applied x mend

Metro Transit Wayfinding
Research Report

Version 2.0
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Produced by Applied Information Group x Mend Collaborative

Introduction

This Research Report is the conclusion of the Research Phase, part of the Twin Cities downtown transit wayfinding project.

The overarching project goal is to:

Improve downtown transit wayfinding to better connect people to transit.

According to Metro Transit, through various customer and community engagements over the past nine years, transit riders have consistently shared that a lack of clear wayfinding at key transfer points is a barrier to a seamless transit experience. This is especially true for new and infrequent riders, those with disabilities, and those with limited English proficiency.

As such, through particular focus on transfers, in addition to understanding other challenges that affect riders' ability to navigate the transit network in the Twin Cities downtowns, the report presents research findings that will inform the development of a systematic approach to address the rider challenges in order to better connect them to transit.

Through site visit observations and discussions with various stakeholders at the outset of the project, it is clear that Metro Transit has built a good foundation for a system that can support its riders, regardless of experience.

Rider research as well as a comprehensive review of the current system and sign family in place set out in this report highlights opportunities for improvement, building upon the foundations already present in the Metro Transit system.

Summary of key challenges and opportunities

The next four pages of the report summarise the key challenges and opportunities identified through the Research Phase work, based on research finding themes that are most relevant to the current project scope.

Build rider confidence through consistent signage



Signage at Stops/Stations

Riders value stop information that answers a few immediate questions: Am I in the right place? Which direction is this route going? What comes next? And when will it arrive?

There is more recognition of information provided at BRT and LRT stations, less so at bus stops.

The opportunity is to **ensure that the fundamental questions are answered consistently at each stop or station through easy to understand identification signs.**

Key challenges

- → Transit direction of travel is critical to know to identify the right stop, but is often not understood or evident
- → Stops, particularly those without a shelter can be difficult to notice in the environment
- → Stop identifiers are not used consistently and sometimes those that riders use are not displayed on signs
- → Frequent riders rely heavily on digital tools, but wish to be less reliant when weather precludes their use

Key opportunities

- → Ensure that the fundamental questions (Am I in the right place? Which direction is this route going? What comes next? And when will it arrive?) are answered consistently at each stop or station
- → Highlight the connection between stop names and street grid to give riders a navigational device to use

Ideas for concept development

- → Explore inclusion of more stop identifiers on signs
- → Test a scenario for finding a stop based on its name and using the street grid
- → Explore the gate approach for intersections with stops on each corner
- → Explore double-side stop ID signs
- → Explore alternative positions for stop name placement on shelters
- → Explore the idea of ‘Towards [neighbourhood]’ for direction of travel

Connect transit to the surrounding environment



Signage to/from Stops/Stations

Riders identified a need for stronger wayfinding between transit stops and the surrounding downtown environment, including skyways, bicycle facilities and landmarks.

The opportunity here is to **introduce stronger orientation devices that give riders a sense of where they are in relation to where they want to go, therefore helping them plan and execute journeys successfully.**

Key challenges

- → Riders struggle to make connections between the transit network and the environment (landmarks, skyway, bikeways)
- → Connections between transit routes and where to make transfers are not always clear

Key opportunities

- → Introduce stronger orientation devices that connect the transit network to the environment (consider landmarks, street grid, skyway, bikeways)

Ideas for concept development

- → Explore map development for the key transfer area vs the whole downtown
- → Consider how to tie routes / corridors more strongly to the street grid
- → Look at inclusion of landmarks and making route connections clearer
- → Look at adding information about connections to bikeways and skyways

Provide more detail where needed



Finding Stops/Stations

Riders faced challenges in finding stops and stations that stemmed from not being able to identify the right route, direction of travel or position of the right stop.

The opportunity here is to look for **ways to give transit riders a good overview of how the transit network works in the downtowns**, alongside the need to make sure identification signs answer the fundamental questions as explained in the ‘signage at stops/stations’ topic.

Key challenges

- → The direction of travel and stop locations in a one-way street pair is not easily understood

Key opportunities

- → Give riders a good overview of how the transit network works in the downtowns, where routes and stops are located, and where to get on transit that riders need to get to their destination

Ideas for concept development

- → Explore map development for the key transfer area vs the whole downtown
- → Explore adding stop locations
- → Explore showing where lines go without having to show their full extent

Highlight connections



Transfers

Transfers were the most consistent source of wayfinding uncertainty. It appears to stem primarily from not wanting to miss connections and being unsure if a transfer could be made in time.

The opportunity here is to build riders' confidence in making transfers through **making clear where and how to make the transfer and to give them a sense of how far the connecting stop might be.**

Key challenges

- → Infrequent riders avoid transfers altogether. Frequent riders might take longer but simpler trips due to perceived complexity of making the change
- → Riders avoid transfers due to fear of missing the second seat transit (especially at night)

Key opportunities

- → Provide support along the journey, be it through announcements on-board vehicles or nudges at stations that help riders feel more confident

Ideas for concept development

- → Create a system for connecting stops to landmarks and defining where key route connection points are
- → Use the system to inform on-board announcements (not in this scope, but the system could be defined as part of this project)
- → Identify locations in downtowns where current wayfinding transfer signs could be used

Project goal and research topics

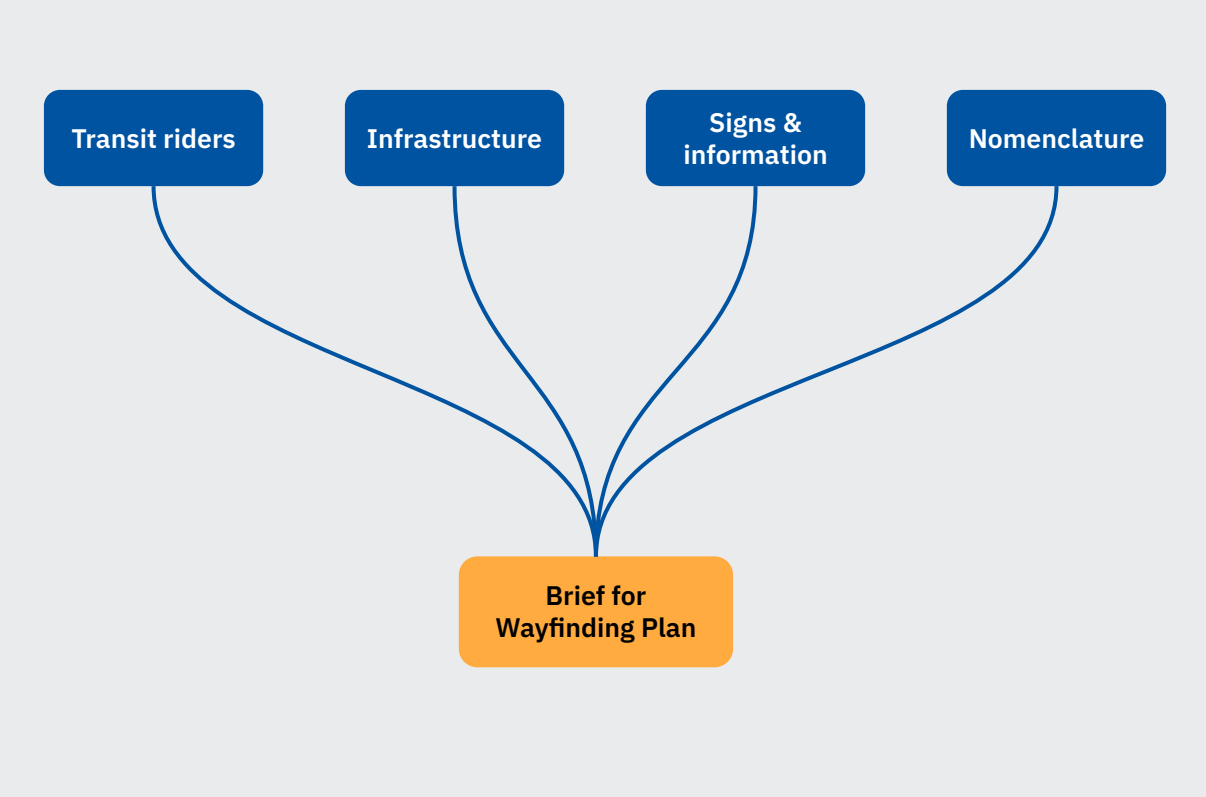
The overarching project goal is to:

Improve downtown transit wayfinding to better connect people to transit.

The aim of the research stage is to understand:

- ➔ How **transit riders** navigate the network currently and what challenges they are facing
- ➔ How existing **infrastructure** affects riders' ability to navigate the network
- ➔ How current **signs & information** guide movement and use of transit
- ➔ How **nomenclature** affects visitors' understanding of the transit system and their ability to navigate it

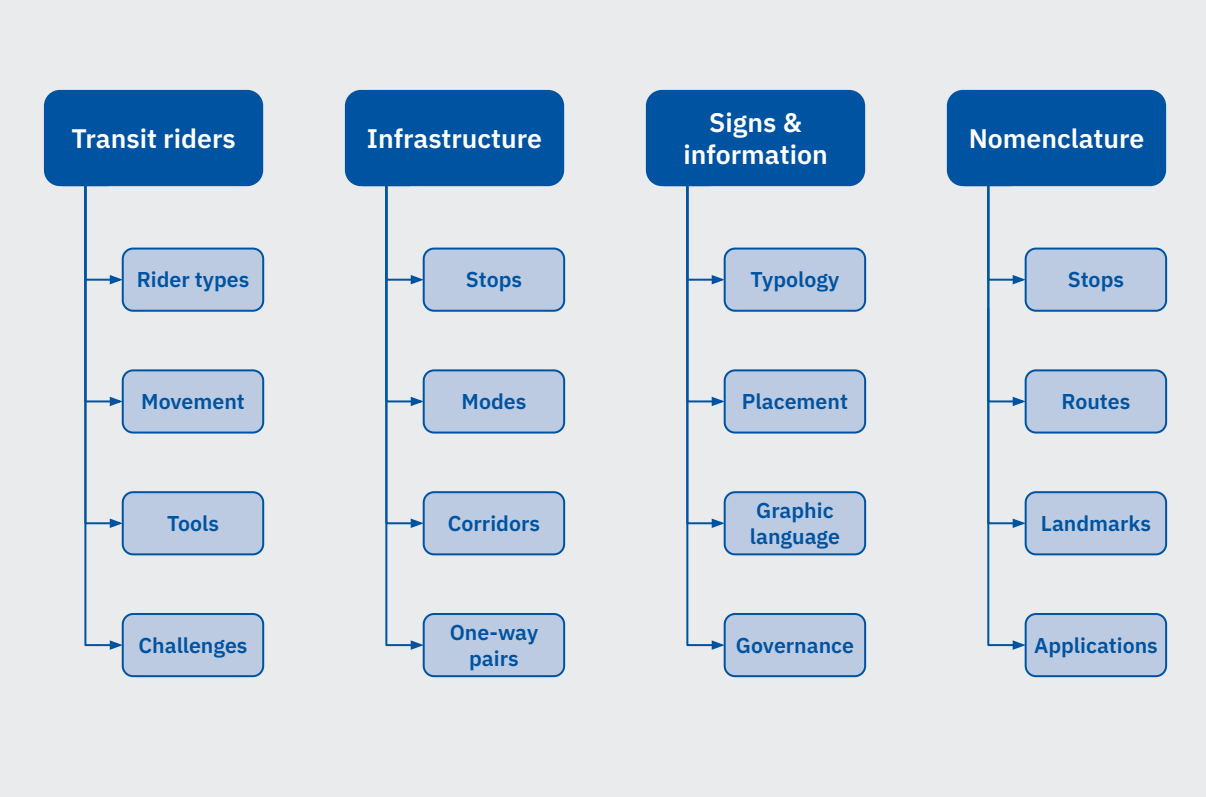
These four factors will inform the foundational principles of the wayfinding strategy.



Research sub-categories

To ensure that each of the topics set out on the previous page is understood thoroughly before informing the wayfinding strategy and plan going forward, sub-categories for each topic have been defined.

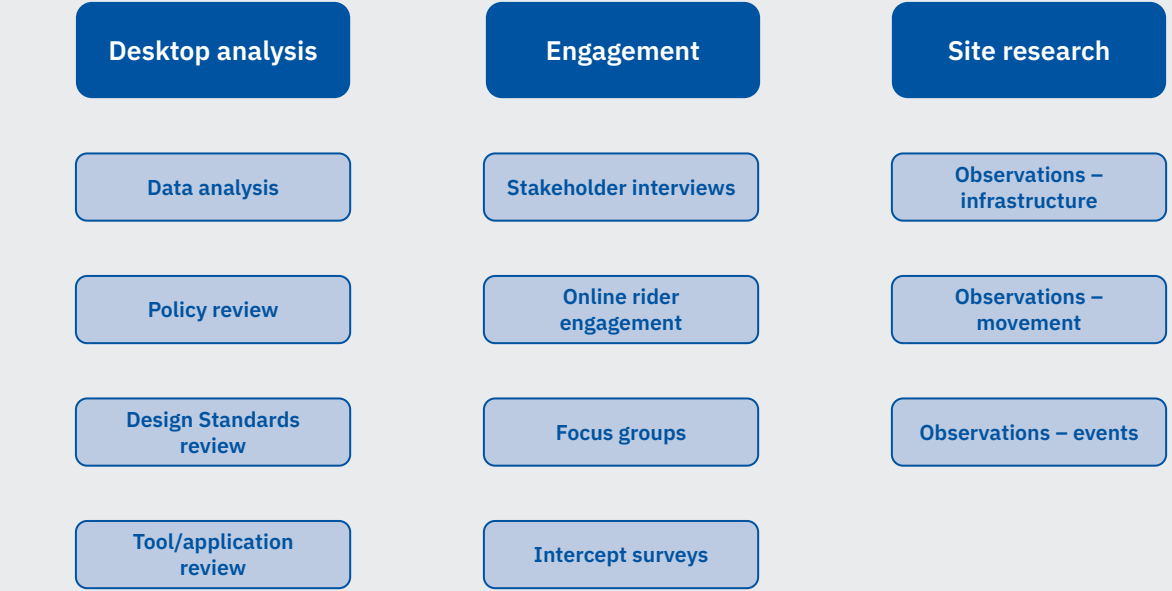
The report that follows is therefore subdivided into four main sections, representing one of the topics. The information in each section is presented in the order of the sub-categories presented on this page. Each page of the four sections is marked with the topic and sub-category that the content relates to.



Research methods

To gain the best possible understanding of the topics and sub-categories, different research methods were applied. These can be split into three broad categories:

- → **Desktop analysis** – review of available data or documentation;
- → **Engagement** – structured interviews, questionnaires or other tools that help facilitate rider and stakeholder research
- → **Site research** – visits to a defined set of locations to observe the environment, assets in place (i.e. stop infrastructure or existing signs) and riders' behavior.



Rider research approach

As part of the ‘engagement’ method of research, particular focus was paid to understanding the current experience of navigating transit from the riders’ perspective.

To gain as broad an understanding while also going into depth to really understand the challenges riders face in navigating the Metro Transit system, rider research was conducted through four approaches – observation/intercepts, online survey, online mapping and focus groups.

The findings from rider research are incorporated into each of the four sections of the document, and contextualised alongside findings from other research approaches.

The full summary of rider research activities is also available in the appendix.

Observation/Intercepts

- → 15 hours of observation
- → 10 stops/stations in Minneapolis and Saint Paul
- → AM and PM, weekdays
- → June 11-18

Online Survey

- → 166 submissions
- → QR codes around transit to access website
- → Open May 26 to July 9

Online Mapping

- → 138 total comments
- → QR codes around transit to access website
- → Open May 11 to July 3

Focus Groups

- → 3 virtual groups of volunteers
- → Various times of day
- → Diverse participants
  - ○ Frequent/Infrequent Riders
  - ○ Access considerations
  - ○ Persons with disabilities
  - ○ Car-free, bicyclists

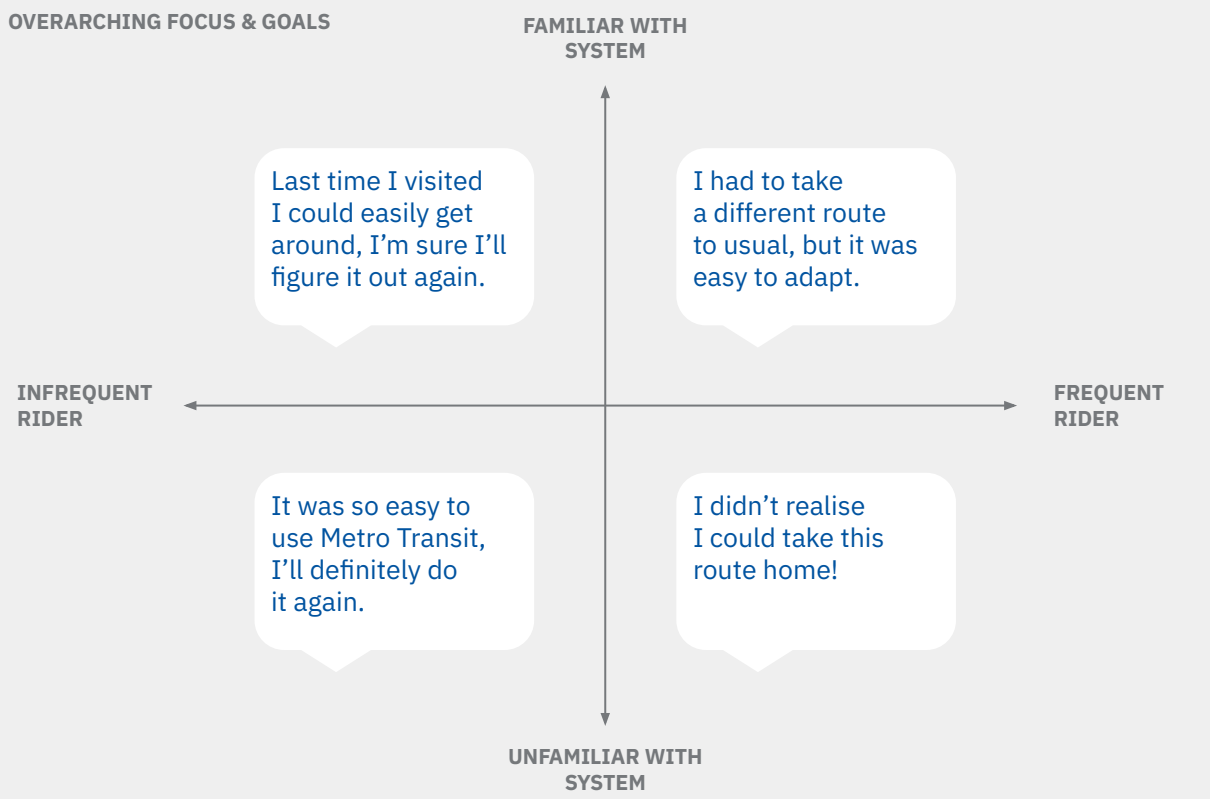
Transit Riders

User types & needs

As stated previously in the report, the overall goal of the project is **to improve downtown transit wayfinding to better connect people to transit.**

Regardless of whether the rider is familiar with the system or not, whether they're a frequent rider or not, the aim is to improve their experience of using transit.

For a frequent rider who is familiar with the system it might be improving the experience of dealing with temporary closures. For someone who visits the Twin Cities repeatedly, it might be instilling confidence that they'll find their way because the last time they visited the system was easy to use. For those who are unfamiliar and infrequent riders, **the goal is to create an experience that is empowering and helps riders get to where they're looking to go** – without much confusion, without backtracking, without having to rely heavily on asking other riders for directions, unless that is someone's preference.



User types & needs

Although the project goal is to improve the overall experience of transit wayfinding for any user type, specific focus has been placed on understanding user groups whose needs in terms of transit wayfinding have not been as well understood historically.

These groups, such as infrequent riders, are especially likely to be more impacted by improvements to transit wayfinding in comparison to those who are more frequent riders or those more familiar with the system.

The next two pages set out research findings related to two groups – infrequent riders and riders with disabilities. Although the intent is to focus also on riders with limited English proficiency, it has been more difficult to engage representatives from this group. Further opportunities for engagement may be considered and discussed with the project team.

SPECIFIC FOCUS & GOALS



Infrequent riders

Infrequent riders were respondents who identified as using downtown transit a few times a year or a few times a month. Based on the online survey responses, infrequent riders were:

- → Less likely to ride in just Minneapolis
- → **More likely to ride in both downtowns**
- → **Much more likely to use transit for leisure**, special events, or sports, not for daily commute
- → **Slightly more confident navigating Minneapolis than Saint Paul**
- → **More likely to confirm using the stop name, less likely to confirm using an app**
- → **Avoid transfers**
- → 100% of infrequent riders responding were white (81% of all respondents were white)
- → More likely to have a higher household income

What would make it easier for you to use transit more often?

- → Faster transit (driving is faster)
- → Better safety/ rider behavior
- → More frequent transit
- → Expanded service locations (NE, Uptown, Suburbs)
- → More/ better downtown destinations
- → Consistent fare-paying methods
- → Better stop communication
- → Expanded service times
- → Better intercity connections
- → Clear bus labeling (esp. if electronic sign is broken)

The research findings about infrequent riders' needs and challenges highlight that they're looking for specific information that will deliver them to the destination they're going to – an event or sports venue. As such landmarks and highlighting connections from transit to key destinations is critical to help infrequent riders feel more confident.

Infrequent riders are also less likely to download a specific app to navigate the transit system, which points to the need to ensure that in-situ signs can support them along every step of the journey. In addition, if they do use an app, it's likely to be one that they already have – Google Maps or Apple Maps. This means that ensuring consistency between those apps and the information in the environment is also critical.

Riders with disabilities

36% of respondents said they had a disability. Most common disabilities were learning disabilities (12%), mobility disabilities (9%), and mental health disabilities (5%) (% of all respondents). Based on the online survey responses, riders with disabilities were:

- → More likely to ride more often than respondents without disabilities
- → **More likely to know the system inside and out, use it for many different trips**
- → Feel **slightly more confident navigating in Saint Paul than those without disabilities**
- → **Slightly more likely to use stop number to confirm the correct stop**
- → **More likely to transfer from Light Rail to Bus (express or local)**
- → Find maps/diagrams on board less helpful
- → More likely to be living alone, less likely to be living in a household of two
- → More likely to have a lower household income

What would make it easier for you to use transit more often?

- → More frequent transit (especially
- → at night)
- → Later (and earlier) hours
- → Better reliability
- → Better safety/ rider behavior
- → Fewer stops (faster route time)
- → Priority for transit over personal vehicles
- → Announcing the next stop
- → Better Metro Transit app
- → Making sure accessible signals are working
- → Faster boarding process for wheelchair users
- → Improved shelters
- → Benches

The research findings show that riders with disabilities are more likely to use transit more often than respondents without disabilities, and they're more likely to claim that they know the system inside and out – likely because they need to make sure that the journeys they set out on can be completed and with the energy and effort they have available.

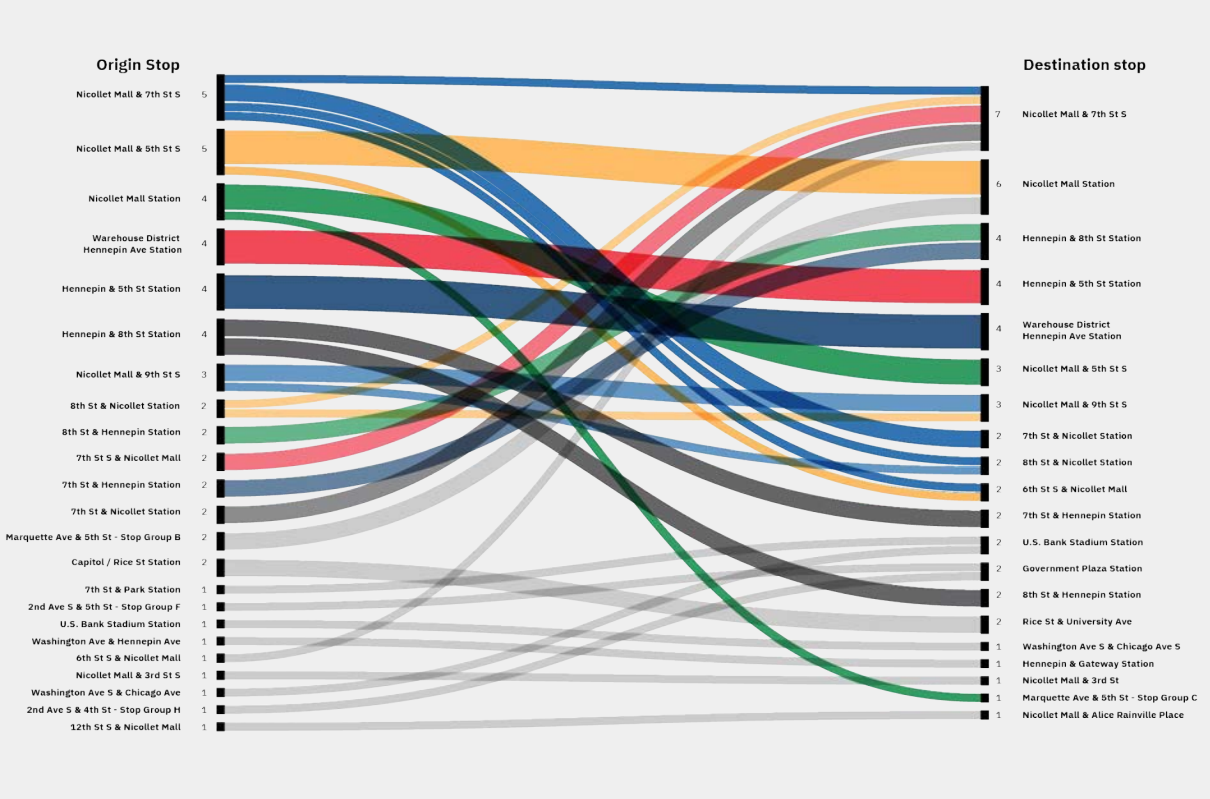
This suggests that riders with disabilities are actually more likely to also be those who are more familiar with the system in general.

However, as mentioned, even those who are generally familiar with the routes and stops they use often, temporary closures or changes to the system can cause situations where they have to make adjustments. This is where in-situ wayfinding can be critical for even frequent riders - to instill in them confidence that taking a journey they've never taken before will be effortless and straightforward.

Connectivity between stops – Minneapolis

Due to the radial approach of the Metro Transit system surrounding the downtowns, Minneapolis downtown sees a number of journeys that involve a transfer from one stop to another, or one mode of transport to another.

Based on transfer activity data available to Metro Transit, out of the 28 top transfer stops, half connect to more than one other stop. However, **almost all of those multi-connection stops are located along Hennepin Avenue and Nicollet Mall corridors.**



Connectivity along corridors – Minneapolis

When represented spatially, the transfer data clearly highlights that the most connected stops are located along Hennepin Avenue and Nicollet Mall.

Otherwise, generally most other top transfers involve LRT station locations – either riders are transferring from a bus or BRT to LRT or vice versa.

The map on the right shows the locations of top transfer stops and stations as well as the METRO network routes. It is evident that **most transfers happen along the METRO network. Where transfers involve local bus stops, the stops are generally located along and within the vicinity of Hennepin Avenue, Nicollet Mall or Washington Avenue.**

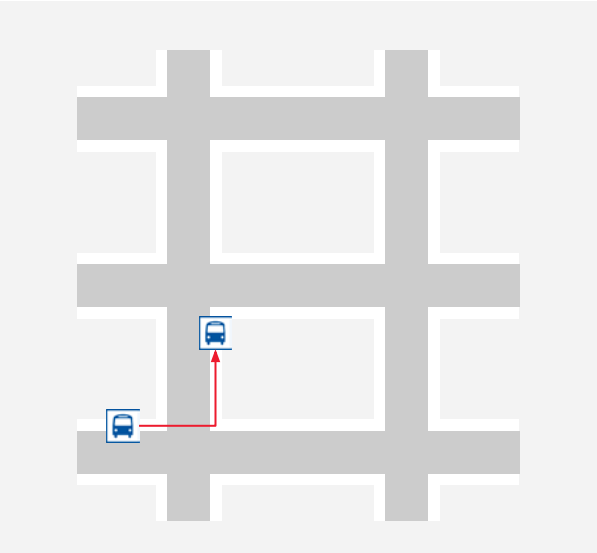


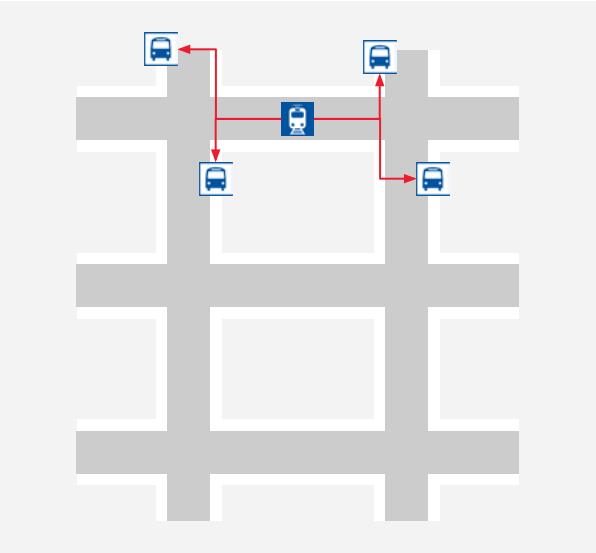
Typical transfers – Minneapolis

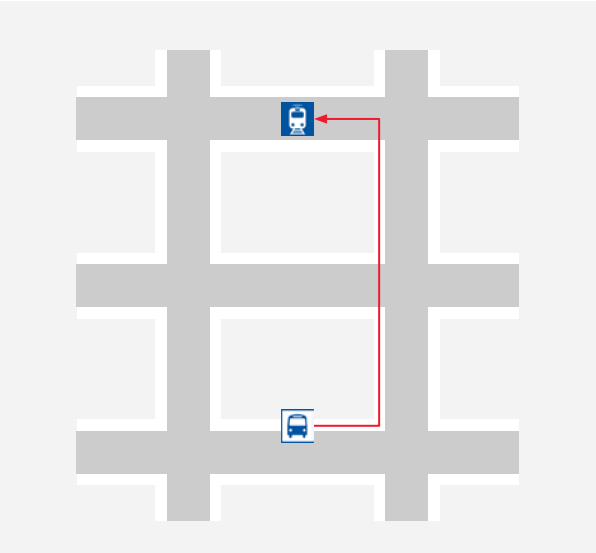
Not only does the transfer dataset highlight that most of the transfer activity surrounds the corridors, it also shows that **by and large the movement happens along the corridors or just around the corner of them.**

This **understanding of the type of movement riders exhibit when transferring, will influence the type of information or signs needed to support them in their journey.**

It might be that shorter around the corner trips can be supported by nudges or simple directional information, whereas longer more complex journeys might need an orientation such as a map at the origin stop to give riders a sense of where their next stop is located.



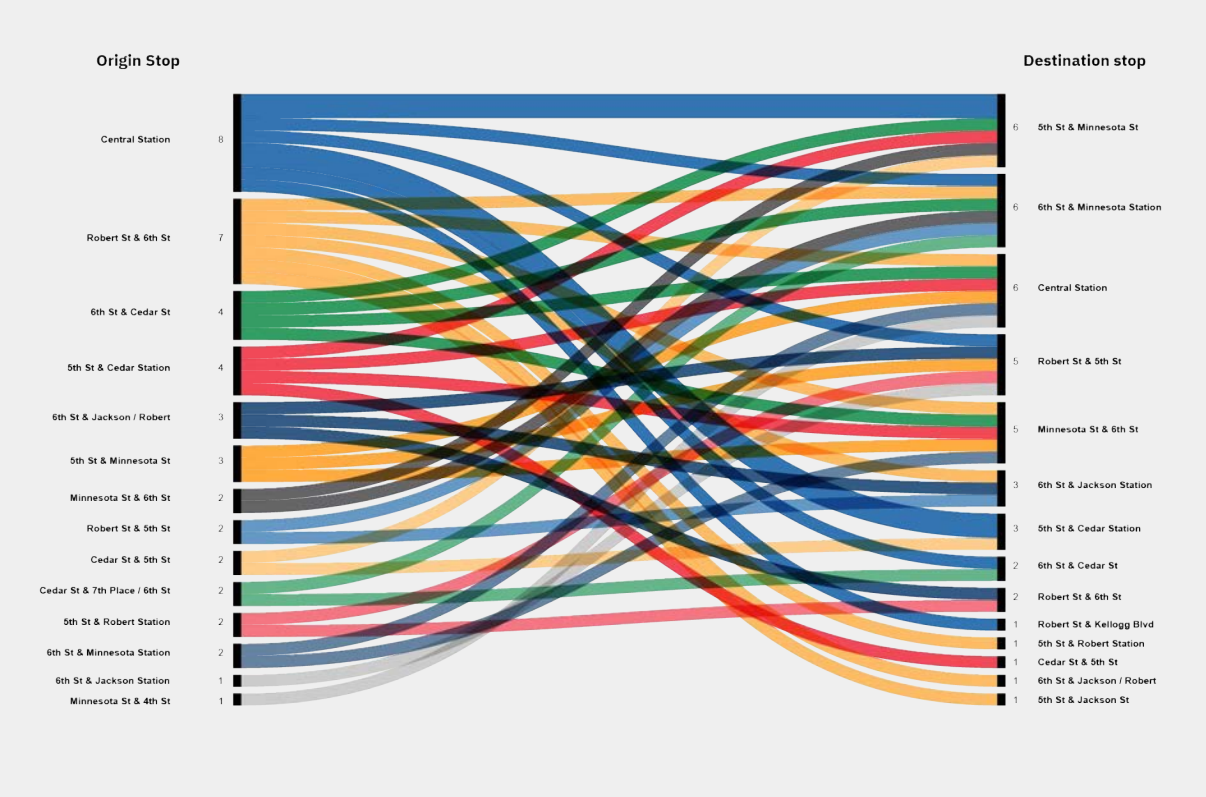




Connectivity between stops – Saint Paul

Due to the radial approach of the Metro Transit system surrounding the downtowns, Saint Paul downtown sees a number of journeys that involve a transfer from one stop to another, or one mode of transport to another.

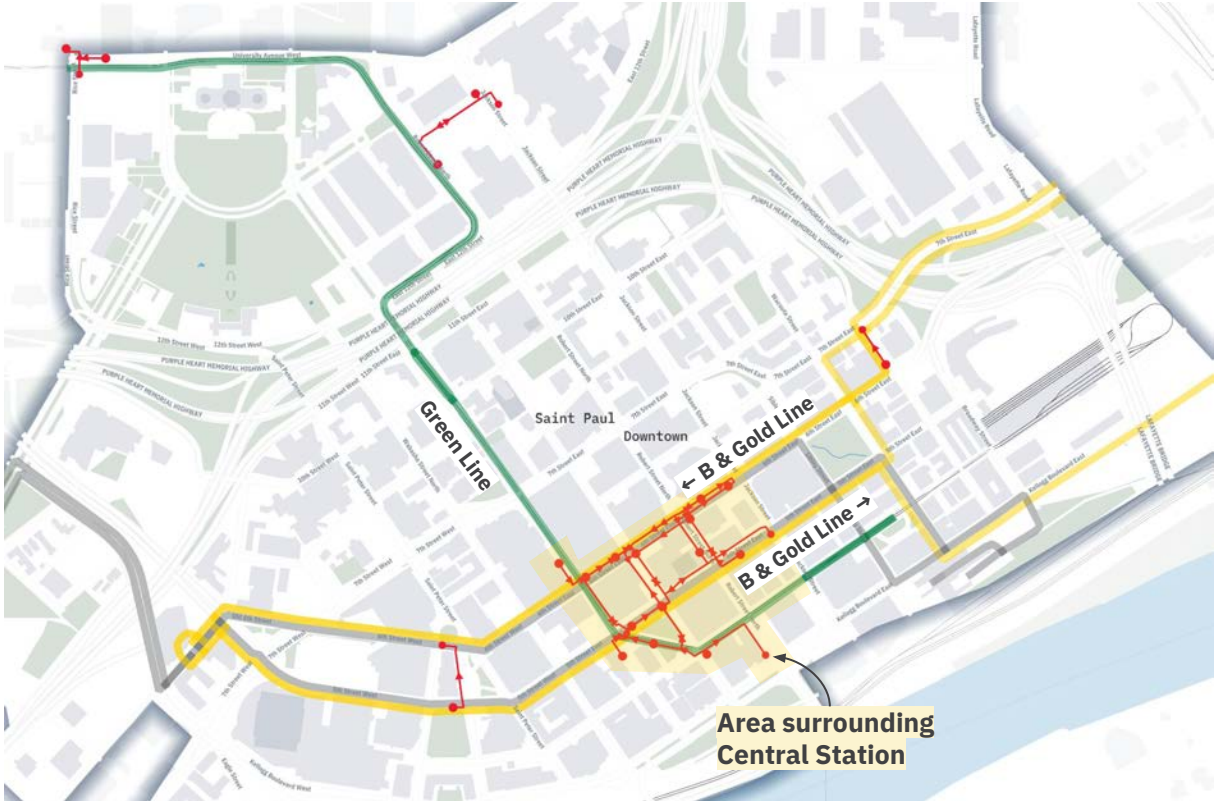
Based on transfer activity data available to Metro Transit, out of the 14 top transfer stops, **almost all of the stops or stations connect to more than one stop or station.**



Connectivity cluster – Saint Paul

When represented spatially, the data show that **in contrast to transfers being clustered along transit corridors in Minneapolis, transfers are clustered primarily in one area surrounding the Central Station in Saint Paul.**

Similarly to Minneapolis, top transfers generally happen around most of the LRT stops in downtown Saint Paul. However, the main cluster surrounding Central Station shows transfer activity between LRT, BRT and local buses.

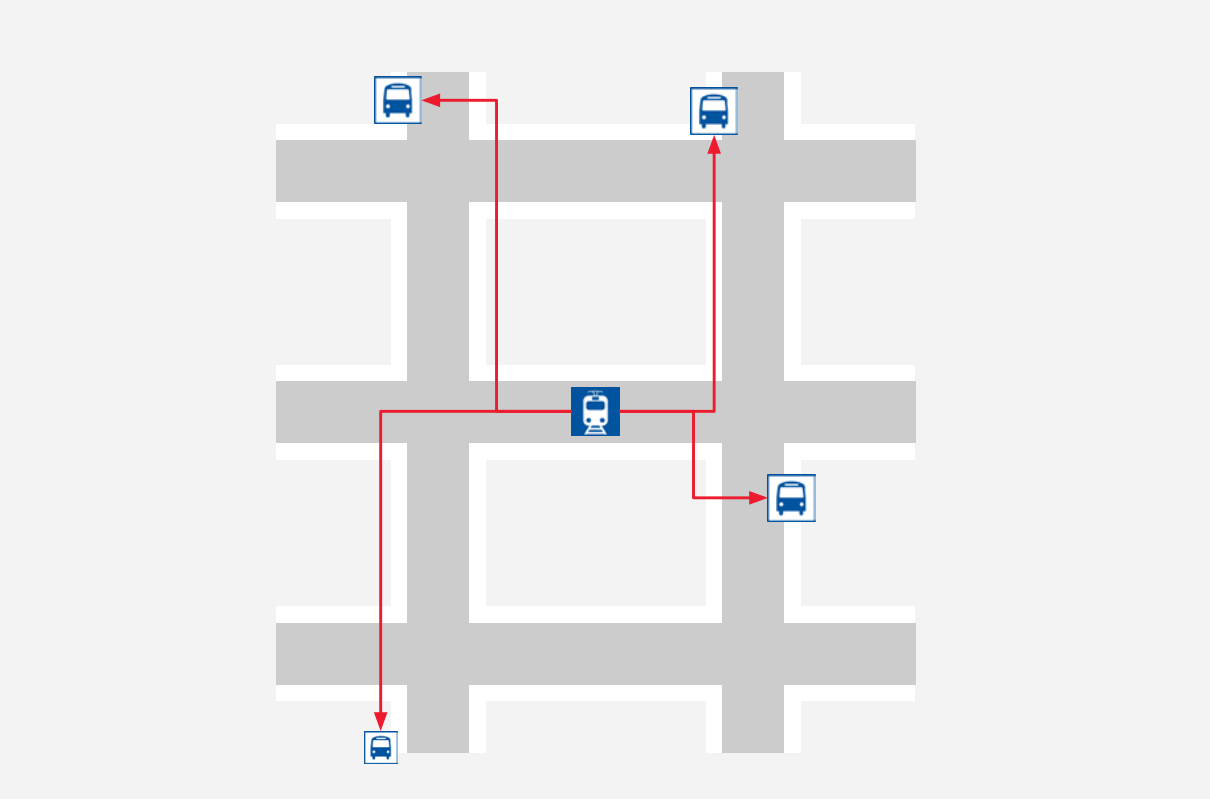


Typical transfers – Saint Paul

In contrast to Minneapolis, transfers in Saint Paul are, on average, more complex and longer journeys. They typically feature several turns before a rider can reach the stop for their second seat journey.

This does not necessarily mean that the possible wayfinding support tools will look different from those in Minneapolis. In fact, **it is critical that wayfinding feels like a seamless experience in both downtowns.**

Nevertheless, it highlights the need to carefully consider what kind of solutions are needed in each of the downtowns, and then how to make them cohesive from the rider's perspective.



Use of digital tools

Focus group conversations about riders' approach to trip planning and travel showed how **digital tools are central to how many participants navigate transit.**

Riders described using Google Maps, the Transit app, Metro Transit trip-planning tools, and real-time information before and during trips.

On unfamiliar routes, some participants continuously followed their location on their phone to confirm that they were traveling in the correct direction and approaching the correct stop.

Participants also identified inconsistencies between tools. Some preferred third-party applications to Metro Transit's trip planner, but noted that Google Maps may not contain current information about construction, detours, or recent service changes. This can leave riders moving between multiple tools without a single source they fully trust.



Apple Maps



Google Maps



Pantograph



Transit



Citymapper



Metro Transit

Eight rider research themes

Through online engagement via survey and pinning comments on maps of Minneapolis and Saint Paul, as well as focus groups, riders communicated challenges that they face when using Metro Transit. Broadly, the challenges fall into one of eight themes – access, apps, finding stops/stations, safety, signage at stops/stations, signage to/from stops/stations, scheduling and transfers.

The next two pages further set out findings related to each of the themes and distinguishes between the issues that are likely to be directly addressed in this project and issues that are related and need to be considered but are likely to fall out of the current project scope.



Access

Physical, sensory, and cognitive barriers in and around stops/stations



Apps

Finding and understanding transit routes and stop/station locations via smartphone applications



Finding Stops/Stations

Navigating near stations/stops. Understanding where stops/stations are along a route



Safety

Safe, clean, and comfortable experiences at transit stops/stations, including interactions with other riders, facilities, and surroundings



Signage at Stops/Stations

Signage at stops/stations that help inform riders of route names, detours, destinations, departure/arrival times, delays, directions



Signage to/from Stops/Stations

Signage at stops/stations that helps guide riders towards key destinations, popular corridors, etc. Signage in the environment that helps guide riders towards stops/stations.



Scheduling

Route timing and organization to help riders minimize wait times, avoid missed connections, and navigate local networks efficiently



Transfers

Switching or connecting from one line or mode of public transportation to another to finish a trip

Four themes that relate directly to this project



Signage at Stops/Stations

Riders value stop information that answers a few immediate questions: Am I in the right place? Which direction is this route going? What comes next? And when will it arrive?

There is more recognition of information provided at BRT and LRT stations, less so at bus stops.

The opportunity is to **ensure that the fundamental questions are answered consistently at each stop or station through easy to understand identification signs.**



Signage to/from Stops/Stations

Riders identified a need for stronger wayfinding between transit stops and the surrounding downtown environment, including skyways, bicycle facilities and landmarks.

The opportunity here is to **introduce stronger orientation devices that give riders a sense of where they are in relation to where they want to go, therefore helping them plan and execute journeys successfully.**



Finding Stops/Stations

Riders faced challenges in finding stops and stations that stemmed from not being able to identify the right route, direction of travel or position of the right stop.

The opportunity here is to look for **ways to give transit riders a good overview of how the transit network works in the downtowns**, alongside the need to make sure identification signs answer the fundamental questions as explained in the ‘signage at stops/stations’ topic.



Transfers

Transfers were the most consistent source of wayfinding uncertainty. It appears to stem primarily from not wanting to miss connections and being unsure if a transfer could be made in time.

The opportunity here is to build riders’ confidence in making transfers through **making clear where and how to make the transfer and to give them a sense of how far the connecting stop might be.**

Four themes adjacent to the project



Access

Riders valued the number of transit options available downtown, though they also emphasized that access depends on being able to understand how transit connects with the surrounding downtown environment, which is similar to the 'signage to/from stops/stations' on the previous page. **This highlights a wider opportunity for better general wayfinding in the downtowns, to strengthen the connection to the transit network from outside in.**



Apps

Digital tools are central to how many participants navigate transit, though riders also identified inconsistencies between tools. While this project doesn't explicitly look to improve the experience of using apps for transit wayfinding, **in defining how information is provided in the environment, consistency with information that is provided on digital tools will be critical to ensure as seamless an experience as possible.**



Scheduling

Knowing arrival times and having access to real-time information was one of the most commonly mentioned issues by riders when talking about their experience of using Metro Transit.

Helping riders feel more confident in making transfers through being more informed about transit leaving times will be part of the considerations.



Safety

Safety was often discussed by riders in connection with uncertainty and waiting rather than as a separate issue. Riders were particularly concerned about missing a transfer at night.

Better wayfinding can reduce the amount of time riders spend searching for stops, backtracking, or waiting in unfamiliar locations.

Infrastructure

Stop and station tiers

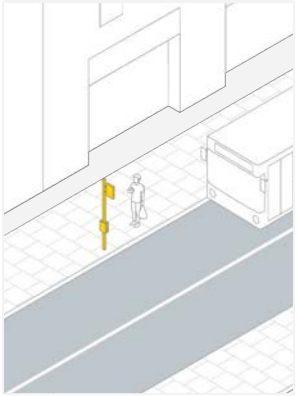
Stops, stations and transit centers are categorised in tiers.

Tier 1 is unlikely to be part of the wayfinding scope plan as they are stops that are used infrequently.

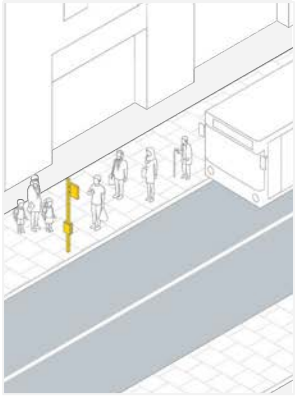
Tier 2 may also be omitted due to limited space.

Tiers 3, 4 and 5 are most likely to be the focus of wayfinding improvements as they feature surface areas that could be used for placing wayfinding information.

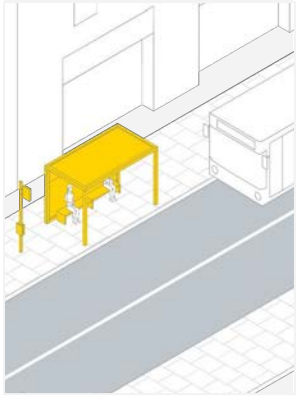
Tier 1
Low Boarding, Stand-Alone Bus Stops (<10 daily boardings)



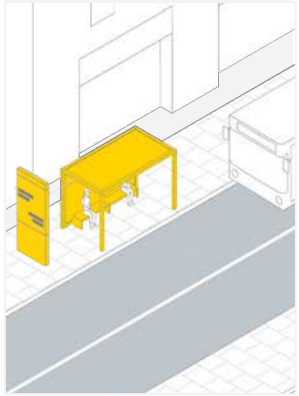
Tier 2
Medium/High Boarding, Stand-Alone Bus Stops (=>10 daily boardings)



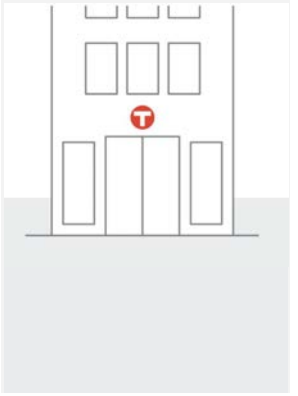
Tier 3
Bus Stops with Customer Waiting Shelters



Tier 4
Transitway Stations (BRT and LRT)



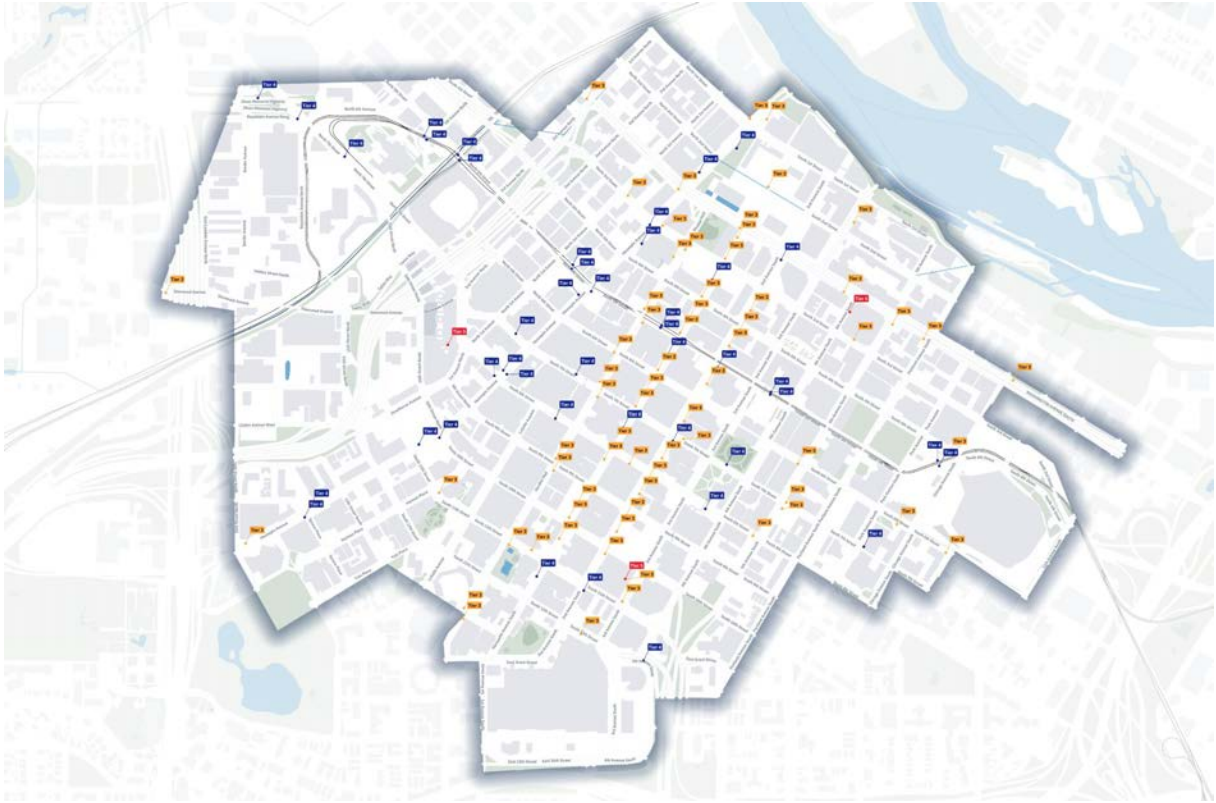
Tier 5
Transit Centers



Tier distribution – Minneapolis

There are 182 stops in the Minneapolis downtown zone. Out of these, about half are in Tier 1 and Tier 2.

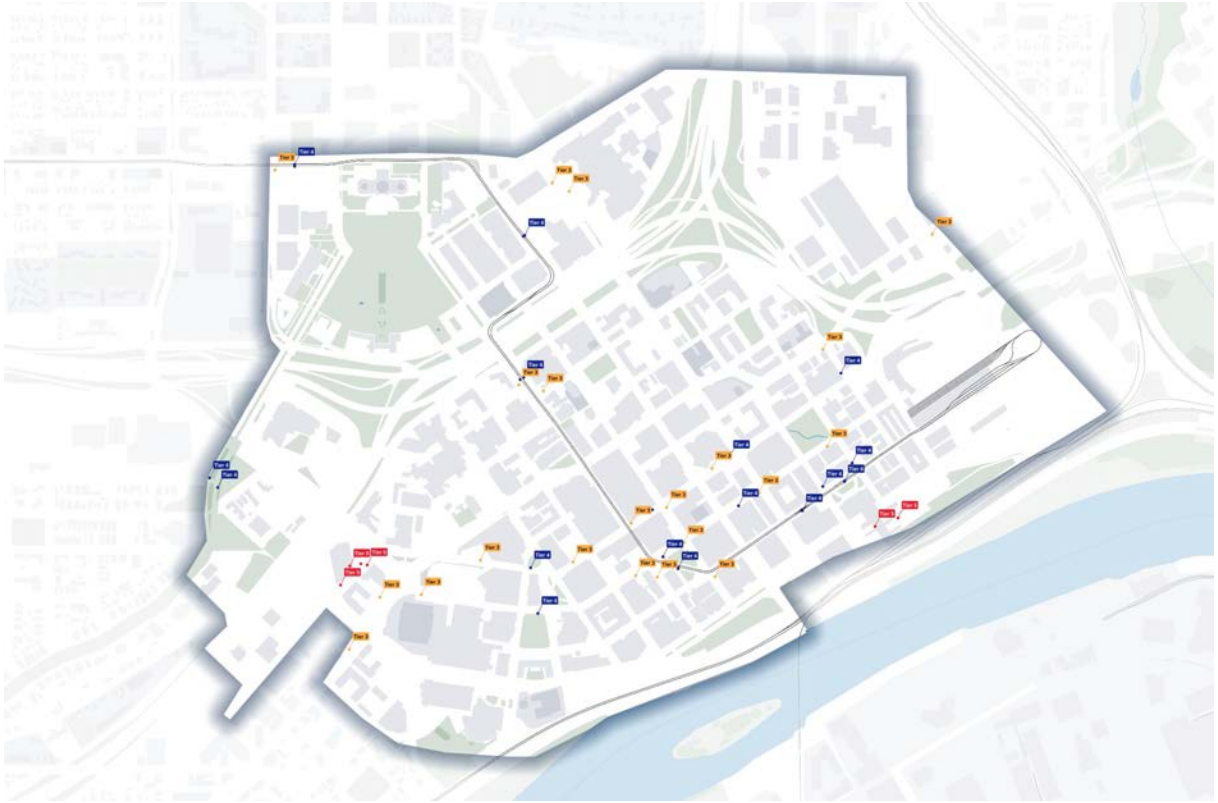
There are 66 stops in Tier 3, 43 stops in Tier 4 and 3 stops in Tier 5. These represent the other half of stops that present an opportunity for wayfinding signage improvements.



Tier distribution – Saint Paul

There are 88 stops in the Saint Paul downtown zone. Out of these, about half are in (19)Tier 1 and (19)Tier 2.

There are 21 stops in Tier 3, 23 stops in Tier 4 and 6 stops in Tier 5 (though these belong to 2 Transit Centers). These represent the other half of stops that present an opportunity for wayfinding signage improvements.



Tier 3 shelter types

Tier 3 contains bus shelters of different sizes and configuration.

It is evident that **often the variance in bus shelter types is associated with their location along a specific transit corridor**, like Nicollet Mall or Marq2 corridor in Minneapolis.

Some stop type dimensions were not available. These gaps will be filled when it is ascertained which stop types will be relevant to this project.

C
12' x 6'



Bronze
On website only



D
8' x 4'



Marq2
Not all stops, dims not specified



E
12' x 4'



Nicollet Mall
Not specified



F
12' x 2'



Custom
Not specified

varies

G
8' x 2'



Digital Ad
12' x 6'



Tier 4 and Tier 5 shelter types

Tier 4 and Tier 5 shelter types are less varied – they generally represent the type of a station, such as BRT, LRT or Transit Centers.

Nevertheless, there is some variance in the types and sizes of BRT stations, which will be taken into account when designing any solutions as part of the future phases of this project.

Large BRT
35' x 5'



Medium BRT
23' x 5'



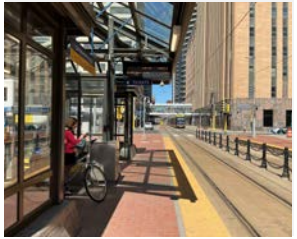
Small BRT
11' x 3' / 11' x 5'



Other BRT
Not specified



LRT
Not specified



Transit Centers
Not specified



Transit modes

The Metro Transit largely consists of two modes – buses and light rail.

However, the transit mode is not a key differentiator of service. For example, in terms of service frequency, BRT and LRT are in their own category, which is separate from local and express buses. Similarly, both BRT and LRT service is paid for before boarding. Effectively, **even though one is a bus and the other light rail, BRT and LRT offer the same kind of service.**

Local bus service differs from BRT and LRT in terms of payment as well as frequency of service. There is a greater variation of frequency amongst local bus routes.

Express buses are again in their own category, largely serving every-day commuters going to and from work in the downtowns.

	BRT	LRT	Local Bus	Express Bus
Payment	Pay before boarding	Pay before boarding	Pay when boarding	Pay as you board going into downtown and pay as you leave as you leave downtown
Service frequency	Every 10 minutes or less, except for Orange Line (12-15 minutes)	Every 10 minutes or less	Dependent on route – 20-30 minutes for most routes (some every 10 minutes, some 31-60 minutes)	Predominantly 31-60 minutes and 20-30 minutes. Services mostly paused midday, weeknights, and weekends except for 94
Hours of operation	5am to 1:30am	4am to 2am	4am to 1:30am	6am to 6pm

Transit mode connectivity in Minneapolis

As set out earlier in the report, transfer data show that top transfers happen mostly along corridors in Minneapolis. Looking at specific scenarios of the most connected stops and stations, the top transfer dataset reveals that transfers also happen between different transit modes.

Although the Metro network, which includes BRT and LRT lines, is sometimes represented separately from buses, the transfer dataset suggests that **when considering wayfinding support for transfers specifically, it is crucial to consider all modes of transport.**

*"**Transferring between the BRT lines and the LRT lines can be confusing for first time visitors, and inexperienced downtown transit riders**. Having some directional signage pointing riders to where the transfer points are could be helpful, as this stop is the first transfer point"*

Origin: Nicollet Mall & 7th St S



Origin: Nicollet Mall Station



Origin: Hennepin & 8th St Station



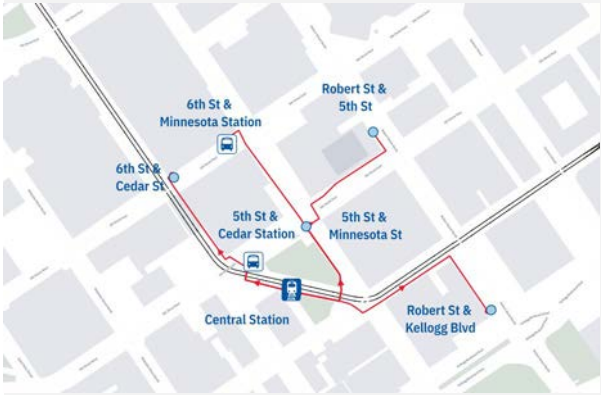
Transit mode connectivity in Saint Paul

Although transfer patterns are different in Saint Paul in comparison to Minneapolis, the same conclusion can be drawn between connectivity across different transit modes.

Transfers happen between buses, between Light Rail and buses, between BRT and buses as well as BRT and LRT. The same as in Minneapolis when considering wayfinding support for transfers specifically, it is crucial to consider all modes of transport.

*"**Bus-Bus and bus-train changes at 6th/Minnesota, 5th/Cedar, and Central are not announced nor really signed**, and with multiple platforms on different streets, this gets extra confusing"*

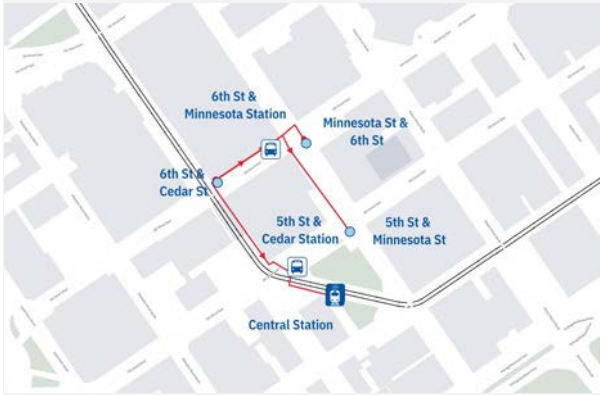
Origin: Central Station



Origin: Robert St & 6th St



Origin: 6th St & Cedar St



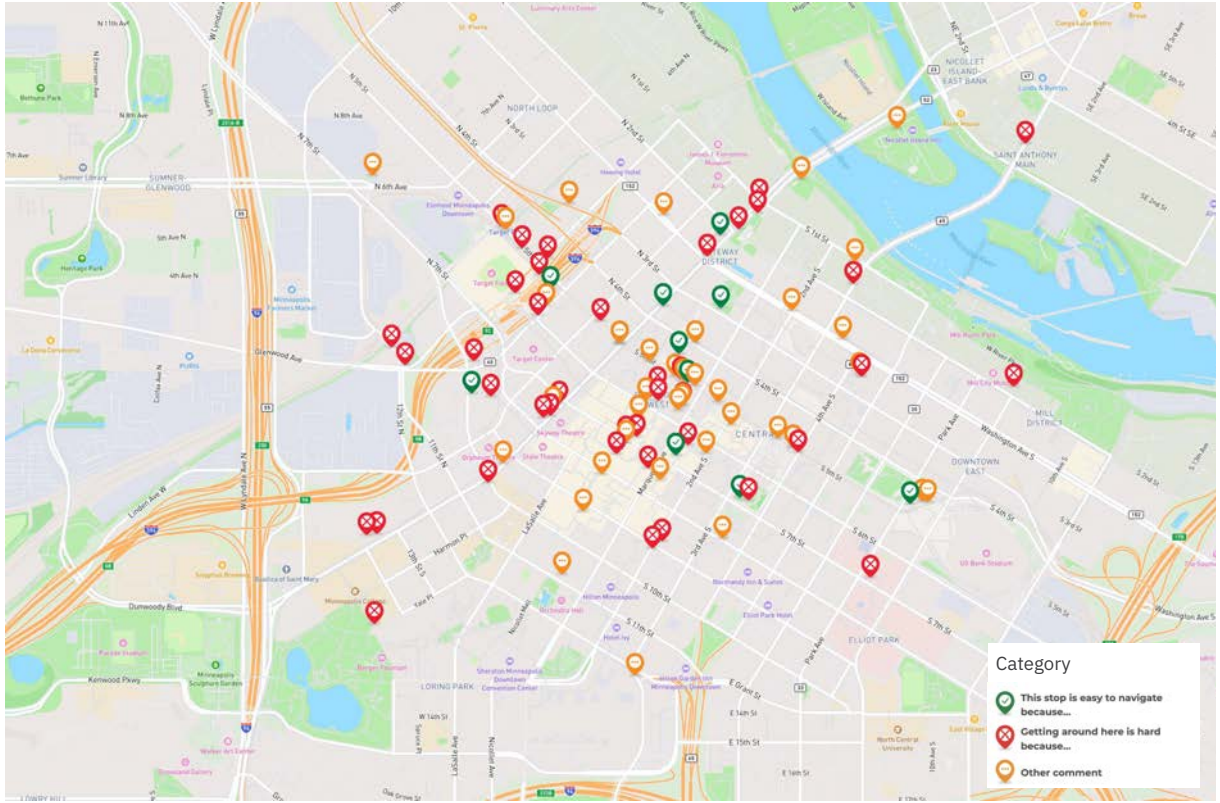
Minneapolis – spatial distribution of rider comments

As identified above in the report, most transfers can be spatial categorised based on which transit corridor they take place in and around.

One of the research phase activities of the project was an online engagement platform. This allowed for riders to drop a pin at a location that they wanted to leave a comment about.

In Minneapolis 91 contributions were made. Although, looking at the overview map, there is a generally broad coverage of comments, to better make sense of them, the comments have been organised in groups that relate to the key transit corridors in each of the downtowns.

The following pages of the report set out the key issues raised by riders regarding each of the transit corridors.



Hennepin Avenue Corridor

Out of the 31 total comments that were left on the map along the Hennepin Avenue Corridor, about a third fall into the key topics relevant to the project. The most common issue raised that is not directly related was the modal conflict between bike lanes and bus stops as well as the need to connect them through information.

The most common issue raised in relation to the access theme was the need to better explain how River Parkway connects to Hennepin Avenue due to the change in levels.

One comment included on this page, particularly included a request to make information bigger on existing signs to enable easier viewing from distance.

31 Comments



Access

Signage at stop/station

*"There should be a sign directing people to the staircase/ramp on the Hennepin Ave bridge to connect to W River Parkway - **it's hard to tell on a map that they are different levels.**"*

*"... **I wish the route name/number indicators/labels were HUGE on the BRT pylons** so they were easy to see and obvious from a distance..."*



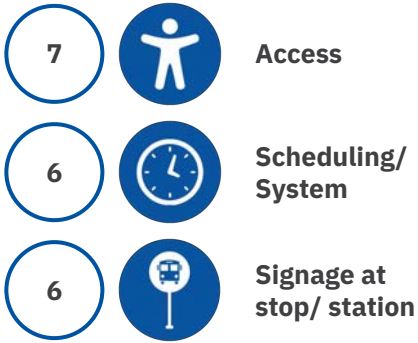
Nicollet Mall Corridor

The most commonly mentioned issue along Nicollet Mall corridor is the distance between the stop ID position and the shelter. Riders mention missed buses due to buses not stopping when people are waiting in the shelter.

Some riders mention that there should be clearer information regarding which routes terminate in the downtown, so they can avoid getting on buses that are not leaving the downtown.

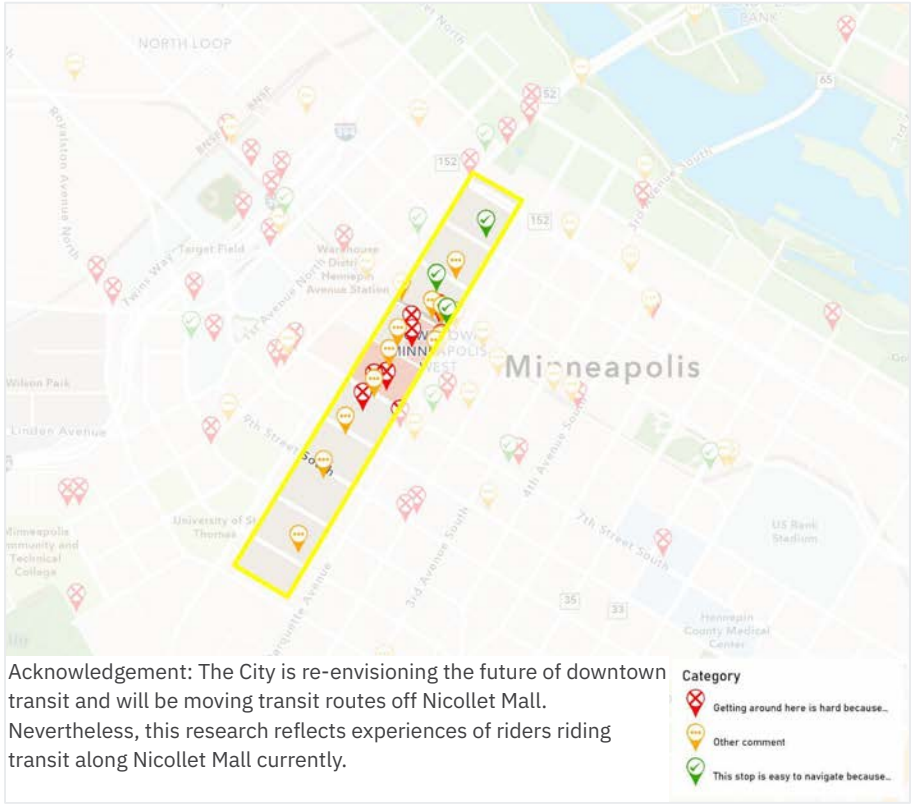
And as Nicollet Mall is a two-way street, riders also wish for information that would more easily help them identify which stop they need to go to dependent on which direction their transit goes.

32 Comments



*"**For routes that end downtown, there should be signs explaining that in plain English** so that people don't accidentally get on the wrong bus..."*

*"Stops on Nicollet are positioned so far from shelters that **many newer riders are unaware that waiting at the shelter is not the correct place to wait** if you are trying to indicate to a bus operator that you intend to board."*



Acknowledgement: The City is re-envisioning the future of downtown transit and will be moving transit routes off Nicollet Mall. Nevertheless, this research reflects experiences of riders riding transit along Nicollet Mall currently.

Marq2 (Marquette/2nd Ave) Corridor

Comments for the Marq2 corridor focus predominantly on the difficulty of using the stop gates – the staggered stops for different routes.

Riders also comment on the fact that connections between Orange Line and C&D Lines where Marq2 corridor crosses the 7th and 8th St one-way street pair are not immediately obvious. Riders suggest that better on-vehicle announcements could raise awareness of the opportunity to make the transfer between the Metro lines.

27 Comments



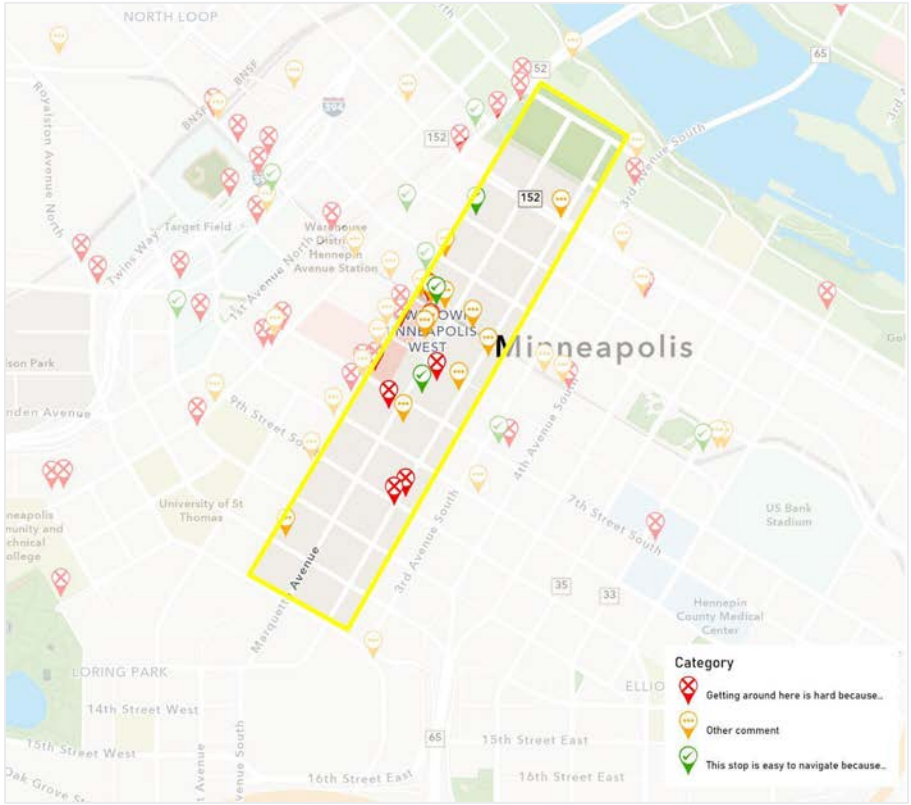
Access

Scheduling/ System

Signage at stop/ station

*"**The Marq2 gates are hard to navigate if you're not familiar**, which is an issue especially for our major capital lines like the Orange Line."*

*"Please consider announcing transfers between lines in downtown, e.g., Blue and Green to Orange, C, D, and E, and vice-versa. **A lot of people don't know some of these lines exist or how to navigate to them** when they do know of them because downtown's transit patterns are so lattice-like."*



6th/7th Street Corridor

One of the issues raised in relation to the 6th and 7th St corridor is the fact that it is adjacent to another one-way street pair (7th and 8th) and telling apart which routes go from where is really difficult.

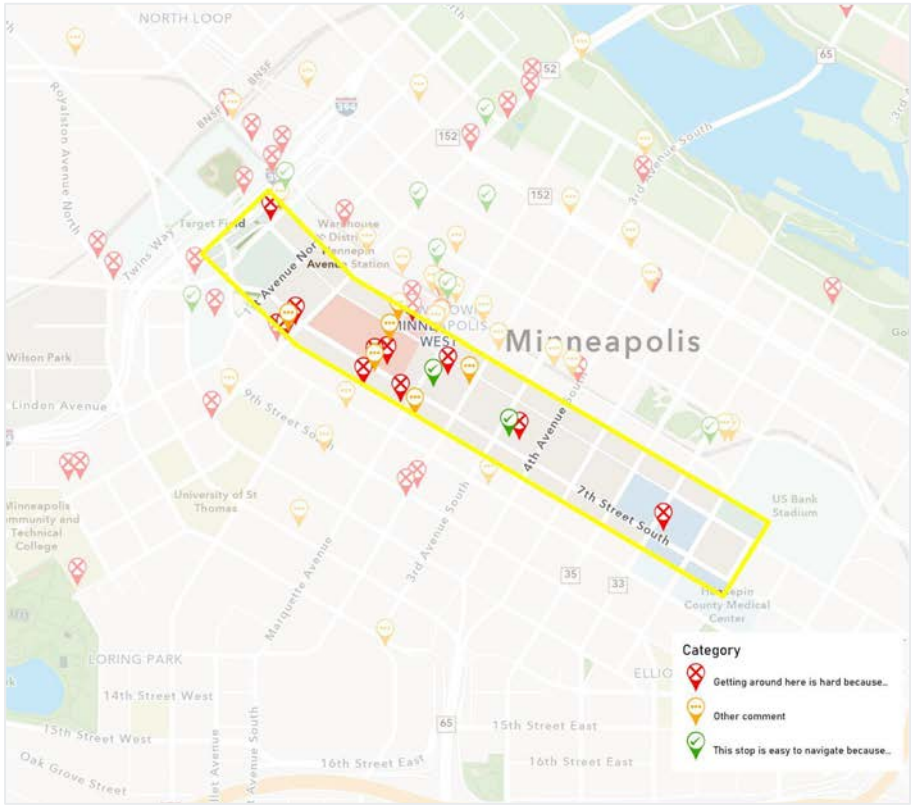
Riders also comment on the lack of information about connections to LRT from this corridor.

32 Comments

6	**Access**
5	**Safety**
5	**Scheduling/ System**

*"**Everything off of the Nicollet, Hennepin or Washington corridors is difficult to navigate to**. Hard to find, a bit of a maze, it's a lot of random lines that run very infrequently so you don't really learn their travel patterns..."*

"Trying to remember which routes are on 6th vs. 8th can be confusing"



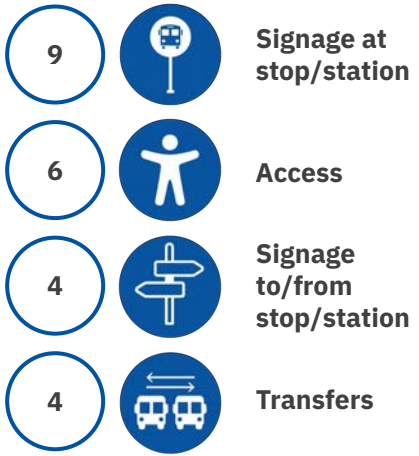
Minneapolis LRT Corridor

Most common issues identified by riders in relation to the LRT corridor in Minneapolis relate to being able to navigate well within the stations themselves and connecting to destinations, other routes and modes of transportation.

In particular, riders express a wish to have clearer information on which trains leave from which platform in the LRT stations. Upon exit at a station, riders mention difficulty to orient themselves quickly to find the next bus stop or destination they're looking for.

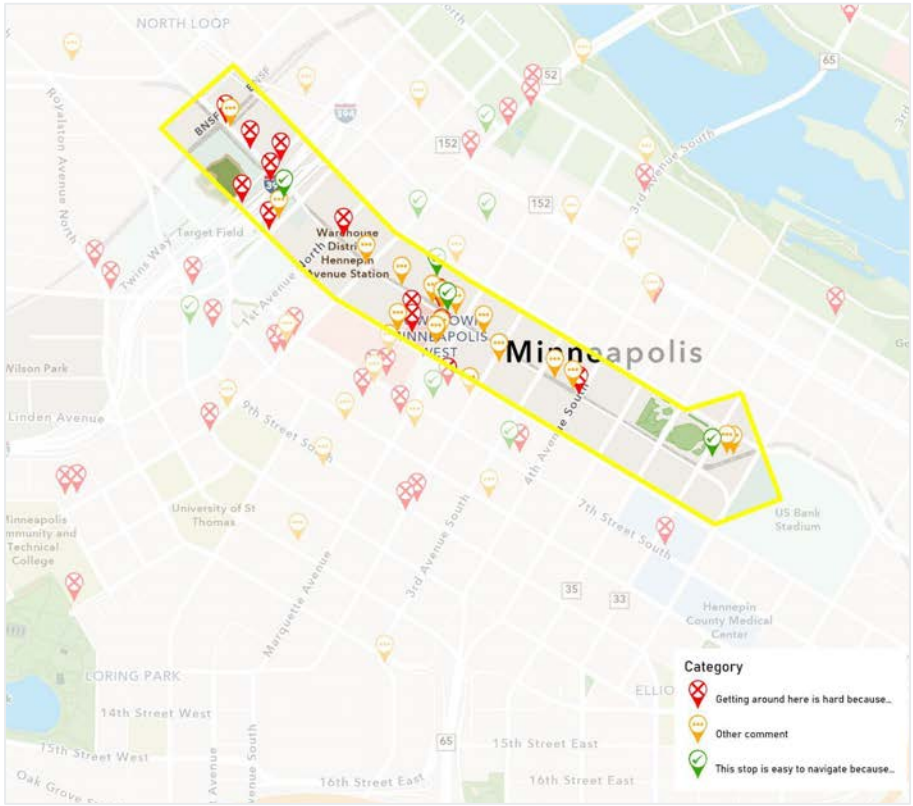
Riders identify an opportunity to provide information at LRT stations that show them how the transit network here connects to nearby bikeways, skyways and landmarks.

42 Comments



*"**Some folks unfamiliar with the system seem extra confused by TFS Platform 1 vs. Platform 2**, both inbound and outbound."*

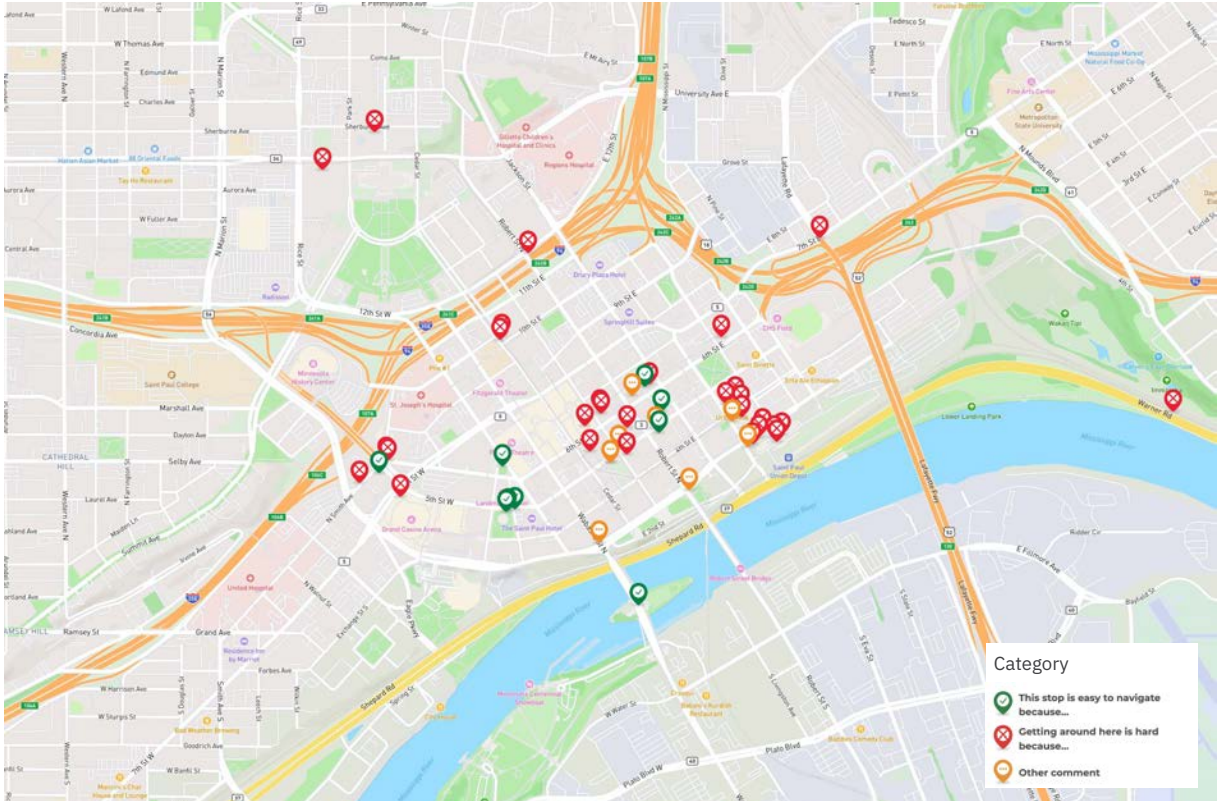
*"It would be great to get some **better signage & wayfinding info for the bus stops**. Some of them are tucked out of the way and not very clear." – about Government Plaza Station*



Saint Paul – spatial distribution of rider comments

In Saint Paul 47 contributions were made by riders who engaged with the online platform consultation tool. Similarly to Minneapolis, the coverage of comments is quite broad, but clustering around certain areas is even more evident than in Minneapolis.

The rider comments have been summarised on the following pages, through the focus on two corridors in Saint Paul. It is notable though, that these corridors overlap, and largely highlight an area in central Saint Paul representing most activity.



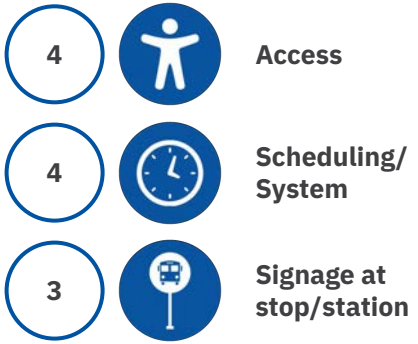
Saint Paul LRT Corridor

Besides comments about a few modal conflicts between bike lanes and stations, most comments in this corridor focus on the Union Depot Station and Union Depot Transit Center.

Riders comment on the confusion arising from the LRT stop having the same name as the transit center.

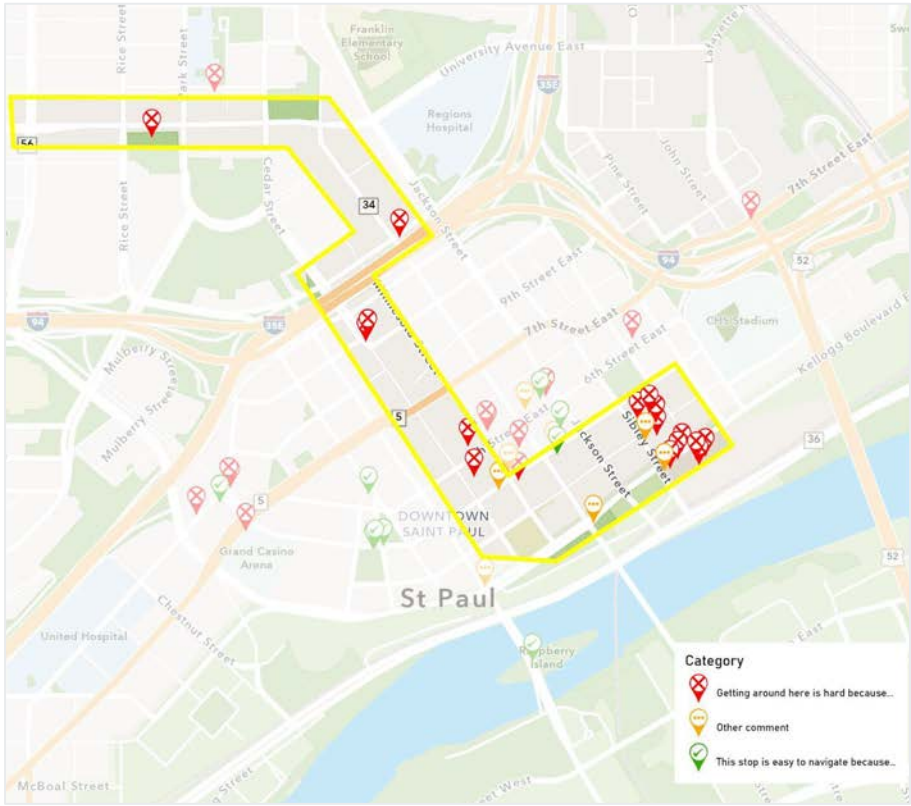
Many comments raise issues regarding the ability to clearly approach the Union Depot Transit Center, find the right bus bays within it and understand which buses are leaving and which are laying over.

26 Comments



"Although valiant efforts were made, ***Union Depot has the worst wayfinding in the entire system****..."*

(about Union Depot LRT Station) ***"The name of this stop is confusing****, since it is not actually at the Union Depot building. A more accurate name would be 4th St and Sib"*



5th/6th Street Corridor

Rider comments highlight how less or more information is required, depending on the environment that a route is serving. Riders report feeling confused around the Grand Casino Arena area, while just one stop towards the centre of the downtown around Rice Park appears much easier to navigate around.

Riders highlight an opportunity to use gates to identify staggered stops along the corridor, like is currently done along Marq2 corridor in Minneapolis.

Riders also state that having all East/West routes along this corridor makes navigation simpler, but connections with North/South routes are made more difficult as they are not as consolidated.

32 Comments

8 **Scheduling/ System**

5 **Signage at stop/station**

"Saint Paul is comparatively easier to navigate relative to Minneapolis because there are fewer routes to consider. ***It is nice that E/W routes all travel along the same corridor (5th and 6th Streets). . ."***

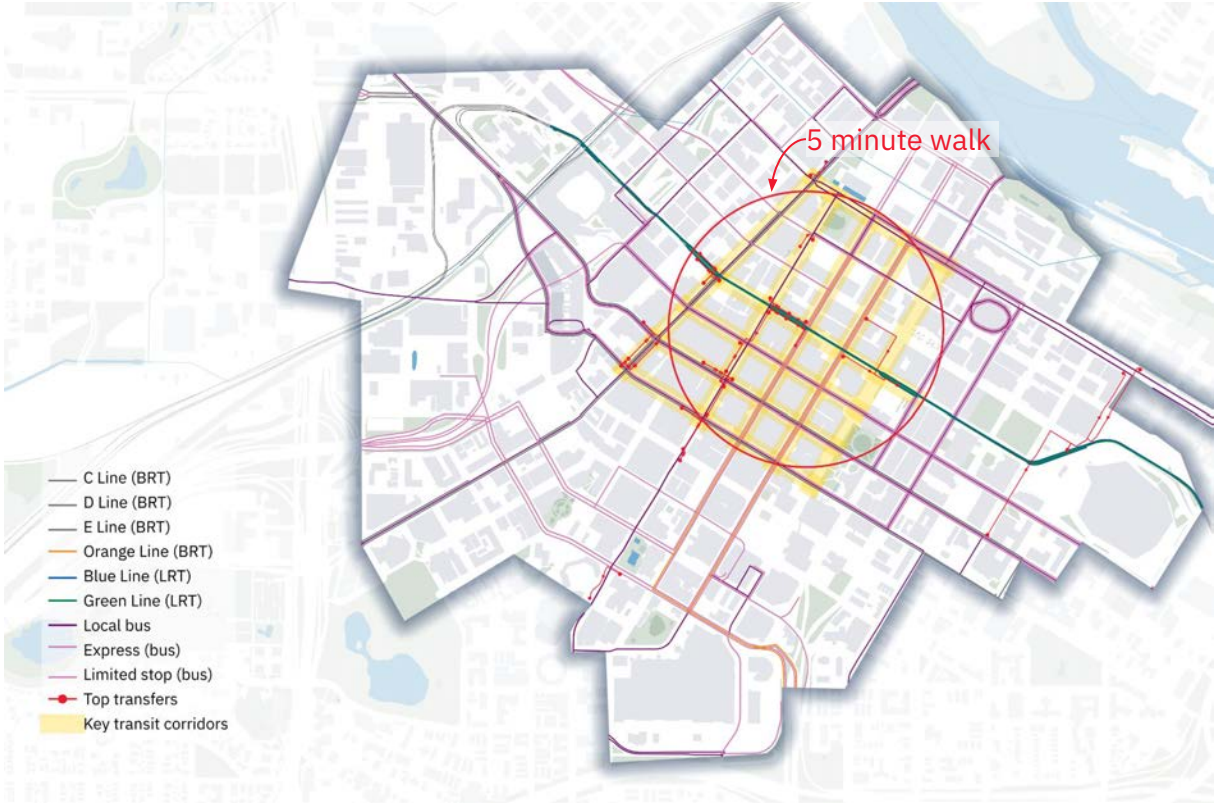


Central Minneapolis route cluster

Although the transfer dataset shows that most transfer activity happens along corridors, it is also important to note that independent of transfer activity, all routes that go through Minneapolis, are contained within a smaller, more central area in the downtown.

It covers just a little more than a 5 minute walking distance from the centre, extending between Washington Avenue and 8th St, and Hennepin Avenue and 3rd Avenue.

This spatial clustering of all the routes in Minneapolis might present an opportunity to focus on a smaller area where most transfers happen and might lend itself to good representation on a map – showing stop locations and route connections.

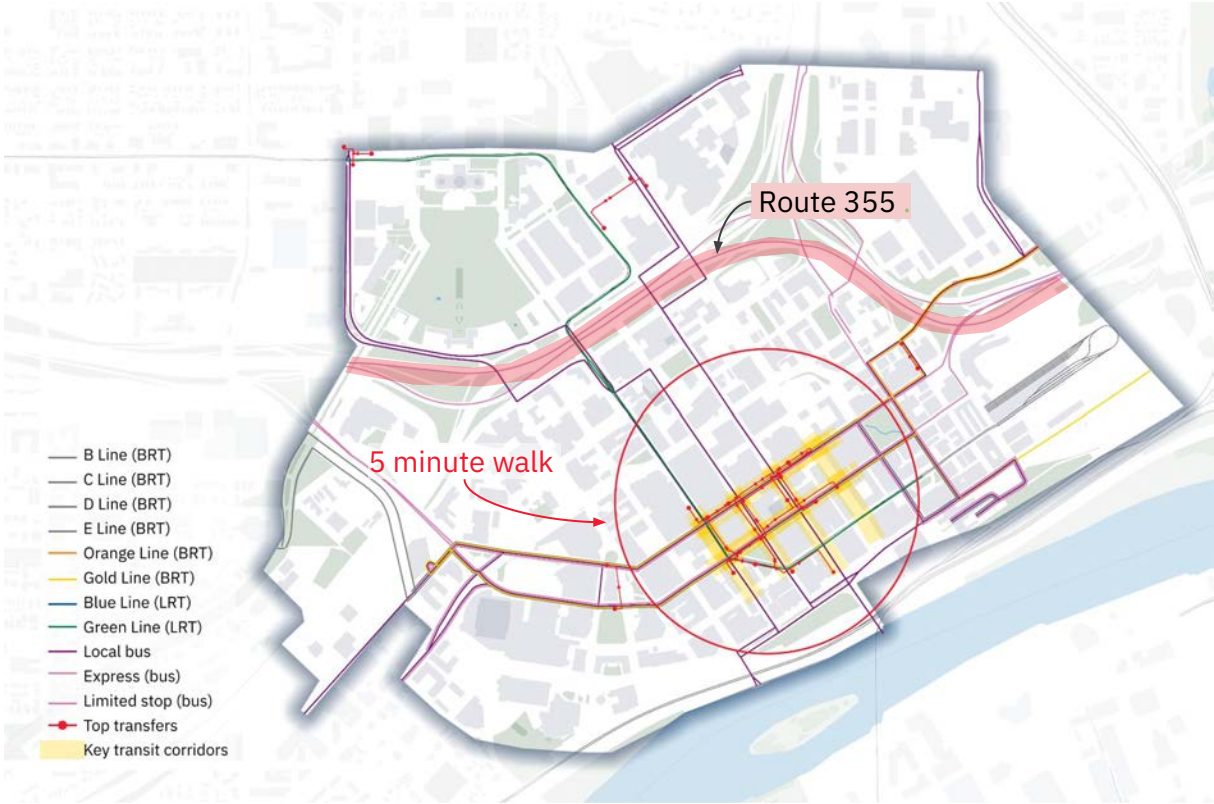


Central Saint Paul route cluster

Similarly to Minneapolis, Saint Paul also features a small area surrounding the Central Station that sees most routes go through. The only exception is route 355 which goes through Saint Paul along Interstate 94 route. However, there are no stops along this route in Saint Paul, so this route can be disregarded when considering information about routes to show in Saint Paul.

The central area fits fully within a 5 minute walking circle, and as previously shown in the report, contains most of the top transfers as well.

Similarly to Minneapolis, if developing **a map that can more clearly show stop locations and route connections to account for most transfers that might happen in the downtown might be a possible addition to the sign family,** then this clustering of most routes and top transfers already suggests the map extent.



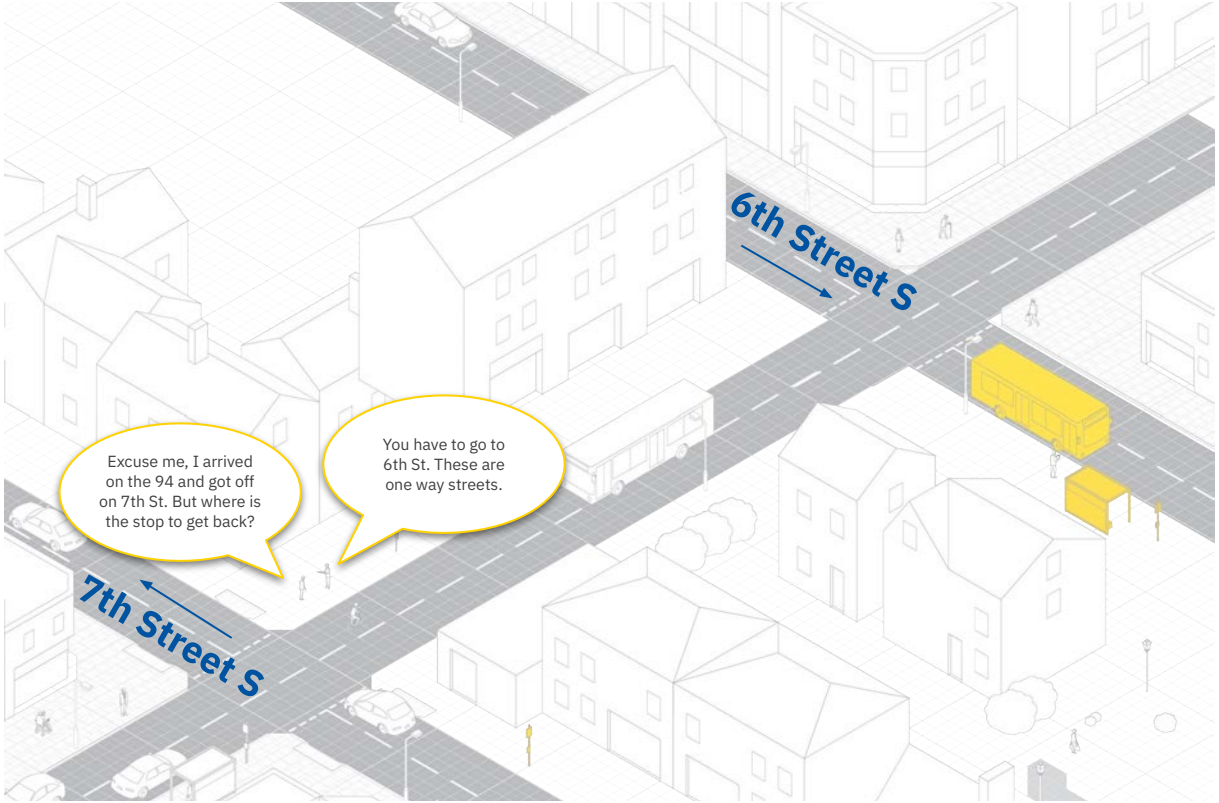
Two-way vs. one-way streets

Another spatial nuance is the difference between two-way and one-way streets.

If a rider finds themselves in a stop where their route goes the opposite direction, on a two-way street they can see a stop on the other side and all they have to do is to cross the street.

The same issue but in the one-way street scenario is more difficult to intuitively navigate. One-way streets act as pairs, which means that the same transit routes can go one way along one street and the other way along the other. This is not visible in the environment, and it's also not evident which way the second of the one-way street pair of streets is located.

This is one of the scenarios where **wayfinding has to work much harder, because riders have to learn about the one-way street pair relationship in the first place, and only then find the right stop.**



One-way street pairs in Minneapolis

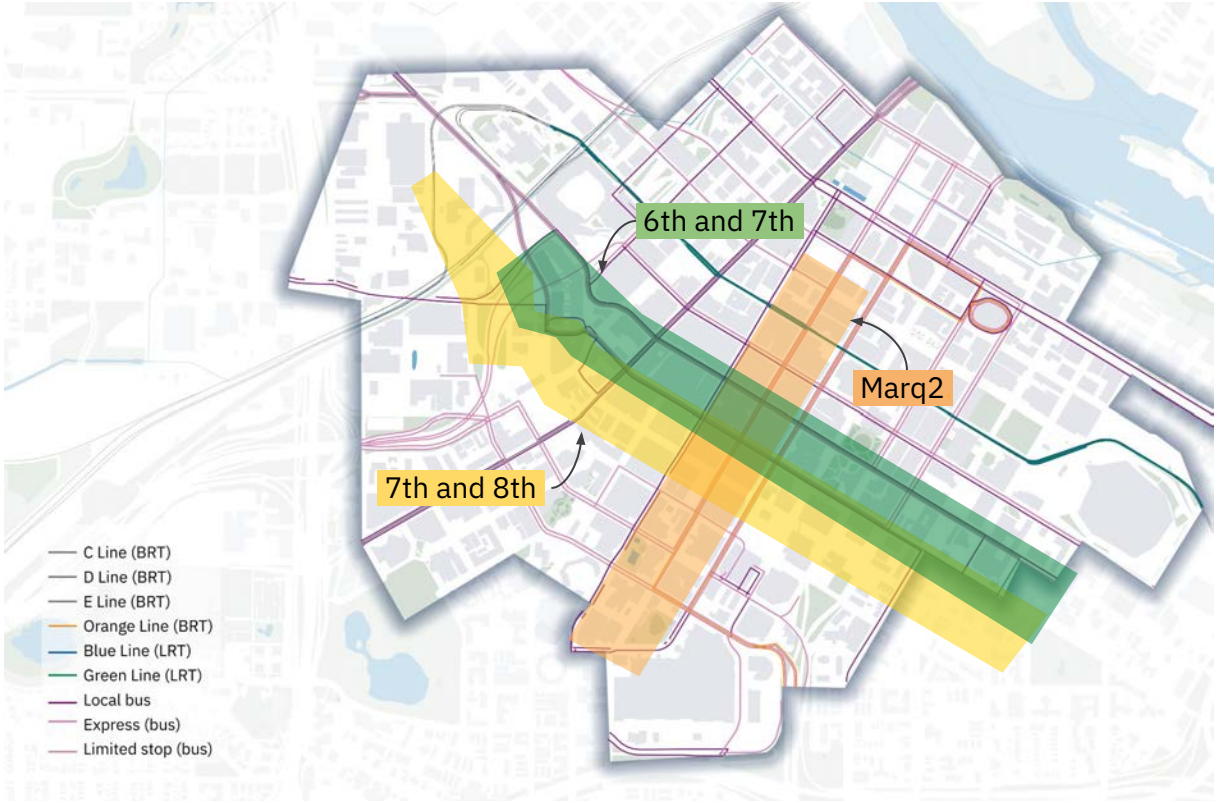
In Minneapolis, there are three one-way street pairs.

Marq2 is a known one-way street pair that accommodates weekday commuter routes – those who need to know, likely know how to use the corridor.

6th and 7th street is another one-way street pair – routes 14 and 94 are affected.

7th and 8th street is another one-way street pair – routes 5, 9 and 22 as well as C&D lines are affected.

Moreover, the two latter one-way street pairs overlap. So **not only does wayfinding information need to explain the relationship between two one-way streets, it also needs to explain which routes can be found at stops along one of the three streets, depending on direction of travel.**



One-way street pairs in Saint Paul

In Saint Paul, there are two one-way street pairs that don't overlap but are connected.

5th and 6th street is the one-way street pair that most routes go through in Saint Paul, including 54, 61, 63, 64, 772, 74, 94, B Line and Gold Line.

Sibley and Wacouta street one-way street pair is connected to the 5th and 6th one-way pair up to Union Depot. Affected routes include 54, 94 and B Line.

Most transfer activity, as set out earlier in the report happens around Central Station and relates to the 5th and 6th street one-way pair. It is likely that wayfinding information related to transfers would need to be focused on this area, and perhaps less so on the Sibley and Wacouta one-way street pair.



Signs & information

Rider interaction with current signs and information

Six stations in Minneapolis and four stations in Saint Paul were chosen for observation of riders' interactions with existing signs and information.

Through these observations, it became clear that **phone use appears to be default behavior, especially when confused.** However, focus group participants mentioned that **their phone use can be weather-dependent** – riders are less likely to take out their phone when it's cold or raining. In addition, **seniors tended to be more aware/ observant of signage than younger riders.**

Therefore, even though digital tool use is prevalent in navigating transit, signs in stops and stations are important to cater for those who choose not to use digital tools.



Rider interaction with current signs and information

Additionally, **when confused, riders ask for help from transit employees, police, maintenance workers, or fellow riders**.

Metro Transit employs people (TRIP agents) to be at certain stations to ensure safety and offer help when needed. In both downtowns, separately from Metro Transit, Downtown Improvement District ambassadors also patrol areas to be on hand when questions arise. These services are great for those who are unfamiliar with using transit and want some help.

Nevertheless, **the more signage can do to make the system easier to understand, the more riders might feel empowered to resolve their confusion.** This can also aid those who are being asked a question about someone else's journey – fellow riders, DID ambassadors, police and maintenance workers alike.

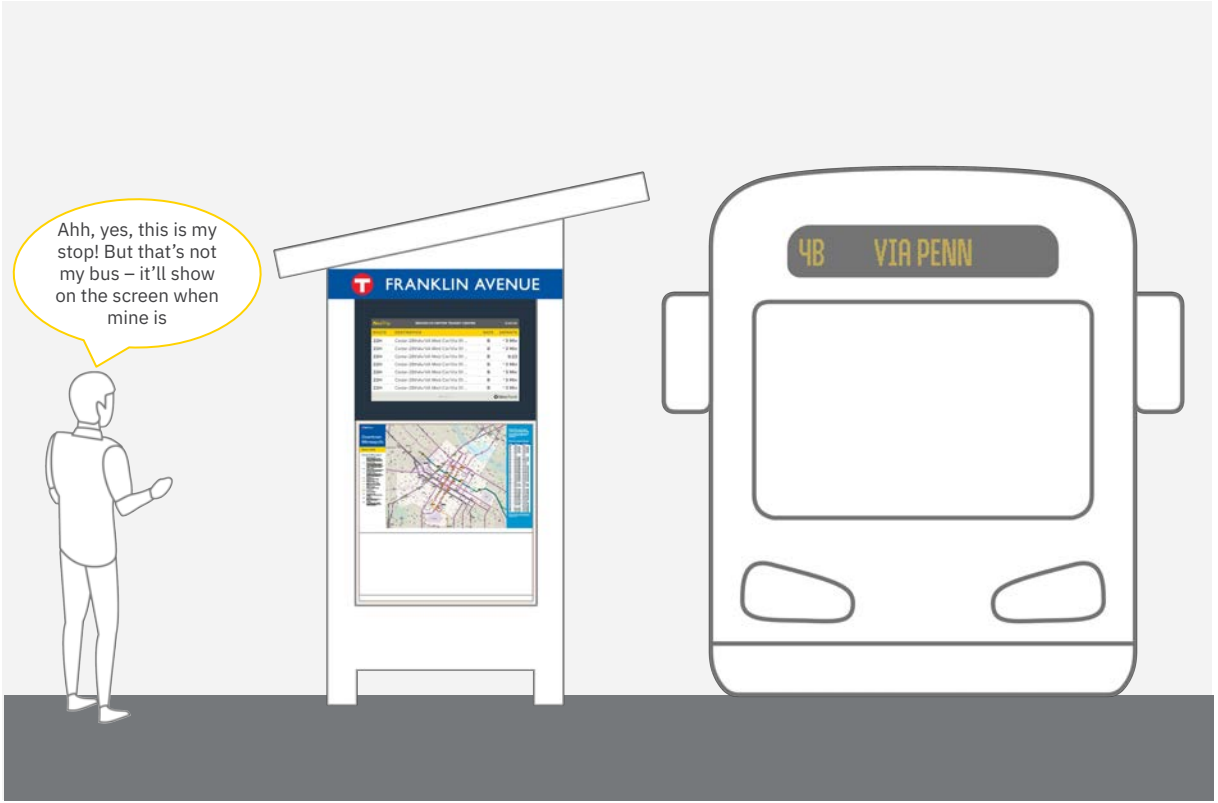


Rider interaction with current signs and information

Further observations revealed that **time boards were viewed most frequently and large digital displays at bus stops were frequently viewed too.** Bus time tables were viewed somewhat frequently as well.

Since most riders appeared to be daily commuters, focus on information about the time of transit arrival is not surprising – this group of riders are familiar with their stop, so focus most on real time arrival information more than anything else.

However, it was also noted that in general **riders tended to be more aware/observant near stop /station entrance**, which suggests that even though many riders know exactly where they need to be, **some riders, particularly those who use transit less frequently, look for confirmation that they've arrived at the right stop/station.**



Identification signs

Identification signs are the most prevalent and consistent sign type in the current sign family. Their visual appearance reflects the type of station or stop they identify – pylons for BRT stations, panels (either suspended or wall-mounted) for LRT stations and bus top ID flags for all types of bus stops.

Besides potential improvements that could be made in terms of placement and nomenclature used on signs, discussed further in the report, current identification signs clearly serve their purpose.

*"**I love the flashing T on the E Line signs.** It makes it very easy to know if I need to hurry to my station from a distance."*
*"... **I wish the route name/number indicators/labels were HUGE on the BRT pylons** so they were easy to see and obvious from a distance..."*













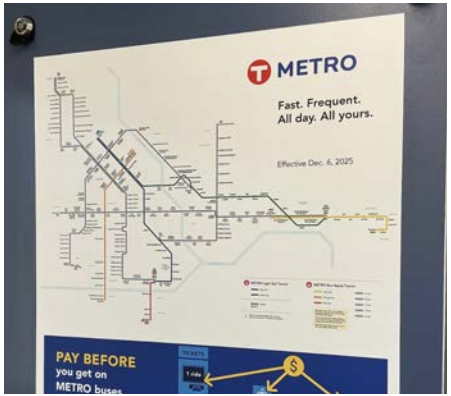
Orientation signs

Orientation signs such as maps and diagrams feature both in stations/stops and on transit. Route and network diagrams are more prevalent in LRT and BRT stations as they are part of the METRO network, and more space is available in these stations to place them.

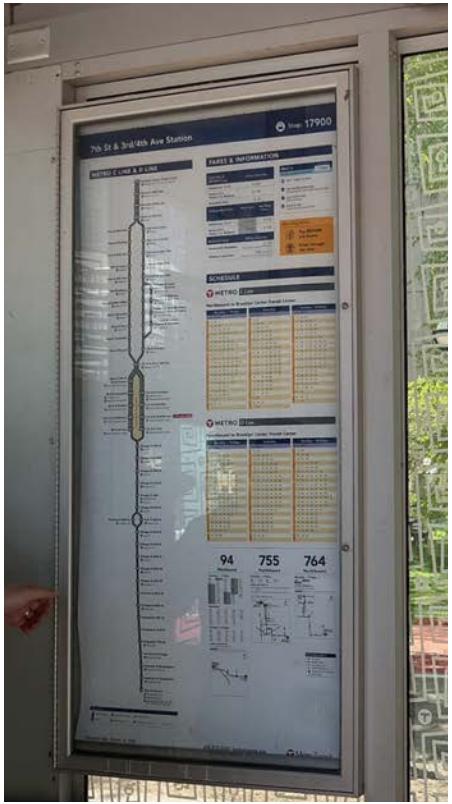
Besides stops along Marq2 corridor and LRT stations, no other stations or stops feature the downtown system maps that show all routes.

The experience created by this application of orientation signs is therefore fragmented. Across all stops and stations, there is an **opportunity to more clearly show how the METRO network connects to the bus network and to the surrounding environment.** Opportunities to show connections to the skyway, bikeways and landmarks may be useful to explore to give riders a better sense of the environment and how the transit system enables them to navigate it.









Directional signs

Directional signs are currently the least prevalent sign type in the two downtowns. They feature predominantly in LRT stations only and mostly serve the function of pointing riders to the right platform or line.

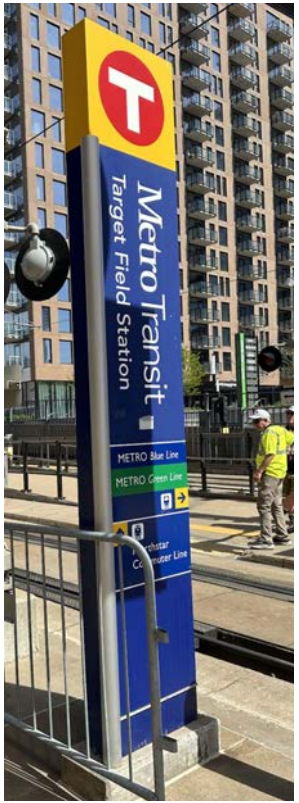
As a key part of the project is to enable easier transfers, **a significant opportunity is to consider how directional signs can work more effectively to help riders point in the direction of a stop they're looking for.** The key challenge will be utilising directional signs in a way that isn't presenting an overwhelming amount of information due to the density of stops and routes in the two downtowns.

"Transferring between the BRT lines and the LRT lines can be confusing for first time visitors, and inexperienced downtown transit riders. ***Having some directional signage pointing riders to where the transfer points are could be helpful****, as this stop is the first transfer point"*











Nicollet Mall information placement issues

Through observations regarding rider behaviour in certain stops, as well as through comments on the online engagement platform, it transpires that the placement of information in Nicollet Mall stops is confusing for riders. Some riders tend to wait by the bus stop ID sign, not the shelter, while some people wait in the shelter.

As highlighted by the comment on the right, those who wait in the shelter may miss their bus, as it stops at the bus stop ID rather than the shelter.

Closer proximity of all stop elements would help avoid confusion about where to stand and would enable easier access to information that is currently too spread out.

*"Stops on Nicollet are positioned so far from shelters that **many newer riders are unaware that waiting at the shelter is not the correct place to wait** if you are trying to indicate to a bus operator that you intend to board."*



Bus stop IDs face away from junctions

Many junctions in both downtowns are surrounded on all four sides by different stops and stations. LRT and BRT stations are easy to recognise in the environment due to the BRT pylons and LRT stations generally being larger.

However, bus stops are harder to spot, especially if they feature only the bus stop ID signs.

Information to confirm that a rider is approaching the right stop is not immediately visible as they approach the stop from the junction.

There is an opportunity to consider how information might be displayed such that it can be more visible from multiple vantage points and perhaps from further distance as well.



Visibility of suspended stop ID signs

Suspended stop ID signs that display the name of the stop and the direction of travel are prevalent in BRT and LRT stations. They help riders confirm that they've either arrived at the right stop to get on transit, or when they're getting off transit.

Their placement, however, is less optimal. Due to the fact that the signs are suspended at the front of the shelter, they can be difficult to notice when getting off transit – the signs are very close and high up when exiting the vehicle. They do perform well when seen across the street, but less so as one is approaching the stop on the same side of the street.

One of the participants in the focus group session suggested to place the sign where the 'Adopt a Stop' signs currently go. In this location the name and direction of travel would be easier to see from the same side of the street, and from within the vehicle approaching the stop.





Opportunity to colocate fare information with ticket machines

Besides information that helps riders find the stop and confirm that they've arrived at the right stop, riders, especially infrequent riders, will look for information that helps them understand which ticket they need to buy.

At the moment, ticket machines are often placed separately from any kind of information about how to pay and which ticket is the right one. This information is consolidated with route schedules and other information and placed inside shelters.

There is an **opportunity to weigh the perceived efficiency of consolidating all information on one poster against its usability and impact on rider satisfaction.** Placing information about fares near the ticket machine would already be an improvement, and there might also be a way to simply convey which ticket one needs to get, depending on where they're going.





***"Go-To card scanners and ticket machines are tucked away behind bus stop poles and are not easy to find** for people coming from the skyways and IDS Center"*

The T!

The T is a highly recognizable, legible, and visually strong system symbol that we will continue to leverage for consistency and quick recognition across wayfinding applications.











Hierarchy of brands

The relationship between Metro Transit and METRO is not immediately clear, a challenge that becomes more pronounced at street level. Shared language and shared colors make it difficult to distinguish between the brands and understand how they relate to the overall system.

In our work we will use the established color palettes to support the distinction – yellow for Metro Transit and white for METRO.

	Metro Transit	METRO
PARENT BRAND	Metro Transit	Metro Transit
SYMBOL		
WORDMARK	Metro Transit	METRO
SERVICE	Local bus, express bus, and general Transit Centers	Premium services: Light Rail (LRT) and Bus Rapid Transit (BRT)
MODES		
SITE ID		
VARIOUS SIGNS		









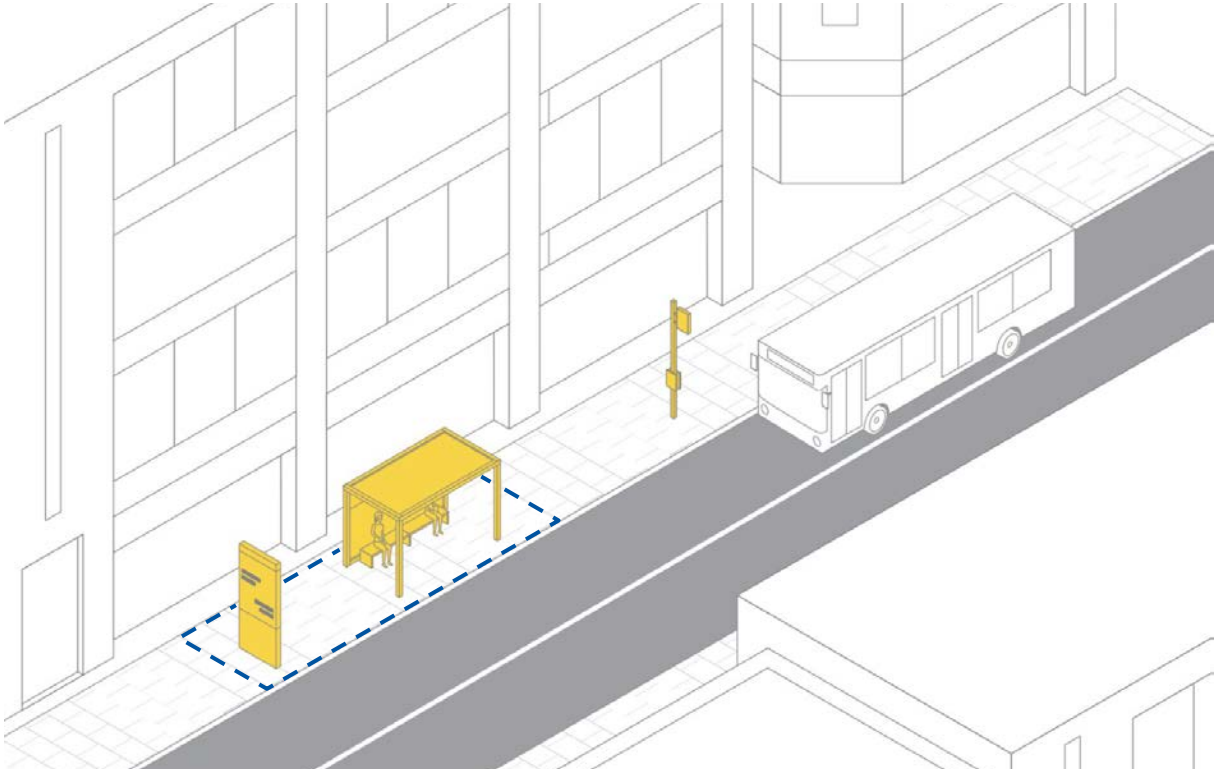


Space jurisdiction and updatability

Engagement with internal Metro Transit stakeholders has highlighted two particular challenges any future updates to signs and wayfinding information will need to take into account.

One of the challenges is Metro Transit's ability to only place information within the confines of the stops themselves. Placing transit-related information in the environment near the stops and stations can be challenging.

The second challenge is related to the frequency of network changes – routes being temporarily closed, updated, re-routed. This will be a significant challenge to consider when specific wayfinding solutions are proposed in the next stages of the project. The need for ease of updatability affects both the potential materiality of any solutions and also the type of content that will be displayed.



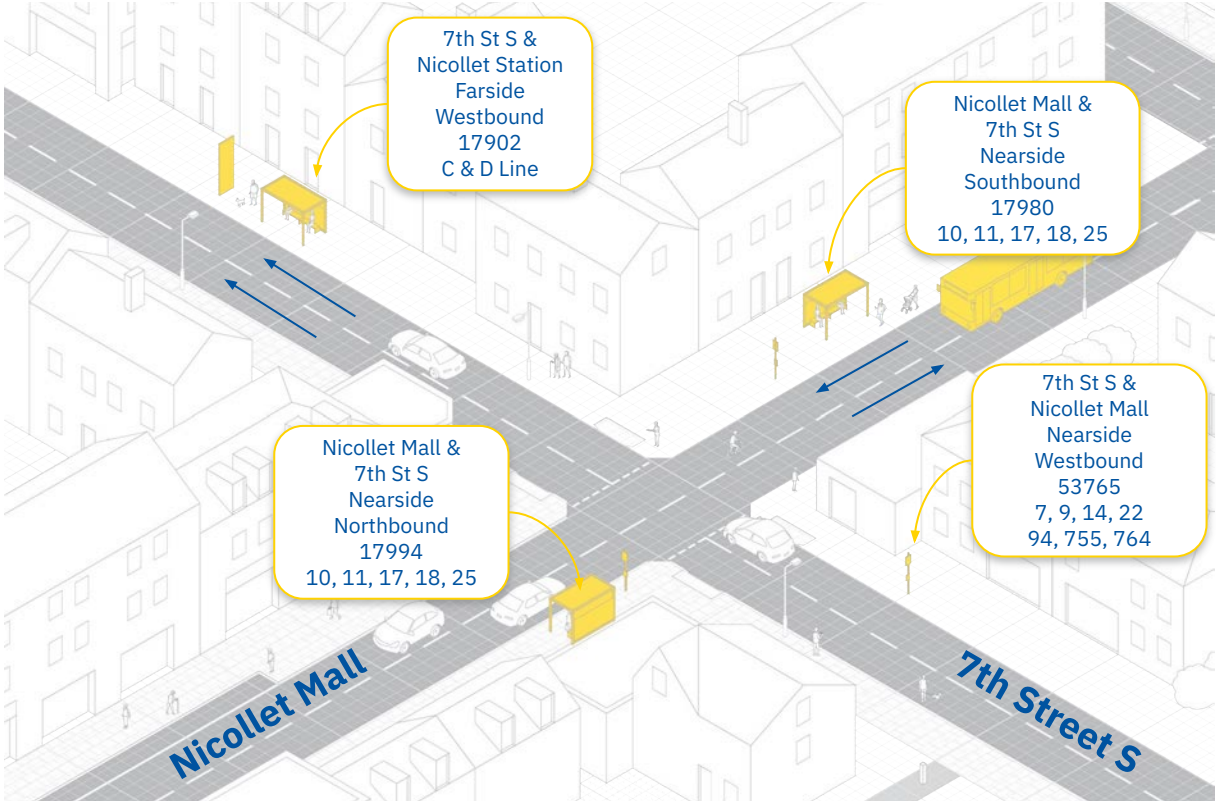
Nomenclature

Stop identifiers

As detailed in the ‘Infrastructure’ section, the Metro Transit network is supported by a number of different types of stops and stations.

When it comes to wayfinding, what is particularly relevant is how the stops and stations are identified – what information riders can use to navigate to the right stop and then confirm that they’ve got to the right one.

The underlying system for identifying stops and stations is quite consistent and relies on six different identifiers (as shown in the image on the right). The next page sets out what each of the identifiers is and highlights opportunities and challenges associated with utilising each identifier for the purpose of wayfinding.



Stop identifiers

Name

Stop name consists of two parts – street they're ON, street they're AT.

LRT stations are sometimes named after a nearby landmark.

- ✔ By name of stop, it is possible to navigate to at least the right junction
- ✗ Some stop pairs have the same name

Position

Stop identifier related to stop position in relation to the junction can refer to – Nearside, Farside, Midblock or Across.

- ✔ Can distinguish between two stops with the same name
- ✗ Not likely to appear on signs – more so an operational way of referring to stops

Direction of travel

Stop identifier related to direction of travel can refer to – Eastbound, Westbound, Northbound, Southbound.

- ✔ Can distinguish between two stops with the same name
- ✗ Downtowns' street grid doesn't align to cardinal directions (see next page)

Stop type

'Stop' refers to a bus stop and 'station' is used to identify LRT and BRT stops (the word 'station' is included in the name of the stop)

- ✔ Name of stop/station can suggest transit mode
- ✗ Not obvious enough to aid wayfinding

Stop number

Each stop has a unique number consisting of 6 digits

- ✔ Unique identifier
- ✗ Displayed on bus stop IDs, not on BRT IDs (schedule poster only)
- ✗ Helps to confirm arrival at the right stop but does not enable finding it

Routes

Each stop serves a set of routes – numbered or named

- ✔ Can identify the stop on one-way streets with staggered stops
- ✗ On two-way streets routes served at a stop don't help identify a specific stop

Stop identifier application

As important as it is to make sure the right stop identifiers feature on stop and station identification signs, it is also important to ensure that they are applied consistently across different types of signs.

Using the example of the stops surrounding the Nicollet Mall and 7th St junction, some discrepancies in which identifiers are used on which signs become apparent.

Bus stop IDs consistently display the stop number and route numbers. The BRT pylons display the stop name and route numbers/names.

A wayfinding system that supports riders' understanding of the transit network and enhances their ability to make transfers should be based on a consistent way of finding and identifying stops and stations regardless of their type or signs they display.

7th St S & Nicollet
Station
Farside
Westbound
17902
C & D Line



Nicollet Mall & 7th St S
Nearside
Southbound
17980
10, 11, 17, 18, 25



Nicollet Mall & 7th St S
Nearside
Northbound
17994
10, 11, 17, 18, 25



7th St S & Nicollet
Mall
Nearside
Westbound
53765
7, 9, 14, 22
94, 755, 764



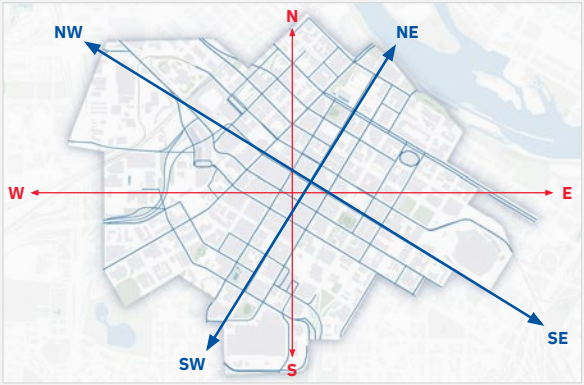
Direction of travel – useful but challenging stop identifier

Direction of travel was identified as a key piece of information riders look for on signs in a separate consultation Metro Transit conducted in August 2025 (Metro Transit Bus Signage Focus Group Report). It is also one of the more challenging to use, particularly by infrequent riders.

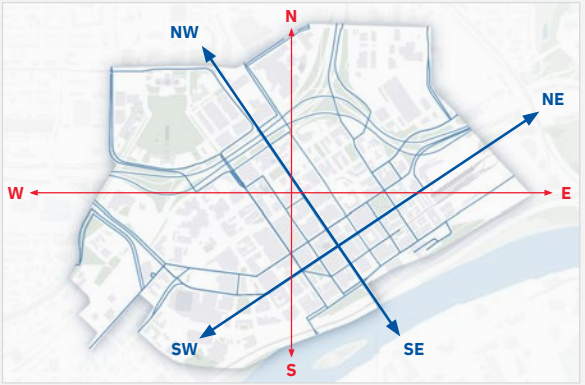
For example, in the focus groups when asked how wayfinding could be improved, participants suggested stronger directional signage indicating, for example, which way to walk for northbound or southbound service, though others noted that **neither downtown follows cardinal directions exactly.**

The challenge and opportunity therefore lies in providing direction of travel information in a way that references something in the environment that is easier to reconcile that cardinal directions.

"I like that there are big signs on the intersection saying "D LINE" but ***I wish the signs also showed the direction of travel - e.g. "D LINE Northbound" or "D LINE to Brooklyn Center", because I sometimes forget which direction runs on 7th street and which runs on 8th street."***



Downtown Minneapolis



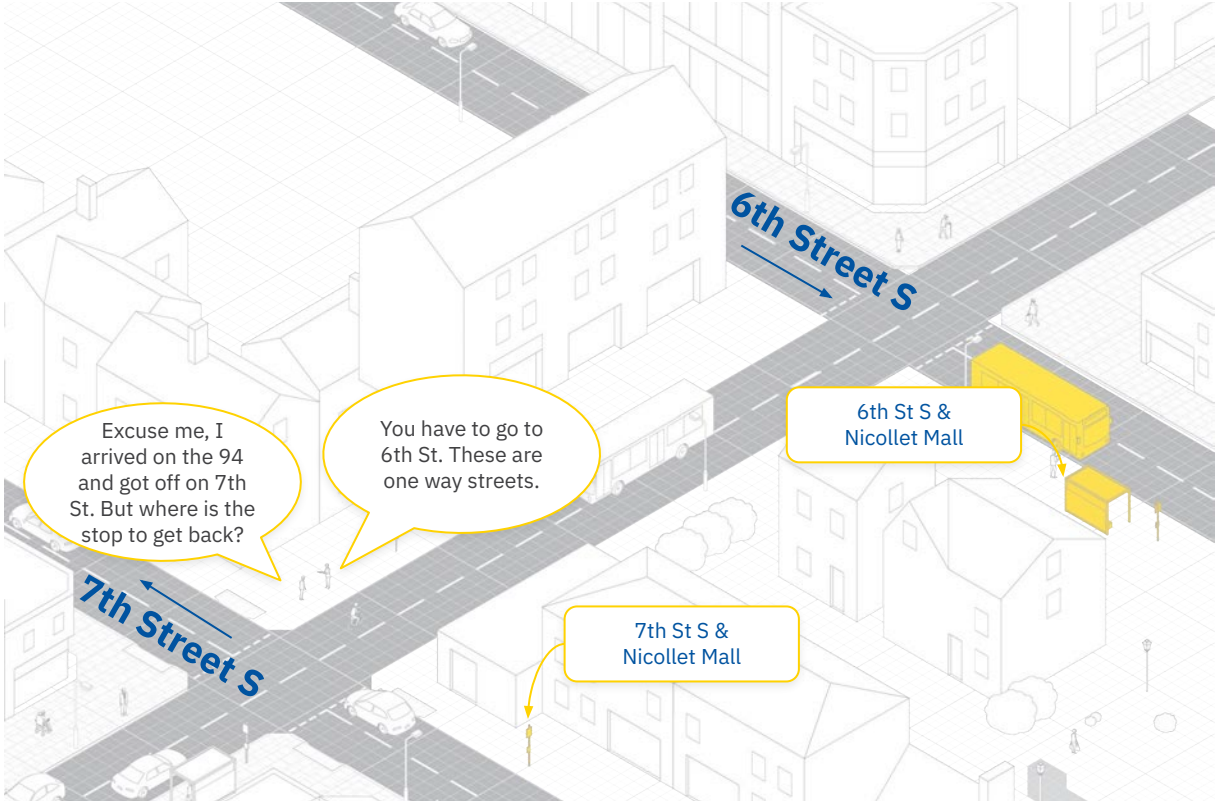
Downtown Saint Paul

One-way street pair stop identifier

*"As much as possible, **station pairs which are not co-located should have identical names**. I consider station pairs to be one station even if they run on different streets. I think that being as specific as possible about what intersection a station is located at can sometimes obfuscate wayfinding more than it aids wayfinding."*

As set out earlier in the report and highlighted by the above quote from a rider, identifying the one-way street pair stops is a challenge.

This project presents an opportunity to consider if indeed a specific way of naming one-way street pairs would help with wayfinding or there might be other ways, such as maps or diagrams to convey the relationship between the paired streets and stops.

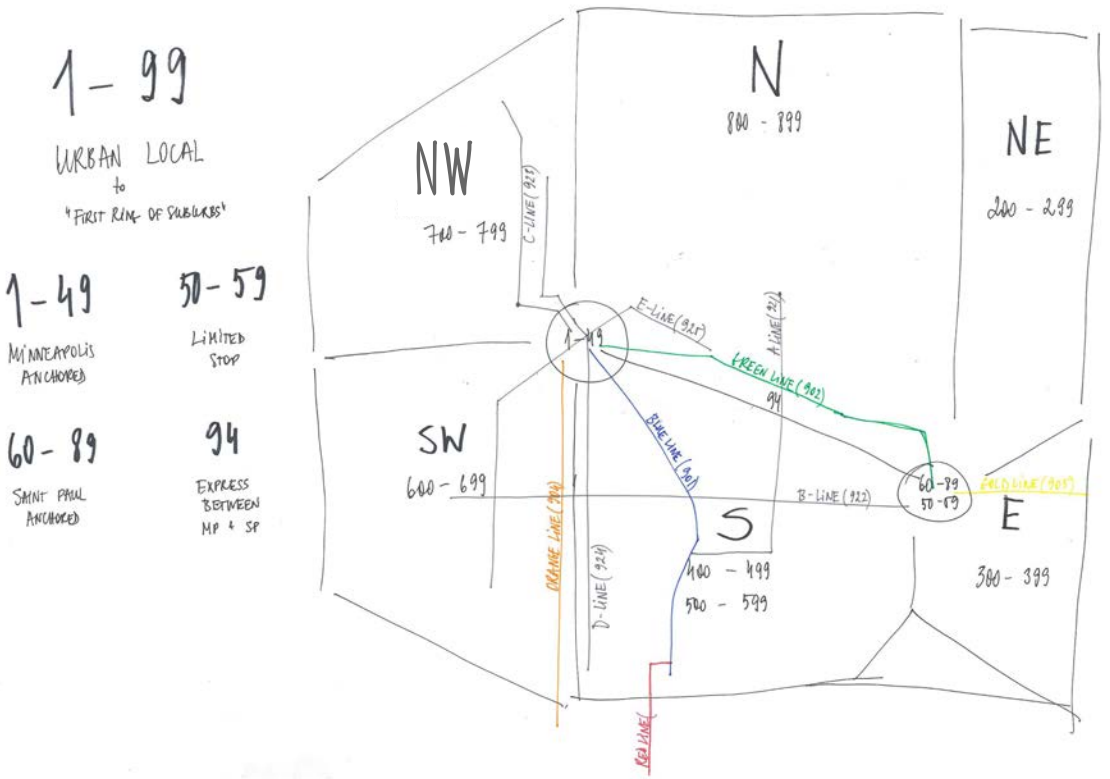


Route identifiers

Metro Transit bus routes are numbered, but not randomly. Series of numbers represent the origins of the routes based on geographic location surrounding the two twin cities centers.

Although the numbering system exists, it is not communicated on transit related signs at all.

The numbering system may be too complex and abstract to explain the system to a visitor or someone new to Twin Cities. However, there may be **opportunities to use the numbering system as a shorthand for orienting more experienced riders – a key in developing a better mental map of the system.**

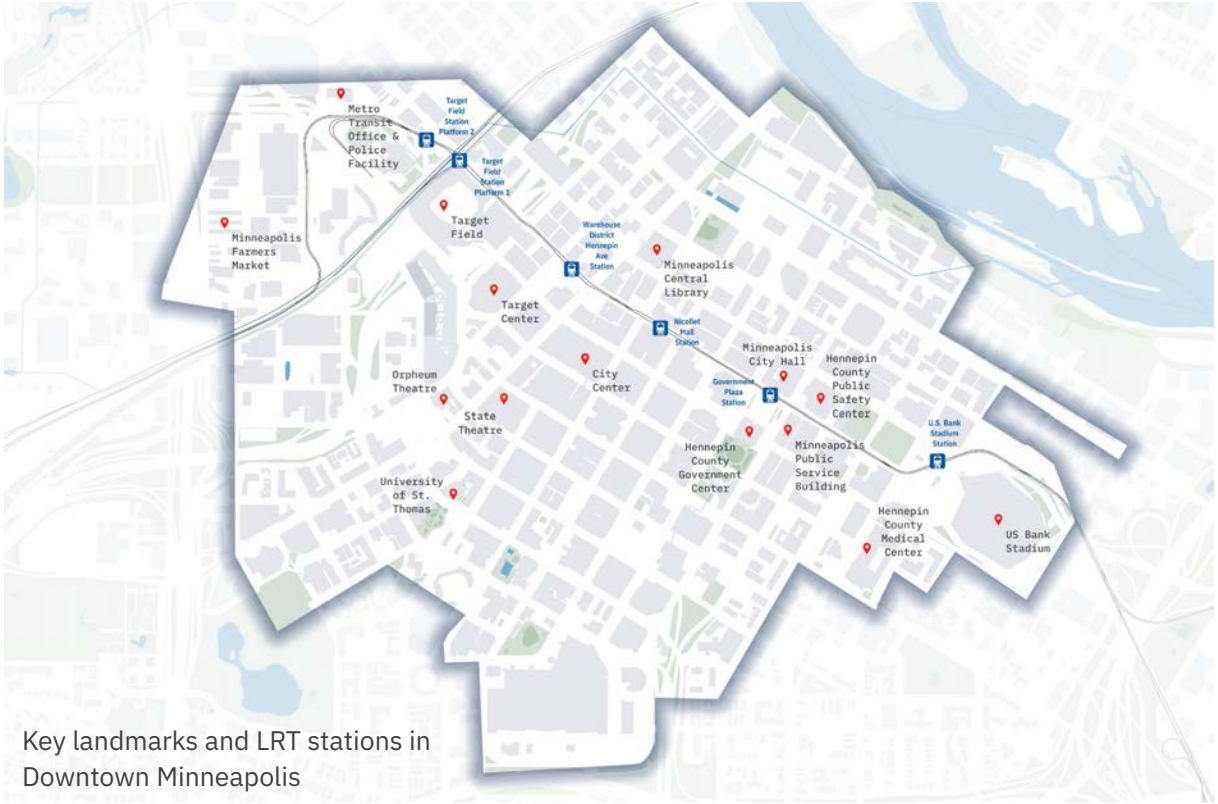


Station names based on landmarks

Both in the online engagement exercise and through conversations in focus groups, it transpired that downtown destinations such as Union Depot, Target Field, government buildings, libraries, and entertainment destinations were important reference points within the system.

A connection to landmarks is already utilised in the way LRT stations are named. This approach is particularly successful because the LRT stations are located near major event venues and attractions, such as Target Field and U.S. Bank Stadium.

There is an opportunity to explore how landmarks can be further incorporated into the system – either through naming of other stops based on their nearby landmark or through visually representing landmarks and routes that can deliver riders to them.

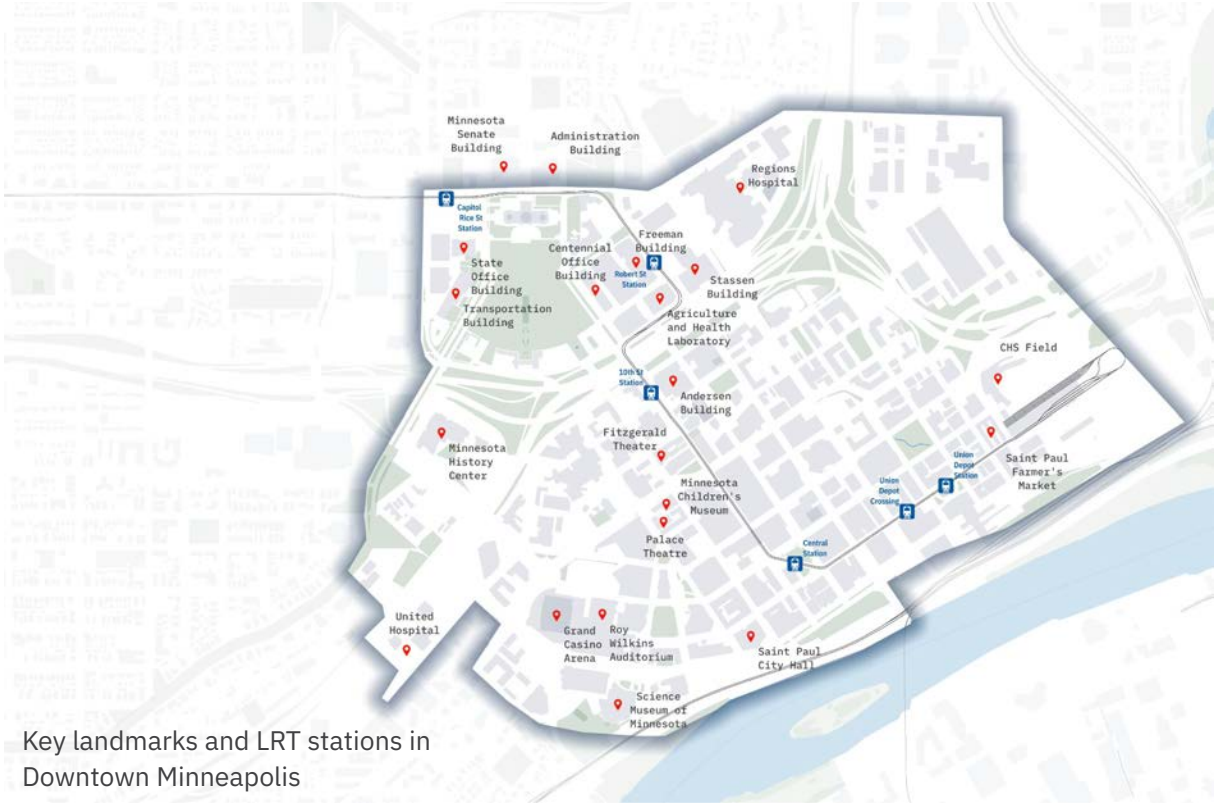


Key landmarks and LRT stations in Downtown Minneapolis

Other opportunities to incorporate landmarks into the wayfinding system

Research also highlighted that riders don't only look for information on signs or in the environment that connect them to nearby landmarks, but they also listened for audio announcements on transit to give them an idea where they might need to get off to reach the landmark destination they're looking for.

It is likely that the scope of this project won't entail work on audio announcements, however, there is an **opportunity as part of this project to better define which landmarks are truly key in helping riders navigate the transit network in the downtowns**, besides those that have already been referenced in LRT station names.

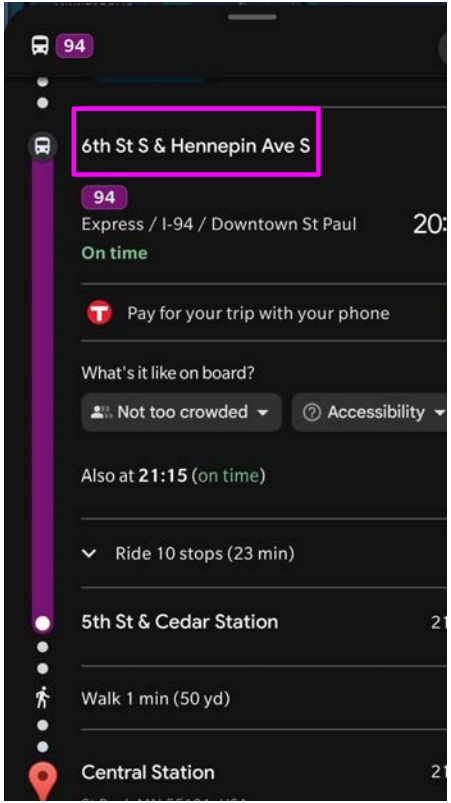


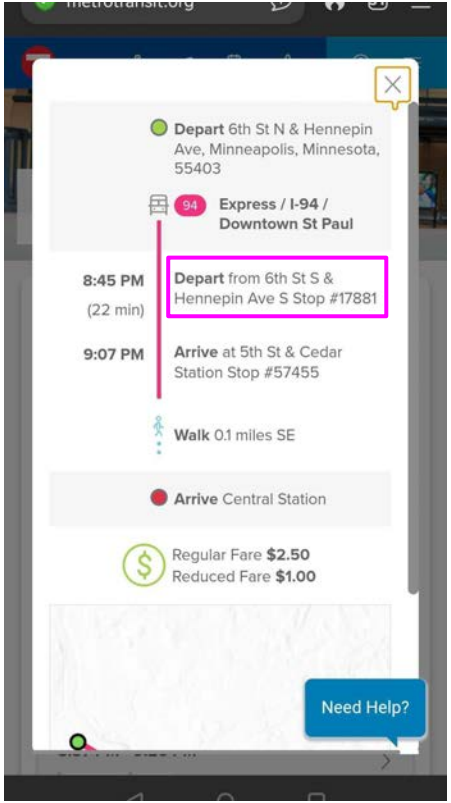
Key landmarks and LRT stations in Downtown Minneapolis

Nomenclature consistency across touchpoints

As mentioned in the ‘challenges’ sub-category of the ‘Transit riders’ section, this project will not affect how information is presented on transit apps. However, **it is critical that riders are able to cross-check information on apps and on signs.**

Currently, there are some inconsistencies in which identifiers are preferred on some apps like Google Maps (stop name) and signs in-situ (stop number).







Next steps

This report is a summary of research findings including site observations, sign family review, as well as engagement with riders and various stakeholders. Challenges and opportunities for wayfinding improvements have been highlighted throughout the report and summarised at the beginning.

In the next phase of the project ideas for how to fulfill the opportunities and address the challenges identified in the report will be discussed with the project team.

Through further discussion and testing ideas will take shape and become concepts for the types of signs required to address information gaps and improve rider experience. Applying constraints such as updatability, maintenance and cost considerations, will then allow the project team to further develop designs that will not only positively impact the rider experience but will be practical and implementable.



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