



# TRANSIT STOPS

Transit stops are designated places where riders can board or alight transit vehicles. Grand Rapids has three types of fixed-route public transit – downtown circulator service, local bus service, and Bus Rapid Transit (BRT).

At a minimum, bus stops may be as simple as a sidewalk with a paved connection to the curb adjacent to a transit stop signpost, or may include a range of amenities such as a shelter, seating, waste receptacles, dynamic information displays and/or public art. A well-designed stop calls attention to the availability of transit service, explains how it works, and makes transit an appealing travel option.

BRT stops have more robust amenities for passenger comfort and enhanced operations. BRT stops will include shelters and seating, ticket machines for off-board fare collection, distinctive branding, and may be raised above typical curb level to provide level boarding.

## USE

- Transit stops are located along corridors with transit services. A transit stop is required for fixed-route transit service.
- The level of amenity at a transit stop varies depending on the volume of passengers using that stop, the level of transit emphasis on that corridor, or the trip generators served by the stop. For example, stops in front of a senior center need seating and shelters.
- The provision of shelters and other amenities is also determined by the width of the Pedestrian Zone.
- On Transit Emphasis streets and in locations with high ridership, stops should provide an enhanced waiting environment, such as covered waiting shelter, formal seating, informal seating, rider information, and real-time information.
- Transit stops may be located at the near-side or far-side of intersections as well as at midblock locations:
- Where buses operate in mixed traffic and stop in the travel lane and/or at signalized intersections, far-side stops are generally preferable.
- Near-side stops are generally preferred at stop-controlled locations
- The location of the bus stop will be the result of multiple factors including operations, routing and transfers, and local land use and right-of-way context.
- Transit stops are most successful when they provide comfortable places for passengers to wait and sufficient information to understand the services provided.

### DESIGN

- Transit stops on urban streets are generally either pull-out stops located at the natural curb line or in-lane stops located on a bus bulb.
- At minimum, every transit stop must:
  - Be indicated with an appropriately located transit sign or “flag.” The transit sign indicates to drivers where to halt to align doors with passenger landing areas.
  - Have a paved landing area at each door connected to a continuous sidewalk network leading to and from the stop location with appropriate and accessible pedestrian crossings.
  - Meet the accessibility requirements of the Americans with Disabilities Act of 1990.
  - Be illuminated by street lights for early morning and evening passengers.
  - Have signposts indicating the transit services provided at the stop (routes and providers). Signposts should be located at the front of the transit stop, two feet behind the curb.
- Transit stops must be proximate to crosswalks. Where stops are not at an intersection, pedestrian crossings should be accommodated behind the departing transit vehicle.
- Near side transit stops should be set back 10 feet from crosswalks; however, a minimum five feet of setback is required.
- Transit stops should be designed to accommodate the full length of at least one transit vehicle. The length of the stop depends on both vehicle type, stop location, and service frequency. Pull-out stops require greater length than in-lane stops. Pull-out stops for 30 or 40 foot buses should be at least:
  - 80 feet long for far-side stops.
  - 110-120 feet long for near-side and midblock stops.
- Stops on routes utilizing articulated buses require an additional 20 feet of length.
- Corridors with a high frequency of bus service (such that more than one bus may service the stop at the same time) may require longer stops.
- Regulatory signs are required indicating the limits of the transit stop zone. Parking and loading should be prohibited within the stop area. Driveways should be restricted within the stop areas.
- Transit stops should accommodate passenger access or egress from every door of the vehicle.
  - Boarding/landing zones should be provided at all transit vehicle doors. They shall be five feet long (parallel to the curb) and eight feet deep.





- The front boarding zone may be measured from the transit signpost. For a typical 40 foot bus, the distance between the front and rear doors and their respective landing zones is 10 feet, while the doors of articulated buses are 18 feet apart.
- Boarding/landing zones should be clear of all obstructions, including street trees, signal or light poles, and signposts. Street trees should be set 10 feet back from landing zones.
- Boarding zones generally occur at the typical sidewalk grade—typically five to seven inches above street level. Level, or near-level, boarding may be achieved by raising the passenger landing zone 10 to 14 inches above street level (for low-floor vehicles).
  - Where boarding zones are raised, ramped travel paths a minimum of four feet wide must be provided to the landing zone. Any grade difference between the landing zone and surrounding sidewalk should be indicated with warning paint or protected with a railing.
  - Detectable warning strips 24 inches deep should be applied along the curb of raised boarding/landing zones.
- Transit stop amenities should be appropriate to the passenger volume and activity at that stop. The Rapid has guidelines to inform the selection of appropriate amenities. Additional amenities typically include:
  - Waste and/or recycling facilities
  - Seating or leaning bars
  - Wayfinding or informational signage or boards
  - Transit shelters
  - Public art
  - Special or additional lighting
- A minimum 4-foot clear zone around all amenities is required to accommodate circulation and movement for all users.

## TRANSIT SHELTERS

- Shelters in Grand Rapids are typically 9 feet wide and 4.5 feet deep.
- Shelters may be located along the curb or behind the pedestrian clear zone in the frontage zone.
  - When located along the curb, shelters may open toward the street or toward the sidewalk clear zone.
    - When located along the curb and opening toward the street, shelters must be located at least four feet behind the curb.
    - When located along the curb, opening toward the sidewalk, shelters must be located at least two feet behind the curb.
  - When located in the frontage zone, shelters should open toward the sidewalk. They should be set at least one foot from a blank building face or integrated into the building wall, such as an alcove or awning.
- Shelters should be fully or partially enclosed on one, but preferably two sides, to provide protection from wind, snow, and rain.
- Shelters should be mostly transparent for security and to reduce sight obstructions.
- Transit shelters should not be utilized where they would result in less than six feet of pedestrian through zone for the adjacent sidewalk. In these locations, consider the use of bus bulbs to provide additional space for a shelter and passenger waiting area while maintaining the minimum pedestrian through zone.



Consider the opportunity for green roofs or solar lighting on transit shelters if there is not adequate street lighting nearby.

## SPECIAL CONSIDERATIONS

- Transit shelters provide the opportunity for additional information such as real-time bus arrival displays, advertising panels, and larger maps of the stop area and/or transit system.

- Increasingly, major transit stops are designed to be “mobility hubs” integrated with other mobility systems including bike share and car share services, taxis and ride sharing providers, and to provide wayfinding to local civic destinations or businesses.
- Coordinate bus shelters, tree pits, and any amenities anchored in the pavement of the sidewalk with underground utilities. Locate bus shelters at least one foot from manholes and other utility access points and 10 feet from fire hydrants. Transit shelters should not be located above utility vaults.

## OPERATIONS AND MAINTENANCE

- The Rapid is responsible for shelter maintenance and repair along the Rapid’s fixed route transit corridors, and the City’s Mobile GR/Parking department is responsible for maintenance and repair along the DASH circulator routes. Other parties can contribute to the operations and maintenance of bus shelters, such as CIDs, BIDs, DGRI, Neighborhood Associations, etc.
- Bus shelters require quick repair if panels are broken or damaged. The shelter must also be regularly washed and any litter accumulating in and around the shelter removed.
- Transit stops must be cleared of snow and ice both in their landing zones and clear pathways must be provided to cleared sidewalk paths.
- A pathway from the landing zone to the cleared roadway space must be maintained at a width sufficient to enable deployment of wheelchair lifts. This can be particularly challenging as roadway plowing tends to pile snow up at the curb line. This berm of snow must be cut through to enable a clear path for passenger boarding and alighting.

## REFERENCES

- United States Access Board. Proposed Guidelines for Pedestrian Facilities in the Public Right-of-Way. Published in the Federal Register on July 26, 2011. 36 CFR Part 1190
- Downtown Alliance – Downtown Streetscape Design Guidelines
- Streetscape Design Guidelines: Public Realm

