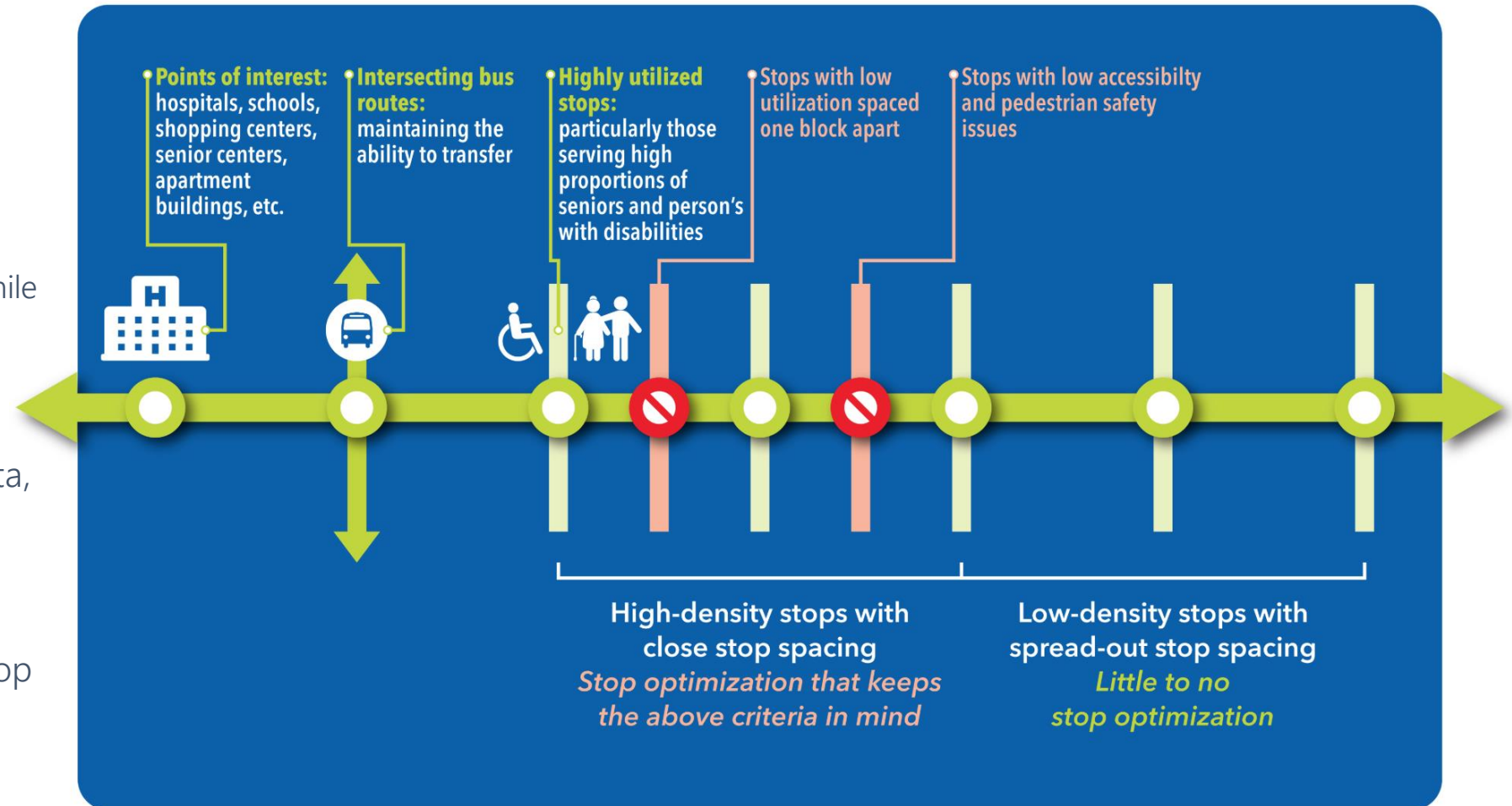
Placement	Near-Side	Mid-Block	Far-Side
Advantages	<ul style="list-style-type: none"> Access via sidewalks Improved visibility between pedestrians and vehicles 	<ul style="list-style-type: none"> Helps minimize sight distance issues for pedestrians and vehicles Buses experience less pedestrian and traffic congestion 	<ul style="list-style-type: none"> Encourages pedestrians to cross behind the bus Provides greater right turn capacity at the intersection Drivers can take advantage of gaps in traffic created by stopped buses
Disadvantages	<ul style="list-style-type: none"> Increased potential conflicts with right-turning vehicles Stopped buses may obscure traffic control visibility May temporarily block through-lane 	<ul style="list-style-type: none"> Encourages jaywalking Increases distance from intersections for street crossings 	<ul style="list-style-type: none"> Traffic may queue behind a stopped bus, blocking intersection Could obscure sight lines for crossing vehicles
Recommended Use	<ul style="list-style-type: none"> Use when traffic is heavy on far-side of intersection Pedestrian controls and infrastructure is safer on near side 	<ul style="list-style-type: none"> Problematic traffic conditions at nearby intersections Passenger generator is located mid-block 	<ul style="list-style-type: none"> High volume of right turning vehicles Intersections with multiphase signals and/or dual turn lanes Heavier traffic on near-side

Bus Stop Installation Considerations

- Adjacent land use and activities, including major trip generators and origins/destinations of special populations.
- Bus route alignment (for example, turning movements at an intersection).
- Intersecting transit routes and transfer possibilities.
- ADA-accessibility should be considered in the placement of all new bus stops.
- Existing public right-of way.
- Traffic conditions (volume and speed) and traffic control devices.

Stop Spacing

- Downtowns
 - One-eighth to one-quarter mile
- Near Downtown
 - One-quarter to one-third mile
- Suburbs
 - One-half to one-mile
- For Aiken and North Augusta, start with stops in observed higher use areas.
- Develop bus stop design guidelines and a plan for stop investments.



Examples

- Glendale, Colorado
 - Mirroring the architecture of the prominent building behind the stop.
 - Small design details accentuate the curb appeal and could be customized to fit the context and history.
 - Design is unique to the area and not replicated throughout the system.



Examples

- Burlington, New Jersey
 - Public art or adjacent building architecture can play a role in stop design.
 - Small design details accentuate the curb appeal and could be customized to fit the context and history.
 - Design is unique to the area and not replicated throughout the system.



Examples

- Gadsden, Alabama
 - Gadsden Transit Service's downtown transit center.
 - Buses generally pulse from the transit center, allowing passengers to transfer between routes at a common location.
 - The transit center footprint is fairly modest, with controlled access to operator restrooms.
 - Sheltered waiting spaces include public benches, a water fountain, trash receptacles, lighting, and ADA-compliant level surfaces.



Bus Stop Recommendations for the Best Friend Express

- Develop bus stop design guidelines and standards, indicating stops that warrant basic or enhanced investments.
- Work with each municipality served to select a stop location that they will support.
- Consider federal funding opportunities for bus stop infrastructure.
- Select bus stop locations with significant local value.
- Consider local architecture, history, art, culture, nature, and aesthetics when considering bus stop designs and enhancements.
- Use clear branding (location names, agency name, and color schemes) on each shelter to help users identify the bus stops regardless of location specific details.

Transitioning to Fixed-Bus Stops

- Hard Transition
 - Conduct public education campaign announcing that buses will only stop at designed stop locations (starting on a specified date).
 - Passengers no longer can hail the bus.
- Hybrid Transition
 - Identify specific locations where bus stops will be installed.
 - Retain ability for passengers to flag down the bus along a route.
 - Bus stops act as timepoints where drivers temporarily stop to ensure schedule adherence.
- Soft Transition
 - Gradually roll-out fixed bus stops, starting in Aiken and North Augusta.
 - Conduct a public education campaign to announce the transition to fixed-bus stops.
 - Develop design guidelines for desired stop designs and gather data on continued maintenance costs as part of annual budgeting.



THANK YOU!



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