Transit Information at Bus Stops: Background Study and Guidelines

August 2015

Metro Transit

Executive Summary

Compared to other high ridership agencies, Metro Transit provides the least amount of customer information at the bus stop level. Further, research suggests that providing information improves rider experience and can help entice new ridership. As Metro Transit seeks to grow ridership and serve customers more effectively, it must provide the information necessary for riders to be comfortable taking the bus, make this information available consistently and equitably throughout the region, represent itself professionally in the communities it serves, and make responsible business decisions about investing in enhanced transit information at bus stops. These Guidelines address those needs by outlining transparent standards for what customer information should be provided where. Specifically, this document proposes that Metro Transit provide the following customer information at bus stops:

	Bus Stop Type				
	Tier 1	**Tier 2**	**Tier 3**	**Tier 4**	**Tier 5**
	Low-Boarding, Stand-Alone Bus Stops (*<10 daily boardings*)	Medium/High Boarding, Stand-Alone Bus Stops (≥10 *daily boardings*)	Bus Stops with Customer Waiting Shelters	Transitway Stations (BRT and LRT)	Transit Centers
Information Available					
Bus Stop Sign	✓	✓	✓	✓	✓
Route Numbers	✓	✓	✓	✓	✓
NexTrip Instructions	✓	✓	✓	✓	✓
Route Descriptions		✓	✓	✓	✓
Route Maps		✓	✓	✓	✓
Timetables		*	✓	✓	✓
Real-time Sign			**	✓	✓
Local Area Map				✓	
Fare Poster					✓
System Map					✓
Approximate Number of Stops					
	9,000	2,000	1,000	Listed in Appendix 1	

* Timetables will be considered at bus stops that meet the shelter placement boarding warrants (i.e., >25 average daily weekday boardings in suburban locations and >40 average daily weekday boardings in Minneapolis and St. Paul) but where a shelter is not installed due to space constraints or other limitations.

** Real-time signs will be considered at customer waiting shelters. The criteria for placement of real-time signs are still under development, but may include boardings, on-time performance, number of routes serving the shelter, Title VI considerations, and proximity to regional attractions.

In addition to peer benchmarking and research into best practices, these Guidelines are informed by a thorough review of Metro Transit's current signage and bus stop information practices, characteristics of Metro Transit's ridership and service, and other implementation considerations.

Table of Contents

Chapter 1. Introduction

Bus stop signs play a critical role in communicating to passengers and operators alike where to board and get off buses. However, bus stop signage and the information available at bus stops serve other important purposes as well. Bus stops are one of the most visible representations of Metro Transit throughout the communities it serves. Customers and community members form first impressions of Metro Transit at bus stops, which are the gateway to its service and its public face. Bus stops offer a unique opportunity to enhance passersby and customers' experiences before they even board. As Metro Transit seeks to grow its ridership and serve customers more effectively, the agency must ensure that it provides the information necessary for new and veteran riders to be comfortable riding the bus.

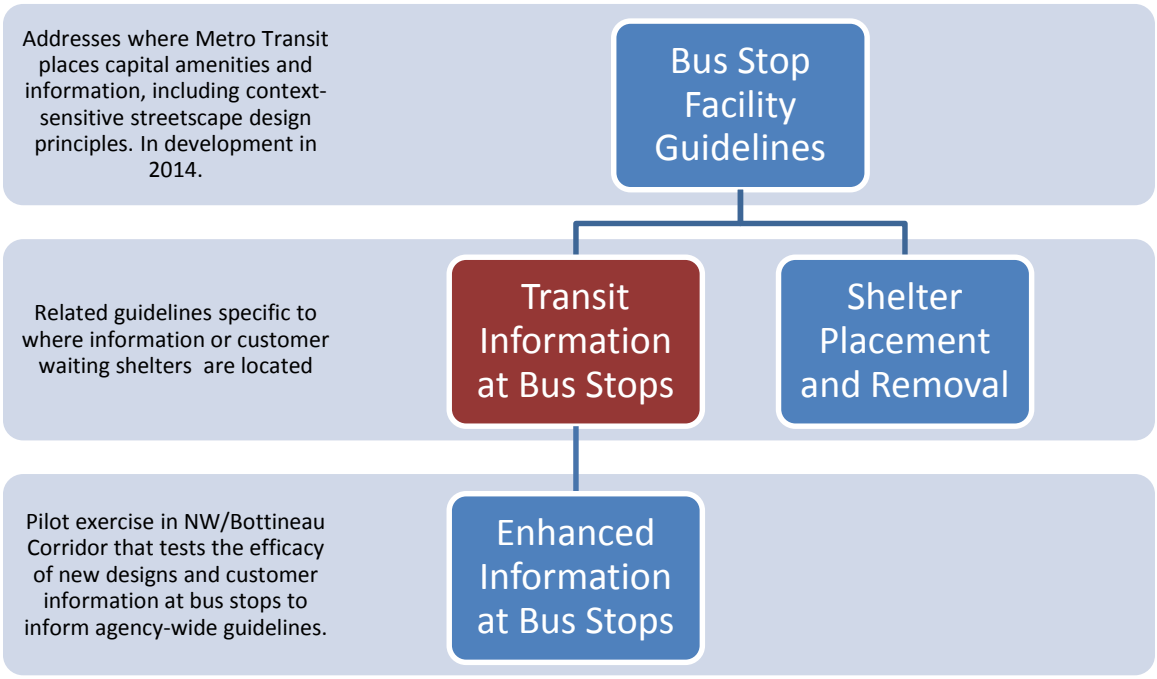
As part of its commitment to service excellence and innovation, Metro Transit has been looking at ways to improve transit information at bus stops. Many valuable ideas have been discussed, but this is the first effort to develop guidelines that can be applied consistently and sustainably. While Metro Transit has guidelines for shelter placement and the regional *2030 Transportation Policy Plan* addresses electronic information displays, no such guidelines exist for the placement of transit information at bus stops. Consequently, efforts to enhance transit information have been opportunistic, reacting to available funds or to customer complaints. While it's important for the agency to be nimble and responsive when issues and opportunities arise, an over-arching standard offers several key benefits.

- **Strategic and cost-effective decision making** – Providing additional information at bus stops offers customer benefits but also incurs costs. Weighing these costs and benefits systematically and thoughtfully allows the agency to make more responsible business decisions than are possible with a reactive and opportunistic approach.
- **Equity and fairness** – A customer should be confident that a stop in one area of the region has the same information as a similar stop in another area; this makes riding the bus more predictable and navigable. Likewise, having clear standards would enable Metro Transit to document Title VI compliance and ensure that information is provided equitably throughout the service area.
- **Predictability** – Metro Transit should only produce information and signage that can be audited, maintained, and supported. Having clear standards that are applied uniformly means the responsibilities to maintain the signage will be more predictable, making it easier to maintain systematically and budget for appropriately.
- **Professional quality and service excellence** – Many internal departments and external parties are involved in producing, posting, and maintaining customer information currently. Further, Metro Transit has many outdated or legacy signs that do not reflect the professionalism and level of service that our customers and host communities should expect. Clear guidelines regarding when and where information is displayed can ensure that the signage posted at bus stops is accurate and professional.

Relationship to Other Documents and Initiatives

The guidelines included in this document complement Metro Transit's *Bus Stop Facility Guidelines*, which addresses where Metro Transit places capital amenities such as shelters, heating, and lighting. In addition, these guidelines are informed by the Enhanced Information at Bus Stops project, which is testing the efficacy of customer information in the Bottineau Corridor.

Figure 1.1. Relationship to Other Metro Transit Initiatives



These guidelines are distinct from the *Metro Transit Signage Standards*, which provide technical specifications for the fabrication and installation of Metro Transit signage (e.g., dimensions, colors, materials selection).

The proposed guidelines seek to exemplify Metro Transit's core values and guiding principles – service excellence, community orientation, innovation, and financial responsibility – and present a vision for bus stop signage that can be applied consistently and sustainably into the future.

Chapter 2. Current Status and Practices

Metro Transit currently provides varied levels of information at bus stops, customer waiting shelters, and other bus facilities. This chapter summarizes the current status of what customer information is available at bus stops as well as who is responsible for preparing and maintaining that information.

Table 2.1 presents an overview of what level of customer information is available at bus stops and what level of ridership that information serves. Record-keeping regarding customer information and facilities is, in some cases, incomplete and outdated. Therefore, these numbers should be interpreted as best estimates of what information is available where.

Table 2.1 Customers Served by Information at Bus Stops

Customer Information Available	Number of Stops[1]	Percentage of Stops	Average Daily Weekday Boardings[2]	Percentage of Ridership
Bus Stop sign only	10,509	85.5	63,859	23.0
Hi-Frequency Network sign	640	5.2	54,284	19.6
Route designation sign	389	3.2	32,198	11.6
Route Schedules (CBS Outdoors Shelter)	108	0.9	7,389	2.7
Route Schedules (Other/Custom Shelter)	65	0.5	6,417	2.3
Route Schedules (Metro Transit Shelter)	919	7.5	125,513	45.3
Custom Poster (route schedules and fare information)	83	0.7	29,121	10.5
Route Schedules, Fare Information, and System Map 3-Poster Display	46	0.4	16,320	5.9
Real-Time Sign	73	0.6	22,393	8.1
Total	12,297	--	277,223	--

[1] There is overlap in what information is available at many locations. For instance, nearly all of the poster displays and all of the real-time signs are installed in locations with customer waiting shelters and or other customer information. Likewise, many route designation signs are installed at locations with customer waiting shelters. Consequently, number of stops do not add to 12,297.

[2] Ridership data are from September 3 to December 6, 2013.

In general, more information is available at high-boarding locations. However, some of these high-boarding locations have duplicative signage and information displays. The resources dedicated to producing this duplicative signage could be used more strategically and cover additional locations.

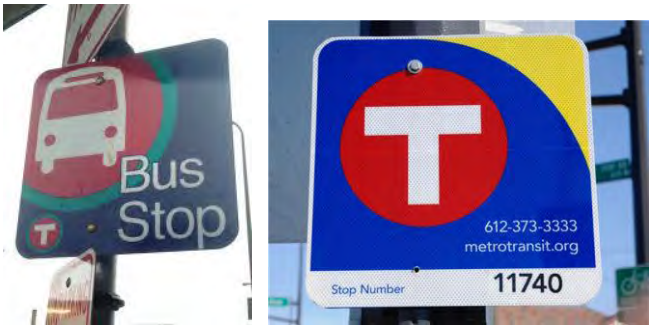
Bus Stop Sign

All bus stops are indicated with a bus stop sign. Installation and maintenance of the signs varies depending on the city and the type of road (e.g., city street, state highway, or county road) where the sign is installed. In some cases, including within the cities of Minneapolis and St. Paul, the city where the sign is located installs and maintains the bus stop signs. Metro Transit's Street Operations department

coordinates this work with the cities. In most cities, Metro Transit staff is able to maintain and install signs. There are over 12,000 bus stop signs installed throughout the Metro Transit service area.

Most bus stops on the street today include a white image of a bus in a red circle and "Bus Stop" text. Following successful pilot testing of the new bus stop design in 2013, Metro Transit will be replacing bus stop signs between 2014 and 2016 to a new design. The new sign includes the Metro Transit telephone number and web address as well as a unique Stop Number. Customers can use the Stop Number to retrieve NexTrip information (i.e., real-time and scheduled departures for routes serving that stop).

Figure 2.1.Old and New Bus Stop Sign



Hi-Frequency Network Sign

Bus stops served by Hi-Frequency network routes include additional signage indicating which routes serve that stop. The Hi-Frequency network refers to routes that operate at least every 15 minutes weekdays from 6 a.m. – 7 p.m. and Saturdays from 9 a.m. – 6 p.m. The Hi-Frequency network includes segments of routes 5, 6, 10, 18, 19, 21, 64, 84 and 515 and all of route 54 and METRO Blue Line and Green Line.

Transit stops served by one of the Hi-Frequency routes are marked with red signs that include the Hi-Frequency network logo and route number. At stops served by multiple routes, Hi-Frequency route(s) are marked with a symbol and shown in red; these signs also include the Metro Transit website address and logo.

Figure 2.2 Hi Frequency Network Signs, One Route and Multiple Routes

There are approximately 700 Hi-Frequency network signs installed currently. Due to pole congestion and the difficulty of including many routes on the signs, these signs are not installed within the Minneapolis or St. Paul Downtown Zone.

Hi-Frequency network signs are managed by the Bus Stop Coordinator. Marketing produces the signs. Maintenance and installation is generally performed by the cities in which the signs are installed, with coordination and support from Street Operations and the Bus Stop Coordinator.

Route Designation Signs

Route designation signs indicate which routes serve a particular stop. They are installed at approximately 400 stops. The signs are installed at staff discretion, by request (from operators, customers, street supervisors, and/or others), and as space on the pole permits. In some instances, the signs are installed due to complicated routing, such as when two routes diverge and one takes a left turn or when multiple routes traverse the same street but do not all serve the same stops. Stops served by many routes may have two holders (either side-by-side or one top of each other) in order to display all of the routes that serve the stop.

The gray holders are installed by local governments (e.g., City of Minneapolis, City of St. Paul) at the request of Street Operations. Transit Information/Schedule Display creates the inserts for the holders. Public Facilities/Facilities Maintenance installs the inserts.

Figure 2.3. Route Designation Signs

Schedules – Shelter Signage

There are nearly 1,000 customer waiting shelters installed at Metro Transit bus stops (more than 800 Metro Transit Shelters, about 100 CBS Outdoors Shelters, and 65 custom shelters). Customer waiting

shelters include posted schedules for all routes serving that stop. Currently, the posted schedules are based on the nearest preceding time-point. In the coming years, shelter signage will have stop-specific time information. The posted schedule displays also include the corresponding stop number, an internal shelter ID number (used by Public Facilities and Schedule Display), the effective date for the schedules, and brief information about Metro Transit (Website address, phone number, online resources).

In instances when only one route serves that stop and when the online map for that route fits on one page, a copy of the online route map is included in the shelter sign. A Hi-Frequency network sticker is affixed next to schedules for Hi-Frequency network routes.

In instances when many routes serve a stop, information is posted on both sides of the Transit Information placard. This is problematic in shelters with frit glass as the schedules on the back side of the shelter are difficult to read (see Figure 2.4 for illustration). Frit glass is the standard in Metro Transit shelters as it is an effective graffiti deterrent.

Customer Waiting Shelter Installation and Removal Guidelines direct Metro Transit's shelter placement. In general, Metro Transit shelters are installed based on meeting a boardings threshold (40+ average daily weekday boardings in Minneapolis and St. Paul, 25+ boardings in suburban locations), having adequate space on the sidewalk or right of way to place the shelter, and regional equity considerations (i.e., Title VI compliance, usage by customers with limited mobility).

CBS Outdoors has shelters in St. Paul, Roseville, and West St. Paul, which are operated to generate advertising revenue. Due to maintenance concerns, the City of Minneapolis ended its franchise agreement with CBS Outdoors and Metro Transit began assuming responsibility for CBS Outdoors shelters within the city of Minneapolis on June 1, 2014. These shelters are currently transitioning from the CBS-style schedules to the larger Metro Transit schedule types.

The Metro Transit schedule display placard is 15.5"wide and 31.5" long. The CBS-style schedule holder is 4.5" wide and 23" long.

Custom or "Other" Shelters are generally installed and owned by third parties, such as nearby businesses or local governments. This shelter type also includes the custom shelters along the Nicollet Mall owned by the City of Minneapolis. Most of these shelters include CBS Outdoors-style schedules, although some include custom posters with schedules and others use the Metro Transit shelter-style information display.

Transit Information/Schedule Display generates shelter schedules. Public Facilities installs schedules for Metro Transit shelters. Schedule Display installs schedules for CBS Outdoors shelters and most Custom/Other shelters.

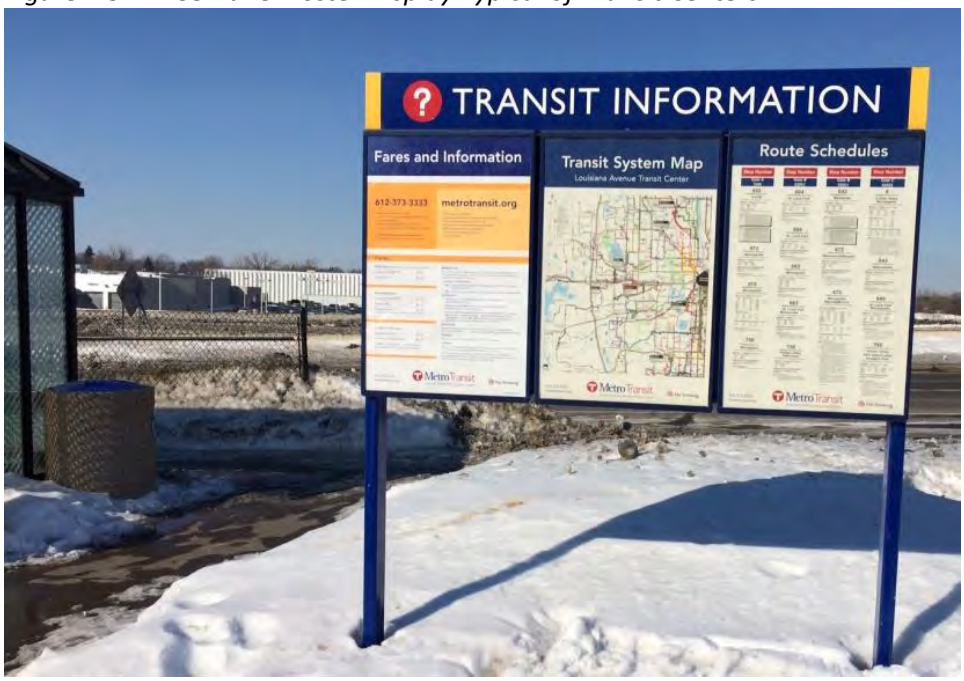
Figure 2.4. Schedule Displays in CBS Shelter and Metro Transit Shelters

Poster Displays

Select Transit Centers, Transit Stations, and Park & Rides include poster displays. These displays generally include three posters: (1) a customized system map (zoomed into the location and with the location highlighted), (2) schedules for all routes serving the stop, and (3) information about fares and payment.

Depending on facility layout, some facilities include multiple displays. Likewise, some also include customer waiting shelters with posted schedules while others include schedules posted in holders at gateposts. Some locations include only two of the posters (either the schedules and map or the schedules and fare information). (A list of information displays available at all transit centers, stations, and park and rides is included in Appendix 1.)

Figure 2.5. Three-Panel Poster Display Typical of Transit Centers



Creative Services updates and produces the system maps. Transit Information/Schedule Display updates the schedules and prints the posters. Schedule Display installs posters for some locations while Public Facilities installs at other locations.

Real Time Signs

Signs displaying NexTrip information – i.e., stop-specific real-time and upcoming scheduled departure times for all routes serving a particular stop – are installed at the following locations:

- Stops along the Marq2 transit corridor (Marquette Avenue and 2nd Avenue in downtown Minneapolis)
- Park & Rides at
    - I-35W & 95th Ave. NE in Blaine
    - I-35W & County Road C in Roseville
    - I-35 & Kenrick Ave. in Lakeville
    - County Road 73 & I-394 in Minnetonka
    - 63rd Ave. & Bottineau Blvd (Highway 81)in Brooklyn Park

- I-35W & 46th Street Station bus stop and BRT station in Minneapolis
- METRO Red Line BRT stations
    - 140th St.
    - 147th St.
    - Apple Valley Transit Station

    - Cedar Grove
- Leamington Parking Ramp in Minneapolis
- Mall of America Transit Station in Bloomington
- Uptown Transit Center in Minneapolis
- South Bloomington Transit Center in Bloomington

The following independent facilities also include real-time information displays

- Wells Fargo Lobby on Marquette Ave
- IDS Crystal Court Vestibule
- U of M Coffman Union – 12+ displays integrated into other U of M information systems
- Union Depot

Real-time signs are prioritized and installed in high ridership areas based on available funding. For instance, several real-time signs were installed with funds from a 2010 Bus Livability Grant. Installation of real-time signs is managed by Engineering & Facilities. The information display is managed by the Transit Control Center.

Plans for additional real-time signs are under development for the following transit centers and transit stations:

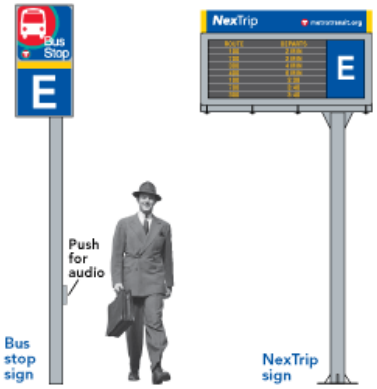
- Chicago-Lake Transit Center in Minneapolis
- Brooklyn Center Transit Center in Brooklyn Center
- Sun Ray Transit Center in St. Paul
- Robbinsdale Transit Center in Robbinsdale
- 5th Street/Ramp B Transit Center in Minneapolis
- Maplewood Mall Transit Center in Maplewood
- Northtown Transit Center in Blaine
- Rosedale Transit Center in Roseville
- Columbia Heights Transit Center in Columbia Heights
- 46th St. LRT Station in Minneapolis
- 38th St. LRT Station in Minneapolis
- Lindbergh Station LRT at Minneapolis St. Paul International Airport
- Uptown Transit Center in Minneapolis
- Franklin Avenue Station in Minneapolis
- Lake Street-Midtown Station in Minneapolis

In addition, Engineering and Facilities is developing guidelines for integrating real-time information into shelters. Although the guidelines are still under development, the following factors may be considered:

- Number of boardings
- Number of routes served

- Title VI considerations (i.e., ensure adequate balance between Low-Income/Non-Low Income and Minority/Non-Minority areas)
- On-time performance
- Proximity to regional attractions (e.g., convention centers, major sports facilities, etc.)

Figure 2.6. Real-Time Sign



Special Customer Information Signage

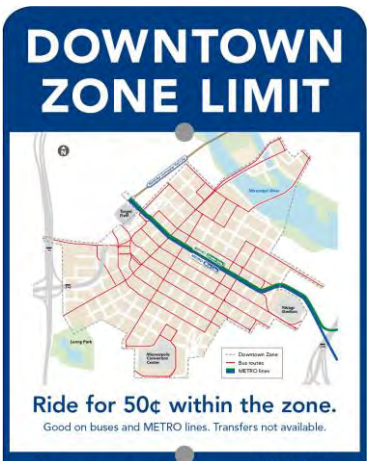
Downtown Zone Limit

There are approximately 70 signs at bus stops indicating the borders of the Minneapolis and St. Paul Downtown Zones (areas where passengers can ride for a reduced fare). The signs are intended to communicate the zone borders to customers and operators.

The current downtown zone limit signs are gray holders with paper inserts. The gray holders are installed by local governments (City of Minneapolis or City of St. Paul) at the request of Street Operations. Transit Information/Schedule Display creates the inserts for the holders. Public Facilities/Facilities Maintenance installs the inserts.

A new downtown zone limit sign will be replacing the current sign in 2014. The new sign includes a map of the downtown zone, additional information about the zone, and will be printed directly on a metal plate.

Figure 2.7.Current and Forthcoming Downtown Zone Limit Signs



Rider Alerts

Rider alerts notify customers of planned and unexpected detours, bus stop closures, bus stop relocations, route changes, and other issues of concern. Rider Alerts are generally posted by Street Operations. Rider Alerts are typically laminated paper sheets that are taped or tied to bus stop poles and shelters. Rider Alerts are installed and removed as needed depending on the circumstances. In some instances, rider alerts are posted for a long time (such as in the event that a shelter is no longer an active bus stop). Other Rider Alerts are posted for a short amount of time due to brief detours.

Figure 2.8.Rider Alerts

Chapter 3. Peer Agency Benchmarking and Best Practices

In order to assess how Metro Transit compares to similar agencies and common transit practices, this chapter reviews bus stop-level information for the 25 largest bus service providers (according to APTA ridership data) and additional providers in Metro Transit's peer comparison group. Table 3.1 presents a snapshot of what information other transit agencies include at the lowest-level bus stop. The first 25 agencies are listed in order of ridership, followed by three additional agencies that Metro Transit considers its peers (Cleveland, Detroit, and Oakland). Similar to Metro Transit, these agencies generally provide additional information at transit centers, transfer points, customer shelters, and in downtown or high ridership areas. However, this table highlights what customers see at the standard bus stop.

Table 3.1. Information Included at a Standard Bus Stop: 25 Highest Bus Ridership and Other Peer Agencies

Peer Region	Route Number	Destination / Route Description	Service Days	Service Hours	Route Map	Unique Stop #	How to Use Stop #	Stop-specific QR Code	Stop-specific Route Schedules
MTA – New York	■	■		■	■	■	■	■	■
LACMTA – Los Angeles	■	■		■					
CTA – Chicago	■	■	■	■	■	■	■		
SEPTA – Philadelphia	■	■							
MUNI – San Francisco	■	■	■	■		■	■		
WMATA – Washington, DC	■					■	■		
MBTA – Boston	■								
King County Metro – Seattle	■	■				■			
MTA Maryland – Baltimore	■		■						
Miami-Dade Transit	■	■	■	■	■				
Metro Transit – Minneapolis									
METRO – Houston	■	■							
RTA – Denver	■	■	■			■			
TriMet – Portland	■	■	■		■	■	■	■	
MARTA – Atlanta									
Port Authority – Pittsburgh	■	■							
OCTA – Orange County	■				■	■	■		
MTS – San Diego	■	■				■	■		
RTC – Las Vegas	■					■	■		
VIA – San Antonio	■					■			
MCTS – Milwaukee	■	■							
DART – Dallas	■					■	■		

BCT – Fort Lauderdale	■								
Valley Metro - Phoenix	■					■	■		
Capital Metro - Austin	■	■	■			■	■	■	
RTA - Cleveland	■	■		■					
City of Detroit Dept. of Transportation	■	■							
AC Transit – Oakland	■	■				■	■		

Some of these agencies are in the process of replacing bus stops with new sign designs. As long as the information included in the new sign is the new standard (i.e., it wasn't just a pilot test), it is included here.

Aside from MARTA in Atlanta, Metro Transit is unique in that it does not include routes serving the stop on bus stop signs. Indeed, Metro Transit provides the least amount of information at standard bus stops compared to other high ridership agencies and its peer comparison group. Appendix 2 includes Images of example bus stop signs from various other agencies.

Peer Agency Programs

This section provides an in-depth look at how four peer agencies – serving Atlanta, Denver, Seattle, and Portland – provide customers information at bus stops.

MARTA – Atlanta, Georgia

The Metropolitan Atlanta Rapid Transportation Authority – MARTA – operates 91 fixed bus routes and 4 rail routes. In FY 2013, MARTA provided nearly 130 million unlinked passenger trips.

Figure 3.1. MARTA Bus Stop Signs

The standard MARTA bus stop sign includes the MARTA logo, phone number, and bus pictogram. According to MARTA staff, very few stops include information about service. Most bus stops had a secondary sign indicating which routes served the stop, but those were eliminated several years ago during a period of major service reduction. The agency had poor records of what signs were installed and what information was included on those signs. Given the major service changes and need to update many signs, they decided to remove all route designation signs with the hope of replacing them all in conjunction with developing better records and record-keeping procedures. The agency is currently in the process of redesigning bus stop signs; this process involves adding route designation information to the standard bus stop sign design.

Approximately 8 percent of MARTA bus stops have shelters or benches. Benches and shelters are installed based on boardings, Title VI compliance, spacing, site conditions, and routing/trip stops. These facilities include additional customer information. Shelters have schedules for all routes serving the stop, information panels dedicated for fare information and nearby destinations, and a system map. Benches have schedules posted.

Most of MARTA's transit centers and park & ride facilities are co-located with heavy rail stations. The facilities that also have bus service include display cases with posted schedules, system map, individual route maps, and rail information. In addition, some of these facilities have racks with pocket schedules available.

RTD – Denver, Colorado

The Regional Transportation District in metropolitan Denver, Colorado, covers 2,340 square miles, 40 municipalities, and eight counties. RTD's service area is home to 2.8 million people. In 2013, RTD had 336,706 average weekday boardings. RTD has 138 regular fixed routes and 9,509 active bus stops.

Figure 3.2. RTD Bus Stop Sign

All RTD stops include: a bus stop logo (bus image and "The Ride"), a unique stop ID number, route numbers and brief route destination descriptions (e.g., "20 – 20th Avenue" or "15 – East Colfax"). In addition, routes that operate on weekdays only are flagged as such.

All park & rides, designated transfer points, and shelters include more detailed information displays. These custom displays include schedules, operating hours, primary destination points along the route, and route maps. These various information pieces are printed directly onto signs. The route and schedule information from planners feeds directly into the InDesign templates the Marketing Department uses to create and print the displays. Likewise, map diagrams are created centrally, fed into the templates automatically, and then printed onto the shelter boards.

TriMet – Portland, Oregon

TriMet serves the three-county region in metropolitan Portland, Oregon. TriMet operates 79 fixed bus routes, 4 light rail routes, and 1 commuter rail line. Their service area covers 532 square miles and 1.5 million people. In FY 2013, TriMet provided 59.6 million bus trips and 39.1 million light rail trips. TriMet has 6,742 active bus stops.

TriMet owns and maintains nearly all of the bus stop poles within its service area. The agency uses an iconic blue pole to help riders and operators identify bus stops. At the lowest-level information bus

stops, TriMet provides information on both the sign pole blades and at ADA-customer level. The blades include:

- Route number
- Route direction/destination
- Special flags for routes with frequent service
- Fare zone information

The ADA eye-level information display includes:

- Simple maps, service days, special routing notes, and approximate service hours for all routes serving the stop
- Stop ID and instructions for how to access real-time departure information
- QR Code that directs users to a stop-specific website with links to plan a trip from or to that stop, access real-time information

Figure 3.3. TriMet Bus Stop Flags and Eye-level Information Display

The eye-level information display is printed on a mylar insert in a steel holder.

At approximately 500 high-ridership locations – those with 90+ average daily boardings – TriMet also provides stop-specific schedules for all routes serving the stop. These stops also include larger and more detailed route maps. TriMet installs customer waiting shelters at locations with 50+ average daily boardings, so these more detailed displays are consistently installed in shelters. However, not all shelters have the more detailed displays.

Before updating signage and information available on the street, TriMet engages its customers in at least two ways. First, the agency will take mock-ups to the street to conduct intercept surveys to get feedback from a diverse cross-section of riders about the material. Second, the agency has an opt-in group of highly engaged transit advocates known as the Rider's Club. This group responds to surveys and provides regular feedback about proposed programs.

King County Metro – Seattle, Washington

King County Metro operates about 220 fixed bus and trolley routes in the Seattle, Washington area. In 2012 the department provided 115.4 million passenger trips.

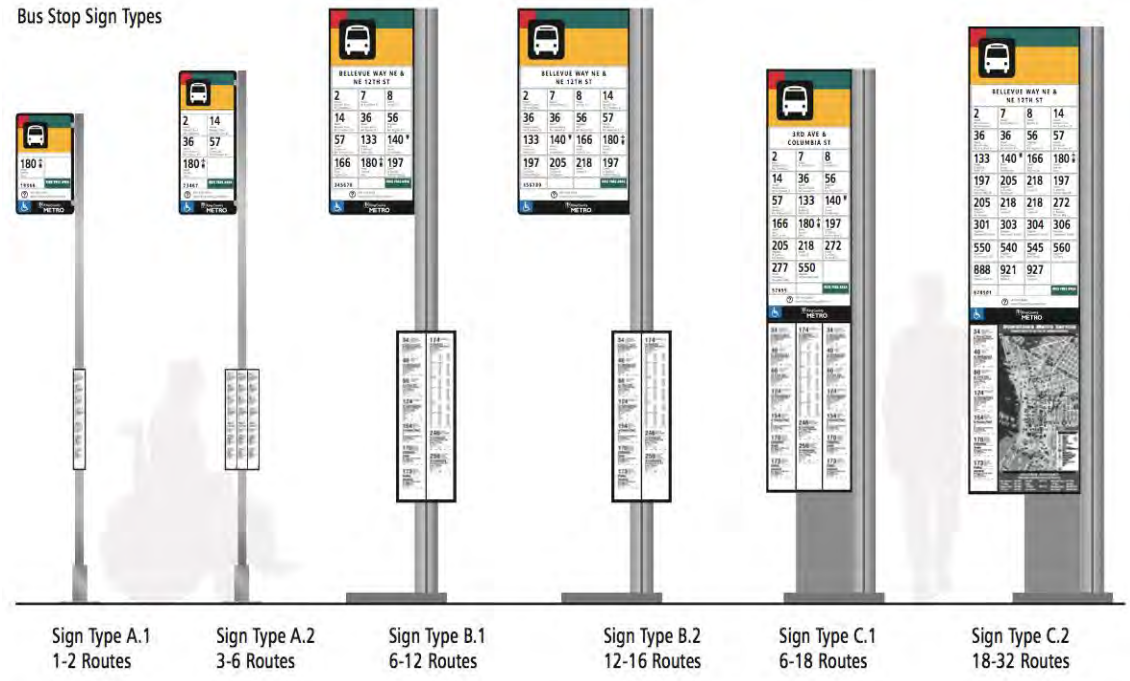
In 2008, King County hired a design consultant to update and make their bus stop signage more efficient and effective for customers. This process resulted in the "Signing Standards Manual," the "definitive document for reference, definition, design aesthetic, design specification, and field implementation for the King County Metro Signing Program."

The standard bus stop sign design for King County Metro varies slightly depending on the number of routes that serve a particular stop. All bus stops include: a post with a bus icon; route number, direction, and destination for all routes serving the stop; distinction between express and local service highlighted. Most bus stop signs and poles are owned, used, and maintained exclusively by King County. These various bus stop sign designs are shown in Figure 3.4.

Following the implementation of these updated bus stop signs, King County Metro has received positive feedback from customers. Additionally, in their regular Rider/Non-rider survey, King County residents indicate that bus stops are second to only the internet as the most popular place to get information about the transit system.

Shelters, transfer points, and transit centers have additional information available. About one-third of stops include schedule information showing stop-specific schedule information for all routes serving the stop.

Figure 3.4. King County Metro Bus Stop Signs



Chapter 4. The Case for Enhanced Customer Information

Industry Standards and Best Practices

Research on industry standards and the effectiveness of on-street customer information is fairly limited. The *Bus Stop Customer Information Program Technical Report,* an industry review commissioned by the Washington Metropolitan Area Transit Authority (WMATA) to inform a bus stop redesign project, found that "virtually all major systems (operating 500 or more buses) had significant on-street programs with a minimum of at least a bus stop flag with route numbers, system I.D. and contact numbers."[1] Similarly, *Customer Information at Bus Stops,* a 1996 Transit Cooperative Research Program (TCRP) Synthesis, found that the level of information available at bus stops was increasing and "the provision of route number and/or name is becoming a minimum, at least in cases of multiple routes serving a bus stop. Other information, such as service type, service day, and span of service information, not subject to frequent revision, is being used to significantly increase the distribution of service information at bus stops."[2]

Although the research is limited, various studies underscore the benefits of providing enhanced customer information at bus stops. A survey administered for a 2004 graduate thesis at the University of Minnesota found that riders would pay an average of $0.83 extra for improved transit information at bus stops.[3] King County Metro found that over 80 percent of passengers find having schedule information at stops very valuable and that bus stops serve as the go-to source of transit information for 75 percent of passengers. In surveys of riders, agencies that provide more information at bus stops tend to find that passengers value bus stop information more highly than passengers in systems that provide less bus stop-level information.[4] The 1996 TCRP synthesis concluded that "a limited number of research studies have concluded that on-street information programs have a return on investment. The research findings are subject to interpretation; however, studies that have quantified usage of on-street information displays have identified tangible benefits."[5]

More recent transit information research has focused on online tools and customer experiences with real-time information. These studies suggest that a wide range of riders value access to real-time information, particularly for routes with less frequent service. For instance, Tang and Thakuriah found a modest increase in ridership associated with the implementation of the Chicago Transit Authority's real-time bus tracker system between 2002 and 2010.[6] Research also suggests that knowing approximately how long a wait will last improves customers' waiting experience.[7] A study of King County Metro riders

[1] Pulsar Advertising, *Bus Stop Customer Information Program: Technical Report.* February 2010.
[2] John J. Dobies, *TCRP Synthesis of Transit Practice 17: Customer Information at Bus Stops* (Washington, DC: National Academy Press, 1996).
[3] Brendan Nee, *Value of Information for Transit Riders.* University of Minnesota Master's Thesis. July 2004. Nexus.umn.edu/papers/VOIFT.pdf.
[4] Pulsar Advertising.
[5] Dobies, p. 42.
[6] Lei Tang and Piyushimita (Vonu) Thakuriah, "Ridership Effects of Real-time Bus Information System: A Case Study in the City of Chicago," *Transportation Research Part C 22* (2012): 146-161.
[7] Md. Matiur Rahman, S.C. Wirasinghe, Lisa Kattan, "Users' Views on Current and Future Real-time Bus Information Systems," *Journal of Advanced Transportation 47* (2013): 336-354.

found that those using the OneBusAway real-time information system faced shorter waits and perceived their waiting time to be shorter than riders who were not using real-time information.[8] Several European studies have found similar benefits. The presence of real-time information displays reduces riders' perceptions of how long they have to wait and improves overall customer experience by reducing uncertainty and improving ease-of-use. Further, real-time information allows customers to plan their trips and use their waiting time more effectively, which enhances overall rider satisfaction.[9]

[8] Kari Edison Watkins, Brian Ferris, Alan Borning, G. Scott Rutherford, David Layton, "Where is my Bus? Impact of Mobile Real-Time Information on the Perceived and Actual Wait Time of Transit Riders," *Transportation Research Part A 45* (2011): 839-848.

[9] Katrin Dziekan and Karl Kottenhoff, "Dynamic At-stop Real-time Information Displays for Public Transport: Effects on Customers," *Transportation Research Part A 41* (2007): 489-501.

Chapter 5. Metro Transit Bus Stop Background

In order to develop guidelines for when to provide various levels of customer information, it is essential to understand the characteristics of Metro Transit's ridership, bus stop system, and service changes. This chapter provides a snapshot of Metro Transit bus stops and the stability of customer information.

Stops by Ridership

Metro Transit bus stops vary considerably in the number of routes and riders served. On an average weekday, over 4,000 passengers board buses at the most popular stop (7th St. N & Hennepin / 1st Ave. N). At the same time, there are many stops that see no activity on an average day. Table 5.1 shows the number of stops corresponding to different boardings thresholds. (Please note that this table shows boardings only; some low-boarding stops are primarily alighting or alighting only stops.)

Table 5.1. Stops by Ridership

Average Daily Weekday Boardings	Full Network		Minneapolis and St. Paul Locations		Suburban Locations	
	Number of Stops	Percentage of Total Stops	Number of Stops	Percentage of City Stops	Number of Stops	Percentage of Suburban Stops
0	4,487	36.5	530	11.9	3,957	50.6
1	1,560	12.7	397	8.9	1,163	14.9
2	889	7.2	264	5.9	625	8.0
3	605	4.9	233	5.2	372	4.8
4	471	3.8	208	4.7	263	3.4
5	368	3.0	185	4.1	183	2.3
6-10	1,098	8.9	604	13.6	494	6.3
11-15	564	4.6	365	8.2	199	2.5
16-19	295	2.4	195	4.4	100	1.3
20-29	477	3.9	329	7.4	148	1.9
30-39	294	2.4	213	4.8	81	1.1
40-49	189	1.6	143	3.2	46	0.6
50-59	130	1.1	96	2.1	34	0.4
60-69	115	0.9	96	2.1	19	0.2
70-79	92	0.7	71	1.6	21	0.3
80-89	77	0.6	60	1.3	17	0.2
90-99	64	0.5	49	1.1	15	0.2
100-124	97	0.8	76	1.7	21	0.3
125-150	85	0.7	70	1.6	15	0.2
151-199	90	0.7	74	1.7	16	0.2
200-299	88	0.7	77	1.7	11	0.1
300-499	68	0.6	55	1.2	13	0.2
500-1,000	66	0.5	55	1.2	11	0.1
>1,000	28	0.2	25	0.6	3	0.0
Total	12,297	100.0	4,470	100.0	7,827	100.0

When considering what customer information can be presented at bus stops, it is also important to consider how many routes serve particular stops. For example, it would be difficult to include route maps, time tables, or even route numbers on bus stop signs when many routes serve the same stop. Although there are some stops served by many routes, about two-thirds of stops are served by only one route and over 96 percent of stops are served by three or fewer routes.

Table 5.2 Number of Routes Serving a Stop

Routes Serving the Stop	Stops	Percentage of Stops	Cumulative Percentage
1	8,180	66.52	66.52
2	2,919	23.74	90.26
3	739	6.01	96.27
4	203	1.65	97.92
5	72	0.59	98.51
6	34	0.28	98.79
7	33	0.27	99.06
8	15	0.12	99.18
9	8	0.07	99.25
10	6	0.05	99.30
11	6	0.05	99.35
12	2	0.02	99.37
13	2	0.02	99.39
14	3	0.02	99.41
15	4	0.03	99.44
16	20	0.16	99.60
17	3	0.02	99.62
18	5	0.04	99.66
19	3	0.02	99.68
20	3	0.02	99.70
21	7	0.06	99.76
22	10	0.08	99.84
23	7	0.06	99.90
24	3	0.02	99.92
25	1	0.01	99.93
27	1	0.01	99.94
29	1	0.01	99.95
30	3	0.02	99.97
34	3	0.02	99.99
59	1	0.01	100.00
Total	12,297	100.00	100.00

Shelf Life of Customer Information

To better understand the maintenance considerations of providing different types of customer information, this section presents an overview of how frequently customer information changed for a sample of diverse routes. Given the nature of service changes, it is impossible to guarantee how long customer information will remain accurate. This is intended to provide a snapshot of the relative stability of various types of customer information. The following types of customer information are considered.

- **Schedule** refers to the pocket schedules and/or schedules posted in customer waiting shelters. This includes adjusting the scheduled time for any stop along the route for one or more trips. This also includes changing which terminal letter operates when (e.g., switching the 70C to a 70D for one trip) because that affects the times certain stops are served.
- **Approximate service frequency** refers to the frequency tables included in pocket schedules and on the system map. This includes changes to approximate service frequency for any day of the week or time of day. Because the frequency table is approximate, however, this only includes adding or removing enough trips that it would require changing the frequency information. For instance, adding a trip that makes frequency change from every 14 minutes to every 12 minutes during rush hour would not count as this type of change because it would still be classified as "every 10-15 minutes".
- **Service days of the week** refers days the route operates. These changes would require changing "Route operates weekdays only" or "Route operates every day" information.
- **Approximate service times of day** refers to the approximate hours of operation of the route for any day. For instance, a route that previously ended service at 5pm on Sundays and extended service such that the final trip ran at 9pm on Sundays would constitute this type of change. Minor trip time changes (e.g., changing the last trip from 6:17pm to 6:32pm) would not be considered a change in approximate service times of day.
- **Stops the route serves** refers to all stops served by the route. This includes adding, removing, or moving stops for any of the terminal letters for that route. This type of change would require changing route designation signs at one or more stop served by the route (or previously served by the route).
- **Detailed routing** refers to detailed route map or turn-by-turn description of the route. This includes routing changes for any of the terminal letters associated with the route.
- **High-level routing** refers to routing changes that would require changing a high-level route map or description of the route. This includes routing changes for any of the terminal letters associated with the route.

These estimates of the shelf-life of customer information are based on Change of Service forms from March 2009 to March 2014 for selected routes. For instance, on the METRO Blue Line, schedules changed 7 times over the 61-month period, suggesting that the estimated shelf life of schedule information for this route is 8.7 months (i.e., 61 months / 7 changes). The results of this review are presented in Table 5.3.

Table 5.3. Estimated Shelf Life of Customer Information (months)

Route	Schedule	Approximate Service Frequency	Service Days of Week	Approximate Service Times of Day	Stops the Route Serves	Detailed Routing	High-level Routing
Light Rail							
METRO Blue Line - Mpls/Airport/MOA	8.7	*n/c*	*n/c*	*n/c*	61.0	61.0	61.0
Minneapolis Local Routes							
4 - Johnson St NE - Bryant - Southtown	4.7	*n/c*	*n/c*	*n/c*	6.1	5.5	6.8
5 - Brklyn Ctr - Fremont - Chicago - MOA	5.5	20.3	*n/c*	*n/c*	20.3	20.3	20.3
10 - Central - University Av - Northtown	5.1	12.2	*n/c*	*n/c*	61.0	61.0	61.0
17-Minnetka Blvd-Uptown-Wash. St NE	10.2	61.0	*n/c*	*n/c*	61.0	*n/c*	*n/c*
St. Paul Local Routes							
63 - Grand - 3rd St-Sunray- McKnight Rd	12.2	30.5	*n/c*	*n/c*	*n/c*	61.0	61.0
68 - Jackson St- Robert St - Inver Hills	6.8	20.3	*n/c*	61.0	61.0	61.0	61.0
71 - Little Canada - Edgerton - Concord	12.2	61.0	*n/c*	61.0	61.0	30.5	30.5
Express Routes							
250 - St Joseph's P&R - 95th Av P&R	8.7	30.5	*n/c*	*n/c*	30.5	30.5	30.5
262 - 95th Av P&R - Rice St - St Paul	15.3	*n/c*	*n/c*	*n/c*	15.3	15.3	15.3
375 - Oakdale - Mpls	30.5	*n/c*	*n/c*	*n/c*	*n/c*	*n/c*	*n/c*
467 - Lakeville-Apple Valley/DT MPLS	4.7	30.5	*n/c*	*n/c*	61.0	*n/c*	*n/c*
587 - Edina - Valley View Rd - Mpls	10.2	30.5	*n/c*	*n/c*	61.0	30.5	61.0
767 - Brooklyn Park - Brooklyn Ctr	20.3	20.3	*n/c*	30.5	*n/c*	61.0	61.0

Shelf life is estimated based on how often service changes between March 2009 and March 2014 affected customer information. For instance, if routing changed one time over this 61-month period, the estimated shelf life would be 61.0 months. "n/c" (no change) means this type of customer information did not change between March 2009 and March 2014.

For all routes and route types, schedule information had the shortest shelf life of all customer information. Schedules changed for all routes at least twice over this period. For two routes, schedules

changed an average of every 4.7 months. For local routes, schedule information had an average shelf life of 8.1 months. For express routes, schedules had an average shelf life of 15 months.

There were no changes to service days of the week for any of the sampled routes and very few changes to approximate service times of day. Similarly, for most routes, approximate service frequency was quite stable over the period.

With the exception of Route 4, which faced frequent long-term construction-related detours over this period, stops served by routes and route maps or where the route goes were more stable than schedules and other information.

How many stops are affected by route changes?

It is also worth looking at how many stops are affected by route and other system changes. To that end, this section looks at route changes at the stop level.

Table 5.4. Route Number Changes at Stops

	Unique Stops that Changed[1]	Times a route was added to a stop (includes both new and existing stops)	Times a route was removed from a stop (includes both stops eliminated altogether and stops still served by other routes)
March 8 to June 14, 2014	741	455	286
June 14 to Aug. 23, 2014	369	143	226

[1]This total includes the addition of new stops (e.g., along Lexington for the new Route 83), existing stops where new route(s) were added, stops that were eliminated altogether, and existing stops that one or more routes stopped serving. Stops with multiple changes (e.g., one route removed and another route added) are only counted once.

If all bus stops included route numbers, 741 signs would have had to be updated between March 8 and June 14, 2014. During this period, 455 route numbers would have had to be added to stops and 286 route numbers would have been removed. Most of these changes coincided with the service changes coinciding with the operators' picks on June 14 and August 23. However, the totals also include mid-pick changes, such as the bus stop consolidation project in the northwest suburbs in summer 2014.

Chapter 6. Proposed Guidelines

This chapter proposes guidelines for what level of customer information Metro Transit should provide at bus stops. The proposal is based on the following principles:

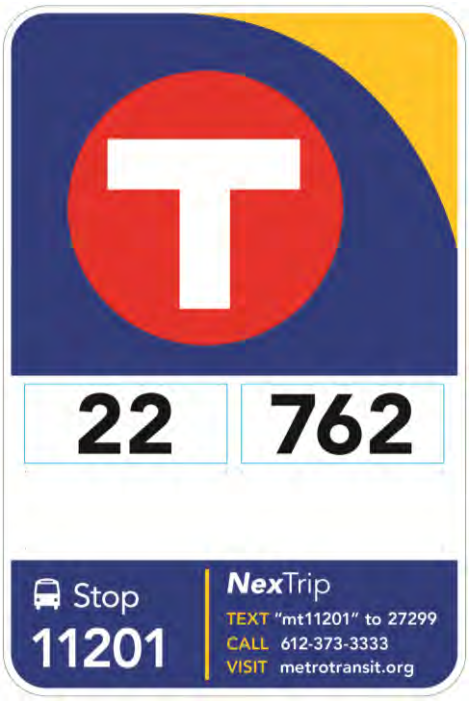
- When providing information, Metro Transit should prioritize higher boarding locations to provide additional information.
- Providing additional information at bus stops can help improve customer experience and entice new ridership.
- Information should be produced only if it can be maintained
    - Inaccurate information is worse than no information.
    - Maintenance and the shelf-life of information should inform the level of information included on signage, signage design, and materials selection.
- The benefits of providing additional information should be weighed against the costs of installing and maintaining that information.
- Signage should serve and be accessible to Metro Transit's diverse ridership.
- Signage should represent Metro Transit professionally and reinforce Metro Transit's identity.

The proposed guidelines use a hierarchy of bus stops based on boardings. In order to meet industry standards and customer demand, the minimum level of information at any stop is bus stop signs and route numbers. Each stop within the same hierarchy level will have the same transit information whenever feasible and practical.

Table 6.1 Proposed Customer Information by Bus Stop Type

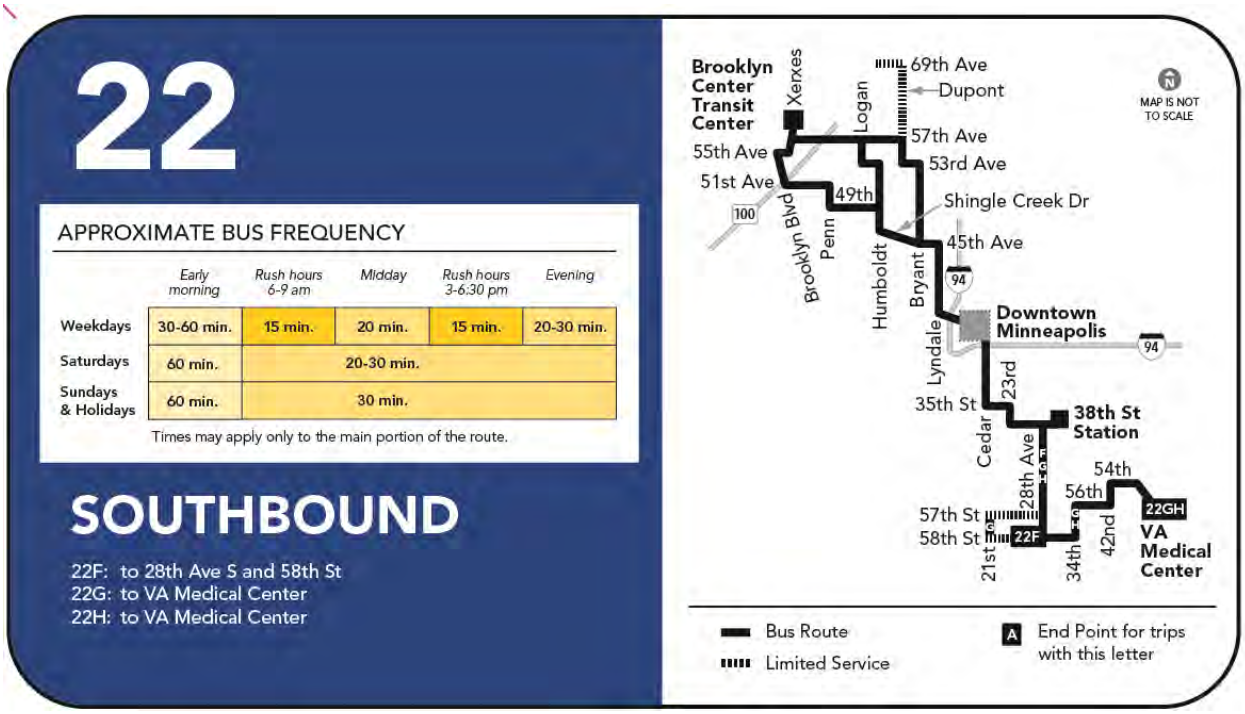
	Bus Stop Type				
	Tier 1	**Tier 2**	**Tier 3**	**Tier 4**	**Tier 5**
	Low-Boarding, Stand-Alone Bus Stops (*<10 daily boardings*)	Medium/High Boarding, Stand-Alone Bus Stops (≥10 *daily boardings*)	Bus Stops with Customer Waiting Shelters	Transitway Stations (BRT and LRT)	Transit Centers
Information Available					
Bus Stop Sign	✓	✓	✓	✓	✓
Route Numbers	✓	✓	✓	✓	✓
NexTrip Instructions	✓	✓	✓	✓	✓
Route Descriptions		✓	✓	✓	✓
Route Maps		✓	✓	✓	✓
Timetables		*	✓	✓	✓
Real-time Sign			**	✓	✓
Local Area Map				✓	
Fare Poster					✓
System Map					✓
Approximate Number of Stops					
	9,000	2,000	1,000	Listed in Appendix 1	

* Timetables will be considered at bus stops that meet the shelter placement boarding warrants (i.e., >25 average daily weekday boardings in suburban locations and >40 average daily weekday boardings in Minneapolis and St. Paul) but where a shelter is not installed due to space constraints or other limitations.
** Real-time signs will be considered at customer waiting shelters. The criteria for placement of real-time signs are still under development, but may include boardings, on-time performance, number of routes serving the shelter, Title VI considerations, and proximity to regional attractions.



Tier 1. Low boarding, stand-alone bus stops include a standard bus stop sign and numbers indicating which routes serve the stop. These are stops without customer waiting shelters and not at a transit center with fewer than 10 average daily weekday boardings. Tier 1 includes well over half of all Metro Transit bus stops.

Tier 2. Medium/High boarding, stand-alone bus stops include the standard bus stop sign (which includes a unique stop number, an indication of which routes serve the stop, and NexTrip instructions) and plates with route numbers, route descriptions, and route maps for each route serving the stop.



Tier 3. Customer Waiting Shelters include the standard bus stop sign and route numbers as shown for Tier 1 level stops. In addition, the signage within the customer waiting shelter includes route descriptions, route maps, NexTrip instructions, and timetables for all routes serving the stop.

Transit Stations (Tier 4) include local area maps, route schedules, route maps, route descriptions, and real-time signs.

Transit Centers (Tier 5) include system maps, schedules for all routes serving the Center, posters detailing fare information, and real-time signs.

Chapter 7. Implementation Considerations

In order to implement these guidelines successfully, Metro Transit should consider the following issues:

1. Rationale – Documenting and exploring the benefits of improved signage will make it easier to make responsible business decisions about the appropriate level of information to provide.
2. Funding – There is currently no dedicated funding for signage. In order to expand information available to customers, funding needs to be dedicated for these specific tasks:
    a. Signage production
    b. Installation
    c. Ongoing maintenance
    d. Regular signage auditing
3. Coordinating with many local governments – Each municipality has different rules and expectations regarding installation and replacement of signs and one-off signage projects often require time-consuming coordination. Developing a clear understanding of how Metro Transit will work with cities to streamline installation and maintenance will make it easier to implement the new signage standards.
    a. Address the issue of pole ownership and consider whether Metro Transit should opt to own poles in certain situations.
4. Number of bus stops – Metro Transit has more bus stops than any comparable transit agency. An overall benefit analysis of our stop placement policy is outside the scope of this proposal, but the high number of stops has a direct impact on the amount of resources required to implement the proposed guidelines.
5. Harsh winter weather – These conditions impact the amount of resources necessary for ongoing maintenance and constrain materials choices.
6. Many terminal letters make route communication more challenging - Maps and frequency charts need to be customized to reflect specific branch information which impacts resources necessary for ongoing maintenance and signage auditing.
7. Information management – Keeping track of which signs with which information are installed where is essential to streamlining the maintenance and upkeep of the signs. Good record-keeping can facilitate automating the production of new signage.
8. Installation – Including more detailed information at more stops increases workload, especially during pick times. We should evaluate the entire installation and maintenance process to ensure we are being as effective and efficient as possible.

Appendix 1: Information Displays at Transit Facilities

Customer Information Available at Transit Centers and Transit Stations

	Schedules Posted at Gates or Shelters	Poster with Schedules	Fare Poster	System Map	Real-Time NexTrip Sign
28th Ave. Station	✓				
38th St. Station	✓				
46th St. Station	✓				
Downtown St. Paul hub[10]	✓			✓	
Brooklyn Center Transit Center	✓	✓	✓	✓	
Chicago Lake Transit Center	✓	✓	✓	✓	
Columbia Heights Transit Center	✓				
Franklin Avenue Station	✓				
Gateway Transit Center		✓		✓	
Huron Station	✓				
I-35W & 46th St. Station	✓	✓	✓	✓	✓
I-35W & 82nd St. Transit Center	✓				
Leamington Transit Center		✓			
Little Canada Transit Center	✓				
Louisiana Avenue Transit Center	✓	✓	✓	✓	
Mall of America Transit Center	✓	✓	✓	✓	✓
Maplewood Mall Transit Center	✓	✓	✓	✓	
Mound Transit Center	✓	✓	✓		
MSP Airport Terminal 1-Lindbergh	✓	✓	✓	✓	
Northtown Transit Center	✓				
Ramp A/7th Street Transit Center		✓	✓	✓	
Ramp B/5th Street Transit Center		✓	✓		
Robbinsdale Transit Center	✓				
Rosedale Transit Center	✓	✓	✓	✓	
Smith Ave Transit Center	✓	✓	✓		
South Bloomington Transit Center	✓	✓	✓	✓	✓
Southdale Transit Center	✓	✓	✓	✓	
Starlite Transit Center	✓	✓	✓	✓	
Sun Ray Transit Center	✓				
Uptown Transit Center	✓				✓

[10] Includes stops at 5th St. & Cedar St., 6th St. & Cedar St., 5th St. & Minnesota St., 6th St. & Minnesota St.

Customer Information Available at Metro Transit Park & Rides

	Schedules Posted at Gates or Shelters	Poster with Schedules	Fare Poster	System Map	Real-Time NexTrip Sign
63rd Ave. & Bottineau Blvd.		✓	✓		
65th Ave. & Brooklyn Blvd.	✓				
Christ Episcopal Church	✓				
Church of Nazarene	✓				
Church of St. William	✓				
Co Rd 73 & I-394 South	✓	✓	✓	✓	
Como & Eustis	✓				
Coon Rapids/Riverdale Station	✓				
Cub Foods-White Bear Township					
Excelsior City Hall					
Faith-Lilac Way Lutheran Church					
Foley Blvd	✓				
General Mills Blvd & I-394	✓				
Grace Church					
Guardian Angels Catholic Church	✓				
Hmong Alliance Church					
Hopkins (Excelsior Blvd.)	✓				
Hwy 100 & Duluth					
Hwy 36 & Rice Street		✓	✓	✓	
Hwy 61 & Co Rd C	✓				
Hwy 61 & Lower Afton Rd	✓				
Hwy 610 & Noble	✓				
Hwy 7 & Texas Ave					
Hwy 7 & Vinehill Rd	✓				
I-35 & Kenrick Ave		✓	✓	✓	✓
I-35W & 95th Ave		✓	✓	✓	✓
I-35W & Co Rd C		✓	✓	✓	✓
I-35W & Co Rd H	✓				
Knox Avenue at Best Buy	✓				
Lake St/Midtown Station West	✓				
Mermaid Supper Club					
Minnetonka Blvd & Baker Rd					
Minnetonka Blvd & Steele St					
Navarre Shopping Center	✓				
Normandale Village	✓				
Park Place & I-394	✓				
Plymouth Rd Park & Ride					

Regal Cinemas 20	✓				
Richardson Park	✓				
Roseville Skating Center					
Running Aces	✓				
Salem Covenant Church	✓				
Shoreview Community Center					
St. Croix Valley Recreation Center					
St. Edward's Catholic Church					
St. Genevieve Church					
St. John the Evangelist Catholic Church					
St. Joseph's Church					
St. Luke's Lutheran Church	✓				
Walton Park	✓				
Wayzata Blvd & Barry Ave	✓	✓	✓	✓	
West River Rd & 117th Ave	✓				
West St Paul Sports Complex					
Westwood Lutheran Church					
White Bear Township Theatre					
Woodbury Lutheran Church	✓				
Woodbury Theatre	✓				

Appendix 2: Bus Stop Signage Examples

Route Number

Destination / Route Description

Service Days and Hours

The sign reads:
11 to Downtown

7 Days a Week

Early AM through Late Night

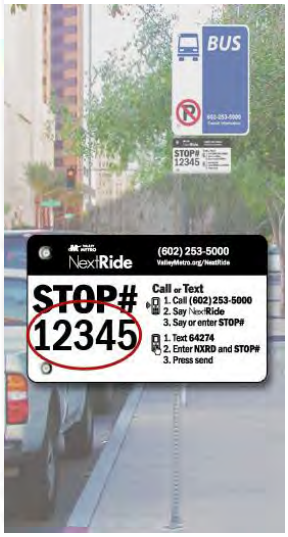
Maps


24
CORAL WAY-
SW 137 AVE.
24
W DADE LIBRARY
SW 24 ST/114 CT.
48
CIVIC CENTER-
HOSPITALS
B
KEY
BISCAYNE
305-770-3131


cta
bus
stop
66 Chicago
Chicago 800N
Austin 6000W
Pulaski 4000W
Blue Line 1200W
Brown/ Purple Lines 300W
Red Line 0 E/W
Columbus/Fairbanks 300W
Grand 530N
Navy Pier
Illinois 500N
East to Navy Pier
Daily, early morning thru late evening
Overnight (owl) service from Pulaski
to Downtown (State/Washington)
TEXT CTABUS 548 to 41411 for estimated arrival times.
transitchicago.com 836-7000 TTY (312) 836-4949
Message to send, including this stop's ID.


cta
bus
stop
66 Chicago
cta
bus
stop
37 Sedgwick Ogden

Unique Stop Number and How to Use It




MTS
7
Downtown
San Diego
For Next Arrival Times
Text Stop Number to
GOMTS
12068
Stop number


FOR MORE INFORMATION
CALL (714) 636-RIDE
50
BUS STOP # 5440
53
OCTA
(714) 636-RIDE

Stop-Specific QR Code