



WAYFINDING ASSIGNMENT



**KINGSTON
CENTRE**

Course
Information Architecture 2

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I. AUDIT REPORT

Wayfinding plays a crucial role in public transportation environments, enabling users to navigate efficiently, reduce confusion, and improve the overall user experience. This audit examines the existing wayfinding elements at Kingston Centre, evaluating their effectiveness in terms of placement, clarity, consistency, visibility, and accessibility. Kingston Centre Transfer Point is located in the heart of the shopping centre and is a major transfer point for Kingston Transit. It is the terminus for daytime routes 2, 3, 11 and 12 with routes 4 and 16 passing through. Routes 501/502 and 701/702 also connect with the Kingston Centre through nearby road stops.

Below is my observation and evaluation for each element:

Placement

- Observation: Bus number signs are posted on the glass doors of the bus stops, visible only from the outside. There are no signs placed inside the bus stops which can cause users to get on the wrong stop and miss the bus they need to get on (I myself got on the wrong stop twice because there are no signs or signals inside to differentiate between the stops).
- Evaluation: Users inside the bus stop must step outside to confirm their route, causing inconvenience, especially in bad weather.



Only the bus number sign is posted on the outside of the window.

Clarity

- Observation: Bus number signs are printed in large, different color for each bus line, clear font with the bus direction indicated below.
- Evaluation: Well-designed for readability and easy recognition.

Consistency

- Observation: Signs follow a uniform style, maintaining consistency in color, iconography, and text hierarchy.
- Evaluation: Professional, reducing cognitive load for users.

Visibility of Signs

- Observation: Signs are visible during the day but difficult to see at night due to poor lighting. No obstructions to visibility, and they are placed at an appropriate height for accessibility.
- Evaluation: Improve lighting around signs or use reflective materials for better visibility.



No lights outside

Digital Displays

- Observation: No digital boards present for real-time bus arrival and departure updates. This requires bus passengers to rely on printed schedule or mobile apps for updates on bus departures and arrival times. Some older passengers who do not use smartphones will have to ask people around about departure times or ask other drivers.
- Evaluation: Install digital boards displaying live updates on bus schedules and delays.

Physical Maps

- Observation: Despite being a large transfer station, there is no overall map illustrating the bus routes, times or layout of the station. Only bus number signs are posted outside the bus stops.
- Evaluation: Major usability gap; maps would greatly enhance users' ability to plan their routes.

II. IMPROVEMENT RECOMMENDATIONS

01. IDENTIFY CRITICAL ISSUES

The following issues have been prioritized based on their impact on user experience, frequency of use, and complexity of navigation within Kingston Centre.

Bus Stop Sign Placement

(High Priority)

- Affects all bus customers, especially those waiting inside the bus shelters.
- Users must step outside or go around to confirm their bus stop, which is inconvenient in bad weather.
- Can cause stress, confusion, and missed buses if users are unable to check their route quickly.

No Physical/Offline Bus Route Map

(High Priority)

- Without a large station-wide map, new and infrequent users struggle to navigate efficiently.
- Complex transfer points make it difficult to locate the correct bus stop.
- Users without smartphones or internet access have no way to check bus routes.

Lack of Digital Displays (Medium-High Priority)

- Real-time bus arrival/departure updates are essential for reducing uncertainty.
- Users must rely on mobile apps, which may not always be accessible or accurate.
- Can improve efficiency and help users plan their trips better.

Nighttime Visibility Issues

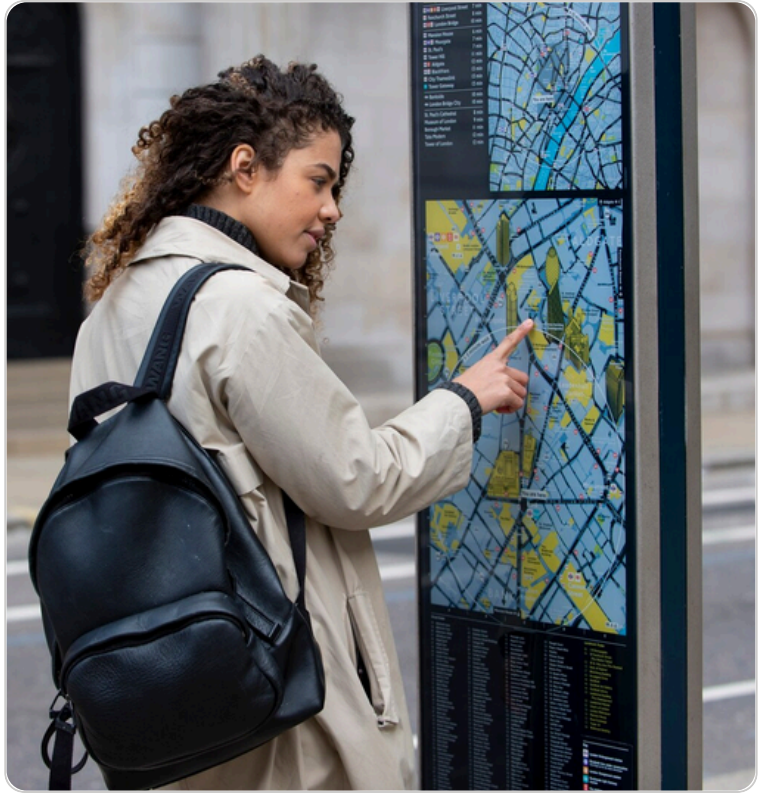
(Medium Priority)

- Affects users traveling after dark, which can impact safety and navigation.
- Poor lighting makes it difficult to read signs and find the right stop.

02. BEST PRACTICES

Touchscreen Kiosks

The image on the right depicts a bus route map kiosk, a crucial feature at bus stops, particularly at transfer points. This digital display offers large, real-time updated maps that are easy to read, strategically placed at multiple entry points and near waiting areas to enhance navigation for passengers.



Bus Stop Direction Instruction

Providing a map that displays the locations of bus stops is essential, particularly in areas with numerous stops like transfer stations. As illustrated in the image to the right, the sign clearly marks the position of each bus stop, enabling passengers to easily visualize where they need to go and reduce their cognitive load. Additionally, the bottom of the sign includes directional information for each stop; for instance, stops C, D, and G are straight ahead, while stop E requires going straight and then turning left.



E-ink Display

Public transportation systems increasingly use ePaper displays (e-Ink) for real-time schedules, offering a cost-effective, energy-efficient alternative to LED/LCD screens. Unlike bright, color-capable LED displays, ePaper screens provide soft, high-contrast readability, resembling paper and ensuring optimal visibility in all lighting conditions. These wireless, solar-powered displays lower energy costs and can be easily relocated, making them ideal for both indoor and outdoor use. Weather-resistant and eye-friendly, they complement traditional signage, enhancing public transit information systems with a sustainable, low-maintenance solution.



- The screen displays upcoming bus routes, numbers, and estimated arrival times.
- Multiple time slots indicate both the next departure and subsequent ones

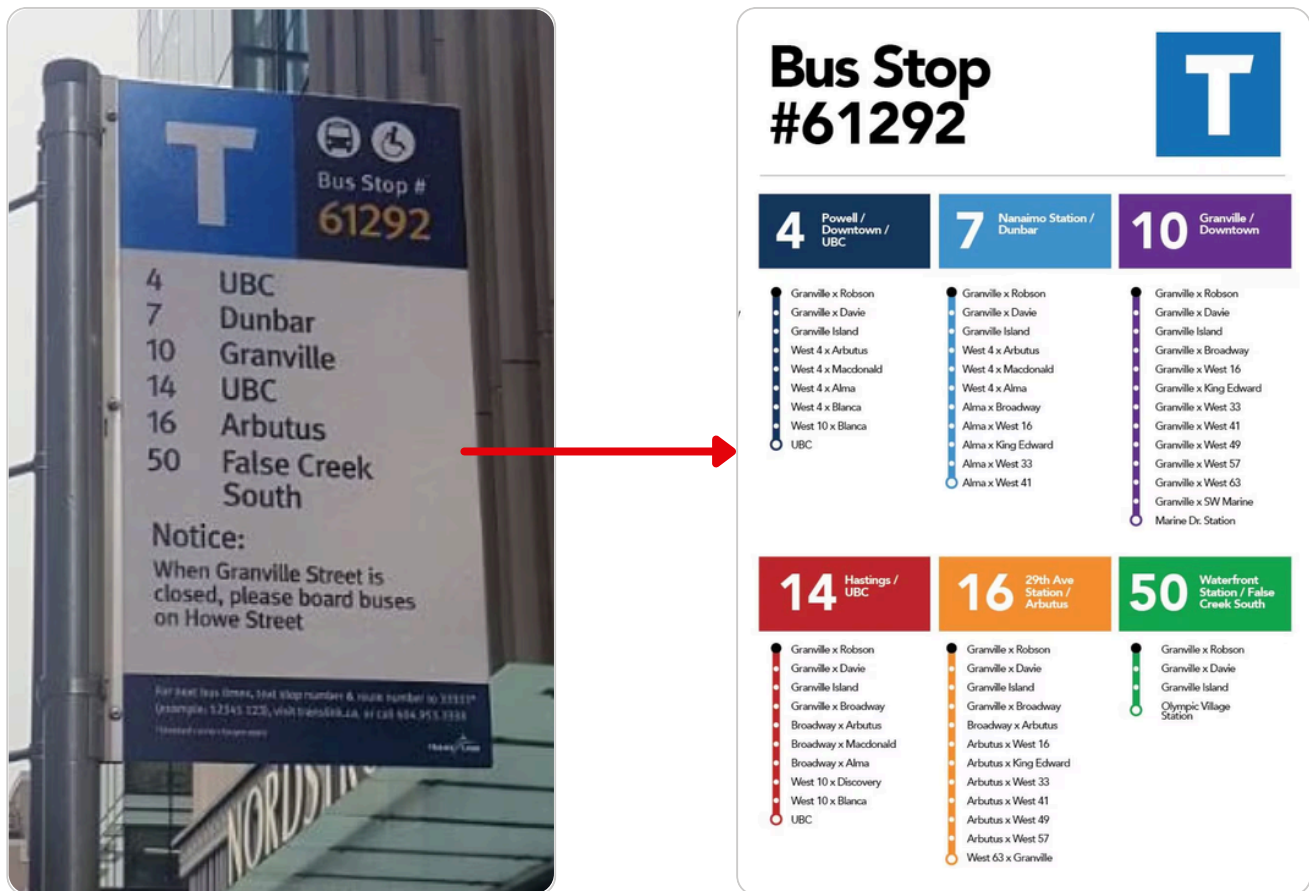
With wireless connectivity, the system continuously updates in real time via 5G or another network, ensuring that displayed bus schedules remain accurate. This removes the need for passengers to check transit apps or printed schedules.

At the bottom of the display, a transit map provides an overview of bus routes and connections, helping passengers navigate transfer points with ease. This feature is especially useful for first-time users or tourists unfamiliar with the transit system. By combining real-time scheduling with static wayfinding information, the ePaper display enhances efficiency, accessibility, and user satisfaction at bus stops.

Bus Signage Design

Consistent iconography and simple information are essential in bus stop map design, helping passengers quickly navigate the public transport system. Standardised symbols make key elements such as bus routes, stops and transfer points instantly recognisable, reducing confusion for both regular commuters and first-time riders.

Here is a good example of a design for a bus stop sign:



This bus stop map is well-organized, with color-coded routes that make it easy to distinguish between services. The bold bus numbers enhance quick recognition, while the consistent layout ensures each route follows a structured format, listing destinations and stops in a logical order.

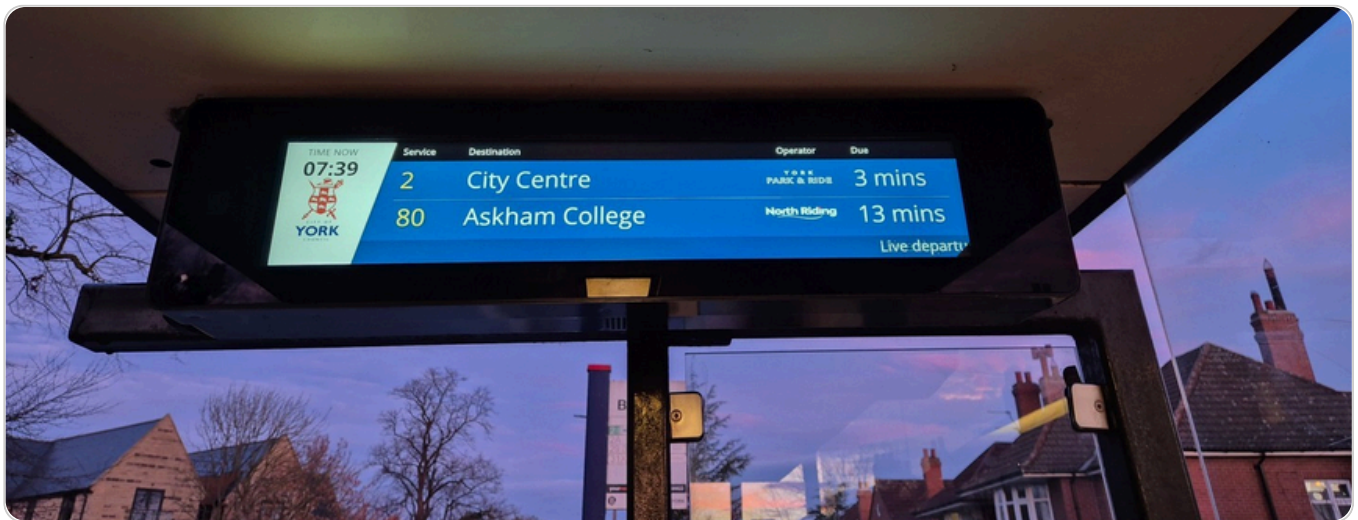
The bold typography and high-contrast colors improve readability, making information easy to scan. The well-spaced stop listings prevent overcrowding of text, while the concise list format provides only essential details, reducing clutter and improving user focus. Overall, the design effectively balances clarity and efficiency, ensuring passengers can quickly find the information they need.

03. SPECIFIC RECOMMENDATIONS FOR KINGSTON CENTER

To enhance navigation, reduce confusion, and improve the overall user experience at Kingston Centre, the following recommendations focus on new signage, reconfigured layouts, and digital wayfinding solutions:

Improve Signage Placement and Visibility

- Install bus number signs inside the shelters, making them visible to waiting passengers without stepping outside.
- Some signs at Kingston Centre are difficult to see at night due to poor lighting, which can cause confusion for passengers traveling in the evening. Improving signage size and contrast ensures better readability, even from a distance. Additionally, installing proper lighting (such as LED backlighting or reflective materials) enhances nighttime visibility, helping passengers identify stops more easily and improving overall safety and efficiency at the bus station.

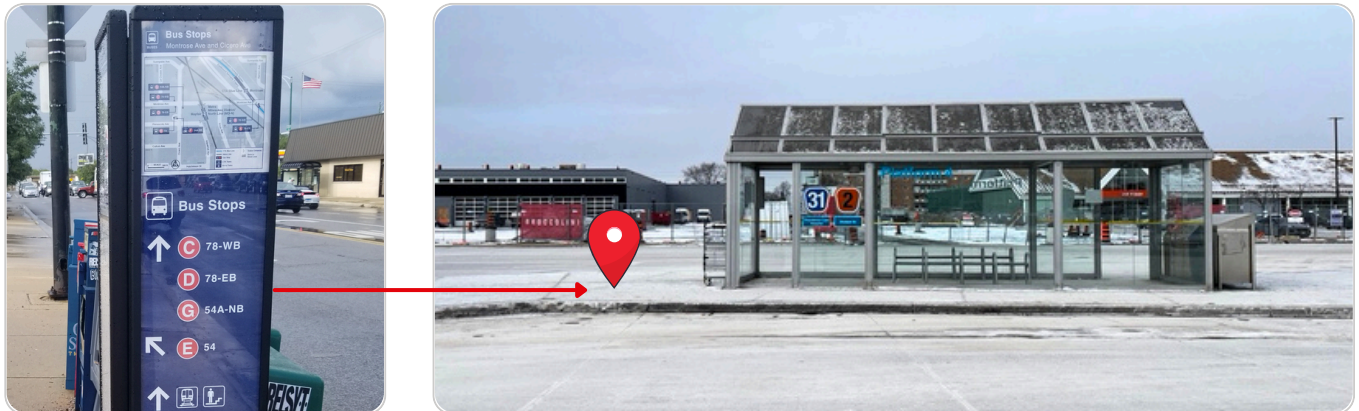


Install a Bus Stop Direction Signage

Effective directional signage is essential for guiding passengers smoothly through a transit hub like Kingston Centre. Currently, the lack of clear wayfinding elements can cause confusion, delays, and unnecessary movement, particularly for first-time users, tourists, or those with accessibility needs. This recommendation focuses on enhancing navigation through clear direction signage.

Many passengers may struggle to locate the correct bus stop or transfer point, especially in a large or crowded station. Installing directional signage with arrows will:

- Clearly indicate which direction to walk for specific bus routes, and transfer zones.
- Reduce confusion and help users navigate efficiently without needing to ask for assistance.
- Include a "You Are Here" marker on station maps to give context to users.

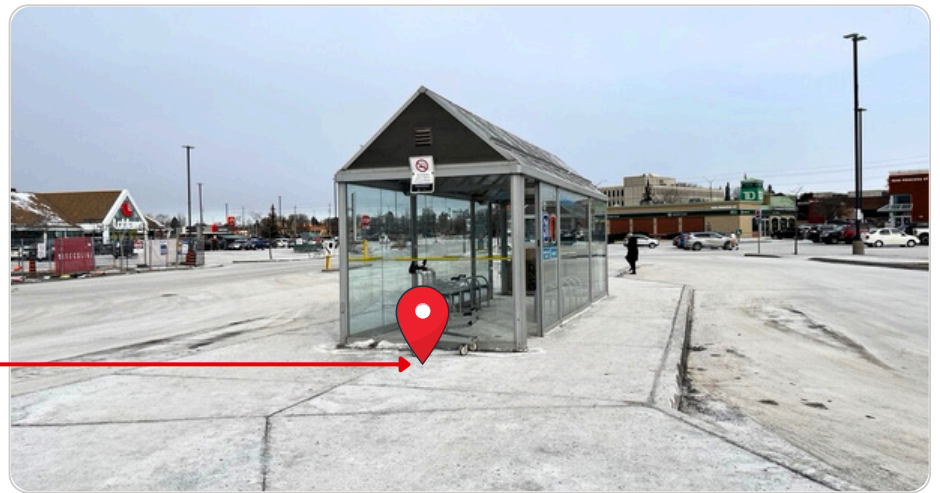


Implement Digital Wayfinding Solutions

Currently, Kingston Centre lacks real-time digital display or physical map, meaning passengers must rely on printed schedules or mobile apps to check bus arrivals. This can lead to uncertainty, missed buses, and inconvenience, especially during delays or service changes. By installing digital wayfinding solutions, such as real-time digital displays or e-ink screens, passengers will have instant access to up-to-date transit information directly at the bus stop.

This solution includes:

- Live Bus Departure Information - Displays the next available bus times and list of buses are coming
- Service Change Alerts - Notifies passengers about route changes, delays, or cancellations in real time, helping them adjust their travel plans accordingly.
- User-Friendly & Accessible - Digital displays are easy to read, even in bright sunlight or nighttime conditions. E-ink displays offer paper-like readability with low energy consumption, making them an eco-friendly option.
- Reduces Dependence on Mobile Apps - Not all passengers have smartphones, data access, or transit apps. Providing digital screens ensures equal access to critical travel information.



Installing digital displays at station entrances and waiting areas (as illustrated above) will provide customers with an overview of upcoming bus arrivals, ensuring they can easily access real-time information. This enhancement will reduce passenger stress and cognitive load by offering instant updates on schedules, delays, and service changes. It also improves accessibility, ensuring that all users, including those without smartphones, have equal access to transit information.

Additionally, real-time digital wayfinding enhances efficiency, helping passengers make quick decisions, especially at transfer points. By modernizing the transit experience, Kingston Centre will align with smart city infrastructure best practices, creating a more seamless, reliable, and user-friendly transportation hub for all commuters.

APENDIX

1. **Kingston Centre** (https://www.wikiwand.com/en/articles/Kingston_Centre)
2. **Benefits of using ePaper for transportation projects** (<https://blog.itesmedia.tv/en/benefits-of-using-epaper-for-transportation-projects>)
3. **TransLink's bus signs could be a lot better** (<https://www.cbc.ca/news/canada/british-columbia/translink-signs-improve-says-uytae-lee-1.5307213>)