

MBTA signage system overview

for design consultants

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Version 03.2015

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MBTA signage system overview

for design consultants

Introduction

In January 2012 the MBTA adopted a new approach for design and fabrication of all wayfinding signage for the entire MBTA system. The new signage system applies to all existing and new subway, commuter rail, ferry, garage and bus signage.

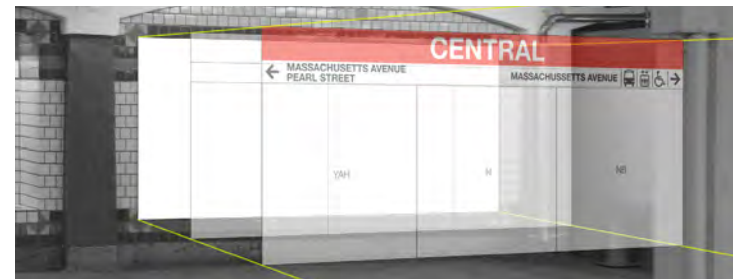
This guide is designed to assist Design Consultants in understanding the goals of the new MBTA signage system and to provide resources for coordinating with the MBTA in order to implement the system. The MBTA is responsible for the design and layout of signage at each station, while the Design Consultant is responsible for the sign frames, the integration of signage with station architecture, and the inclusion of all signage content into the construction documents. Coordination between the parties is key for optimal implementation of the signage system.

The components that comprise the MBTA's new approach to wayfinding signage are described to the right.



Digital Signage Manual (DSM)

Server-based repository which houses all existing conditions information and design tools related to the system signage.



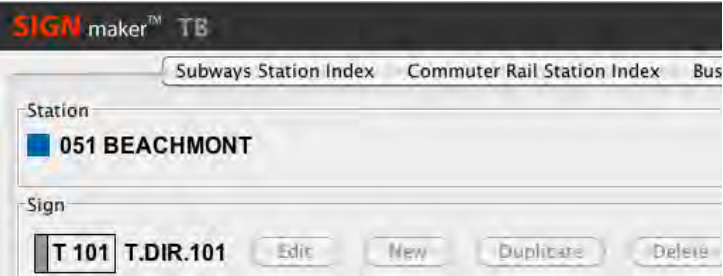
MBTA Signage Guidelines

Reference book which provides an overview of the MBTA's new signage system logic, rules and application.



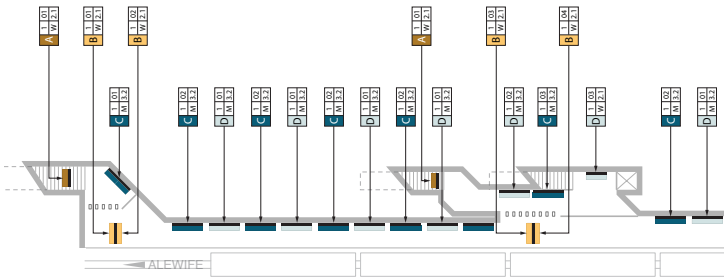
SignMaker™

A custom, menu-driven application for automating the design process and ensuring that visual wayfinding signs are correct, clear, and consistent across the system.



SignMaker™ TB

Enables automatic generation of full size, ADA-compliant Tactile/Braille signs. Output files are used for direct fabrication of etched zinc or stainless steel signs.



Data-Driven Graphic System

The entire signage system is built on individual station data and a newly-designed library of standard wayfinding graphic elements.



End-to-End Delivery Process

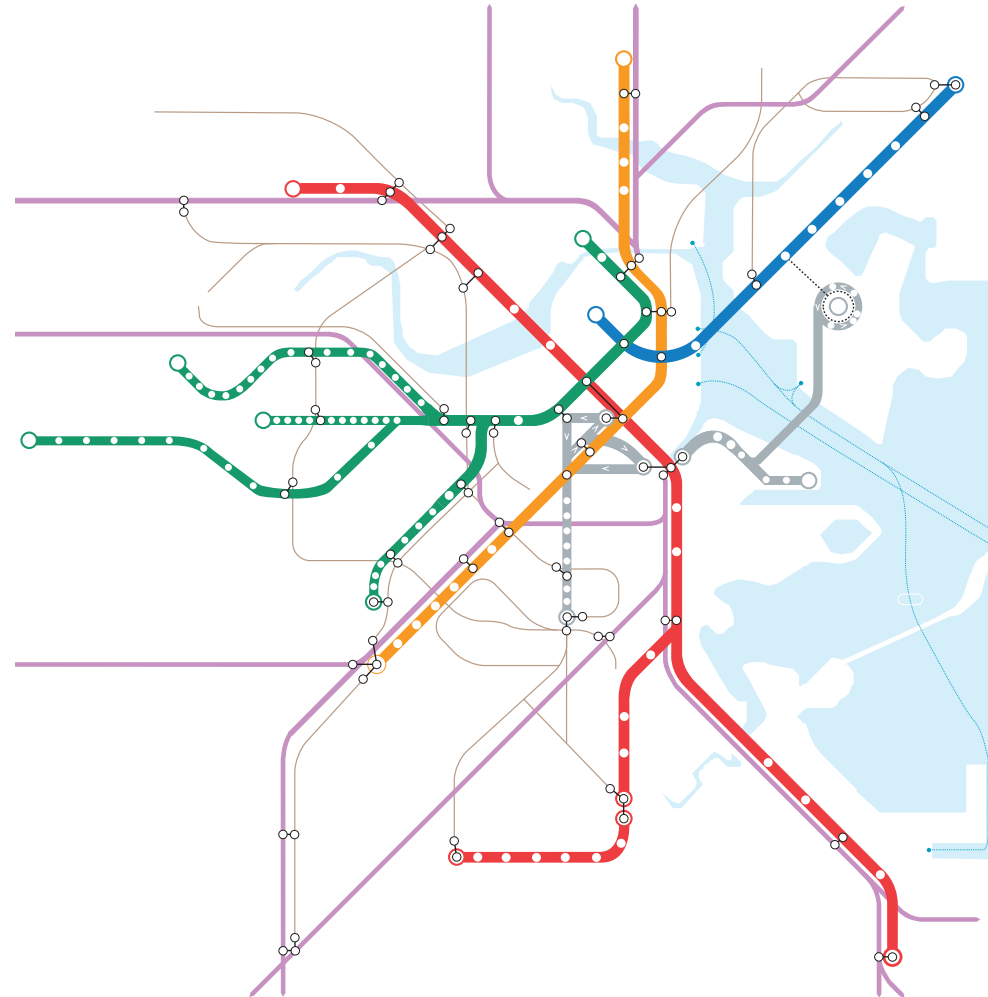
A fully integrated design, construction document, and fabrication process developed specifically for the MBTA signage system.

Creating “One System”

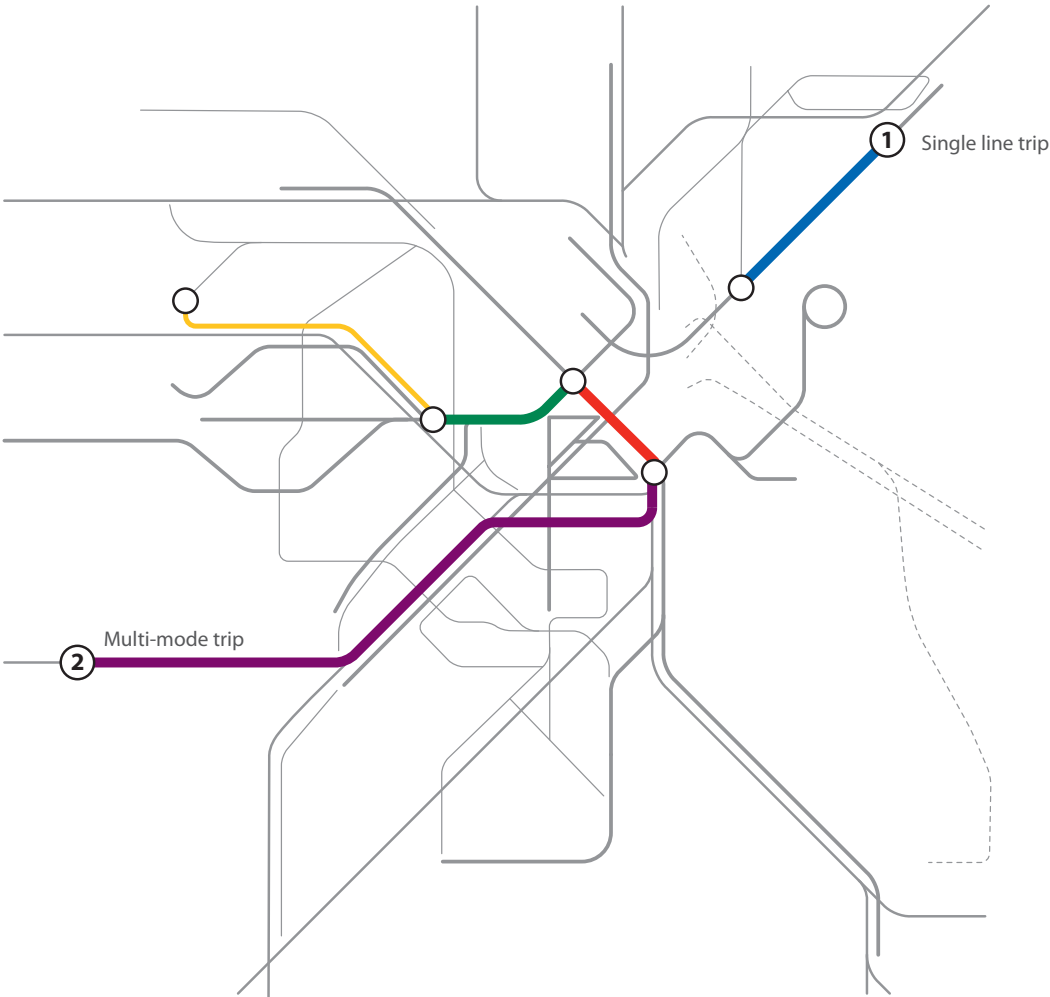
The MBTA has completed a comprehensive redesign of the wayfinding approach in order to create a unified signage system that links all modes of transit:

- 150 subway stations
- 130 train stations
- 8 ferry stations
- 18,000+ bus stops
- 40,000+ signs
- all delivered by automated software

Interconnected Modes



Customer Journey



Subway



Trolley



Train



Bus



Ferry



All transit modes interconnect. A unified wayfinding system helps customers navigate from place to place, while helping the MBTA to project brand consistency and reliability.

Designer Roles

The End-to-End Process involves both MBTA Design and Design Consultants, and requires careful coordination in order to successfully implement the signage system at every station. The basic role of each party is described to the right.

Refer to the End-to-End Process summary on page 30, and the *MBTA Signage Guidelines* for more detailed descriptions of the End-to-End Process responsibilities and steps.

MBTA Design

The MBTA is responsible for:

1. Layout of signage based on pathway diagrams.
2. Design of sign graphics using SignMaker™ software.
3. Creation of full scale sign files used for fabrication, generated by the SignMaker™ software.

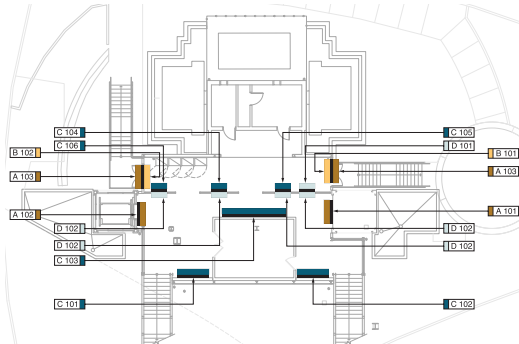
The MBTA provides all sign plans, sign schedules and sign elevations to the Design Consultant for inclusion in the construction documents.

Design Consultant

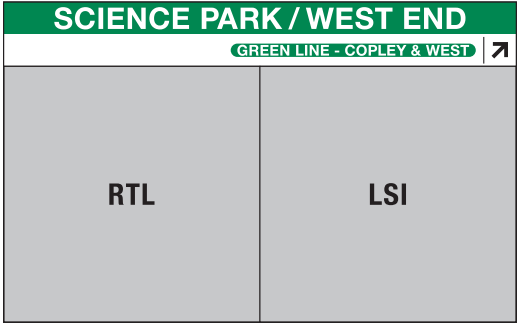
The Design Consultant is responsible for:

1. Evaluation of existing sign frames (at existing stations).
2. Selection and engineering of sign frames and details selected from a CAD library of standard frames.
3. Coordination and integration of signage with station architecture.

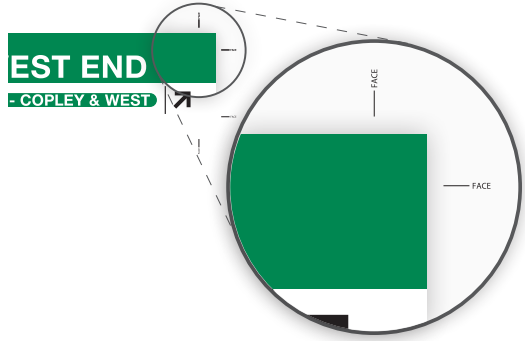
The Design Consultant is also responsible for incorporating all signage content into the construction documents.



Sign Layouts



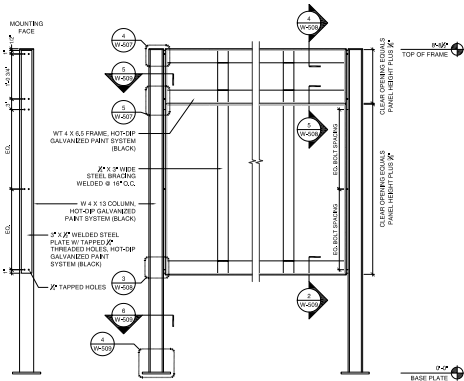
Sign Graphics



Full Scale Fabrication Files



Existing Sign Frames



Frames/Details



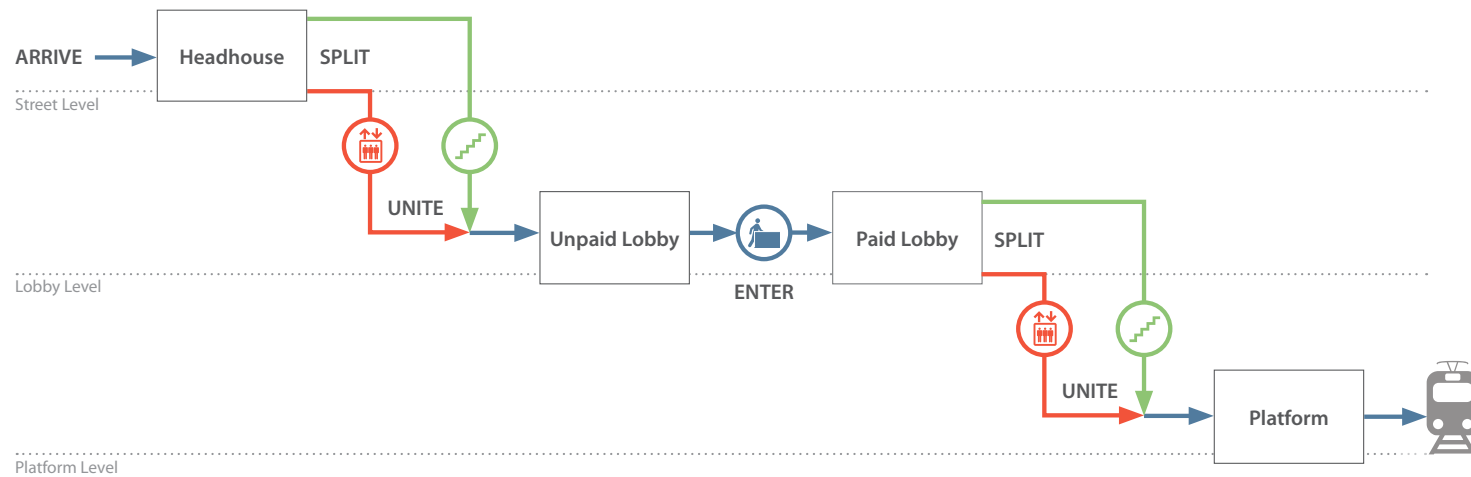
Coordination

Understanding Customer Trips

Supporting a Diverse Community of Riders

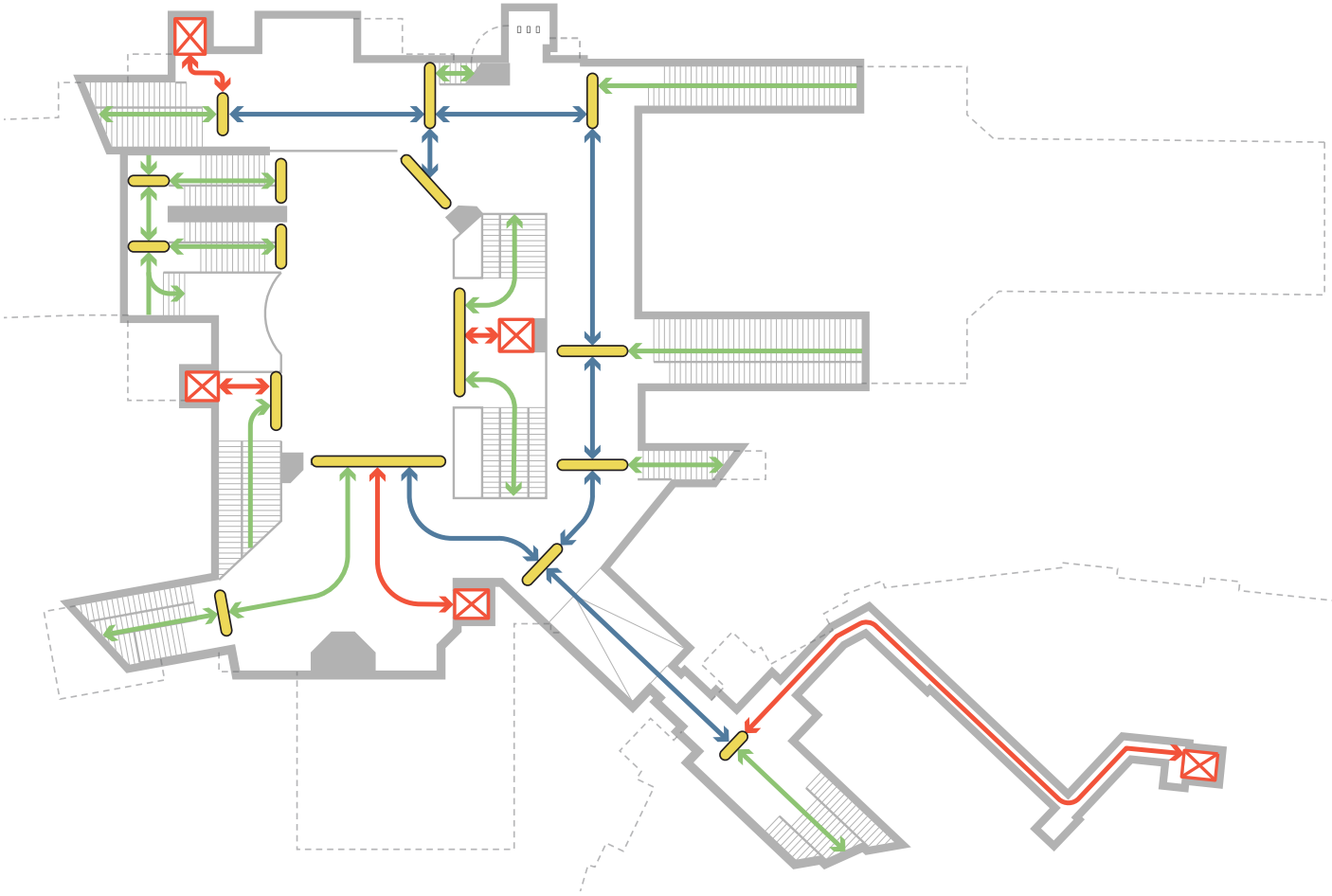
While the majority of MBTA transit stations are accessible, the accessible paths connecting entrances to trains are frequently different than the ambulatory paths. The new wayfinding system is based on a pathway diagram system that identifies every path split and decision point within a station. Accurate signing of accessible, ambulatory and combined paths is determined by each station's unique set of pathways.





Rider Community



Station Journey section diagram: illustrates how the combined path (accessible/ambulatory) splits at vertical circulation points into separate accessible and ambulatory paths, and then rejoins on the next level.

Pathway Diagrams

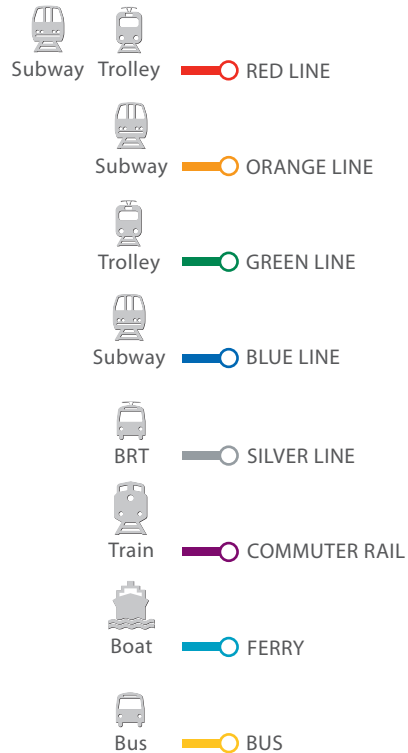


- Accessible 
- Ambulatory 
- Combined 
- Decision Point 

Pathway Diagram: illustrates the station journey on each level of the station by identifying every path and path split.

System Inventory

The entire MBTA wayfinding signage system is inventoried in the Digital Signage Manual (DSM). The DSM is a vast electronic repository of existing conditions information covering every individual station. The DSM organizes over 30,000 files, including 10,000 photographs, plans and sections of every station, as well as detailed signage layouts and sign artwork for re-signing every station.



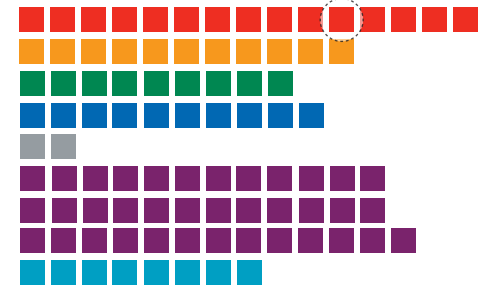
Stations



173 single-line stations



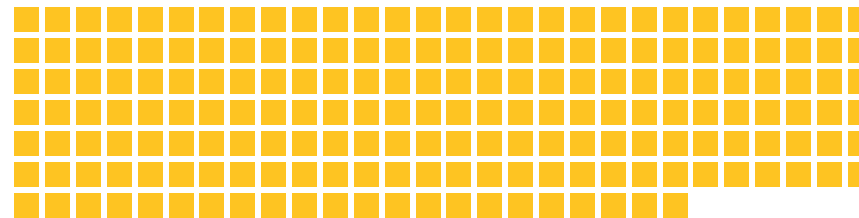
92 single-line stations



15 multiline stations



190+ routes



Website for Each Station

CENTRAL

STATION OVERVIEW

STATION	
Name:	CENTRAL
Branch:	Main
Line:	Red Line

PLATFORM	
Type:	Side

CONNECTIONS	
Parking:	No
Subway:	No
Commuter Rail:	No
Bus:	Yes
Bus Quantity:	8
Bus Configuration:	Single

EXITING	
Exit Configuration:	Direct
Section Type:	2.16

SUPPLEMENTAL	
Emergency Exit:	No
Backlit Signs:	Yes

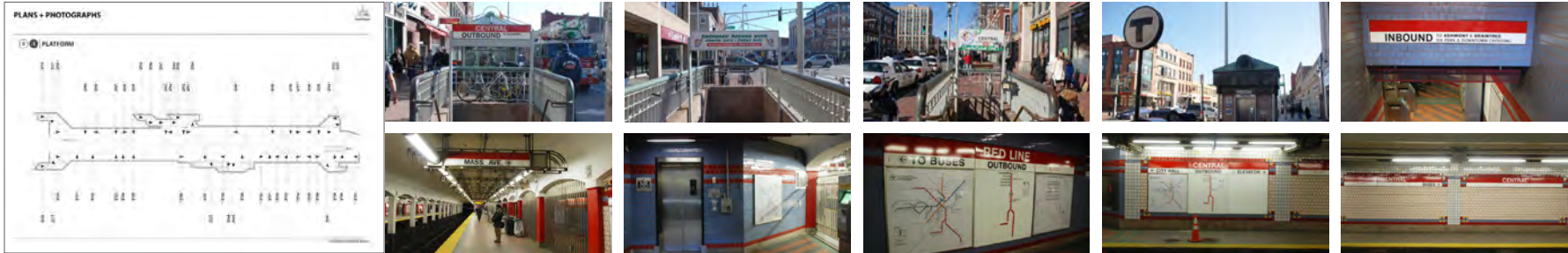
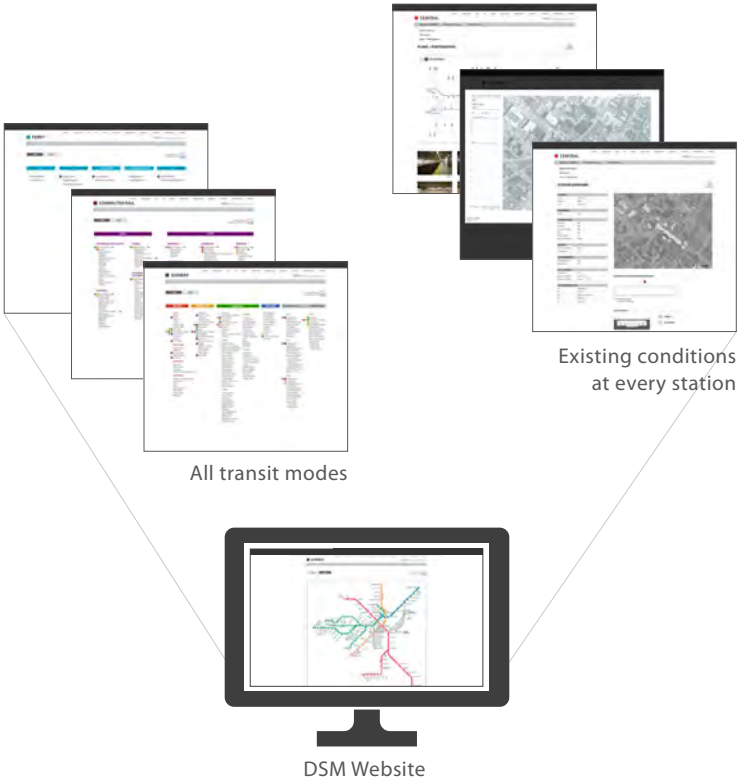
ACCESSIBILITY	
Accessible:	Yes
Elevator Quantity: (Platform Config.)	Level 0 : 2 Level -1 : 2 (F2)

EXIT DESTINATIONS	
01	Prospect St
02	Essex St
03	Massachusetts Ave
04	Pearl St
05	City Hall

ELEVATOR PLATFORM CONFIGURATIONS

SECTION TYPE

Section Type 2.16



The Problem: Inconsistency Over Time

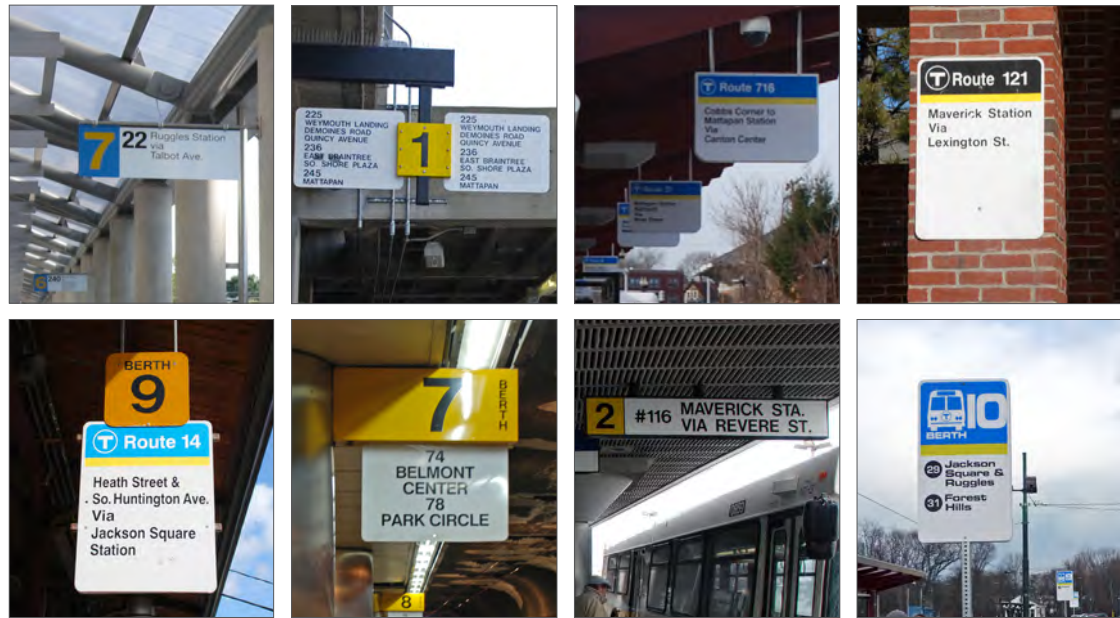
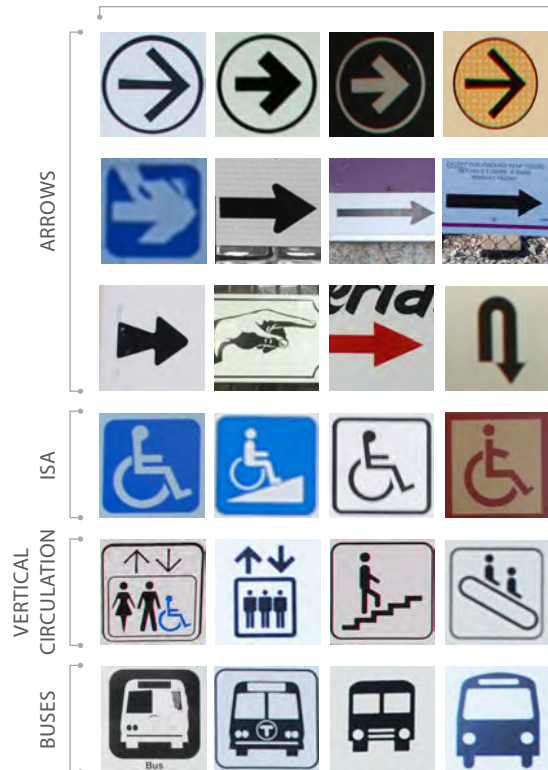
As the oldest transit system in the US, the MBTA has evolved many different ways of displaying wayfinding information and station identification. A complete inventory of every sign at every station established a baseline for conducting a thorough diagnosis of the overall system. This was the first step in creating a wayfinding system that is Correct, Clear, and Consistent.

INCONSISTENT BUS SIGNAGE






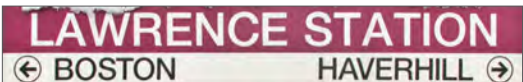









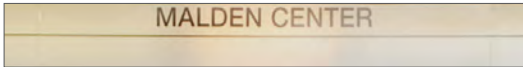


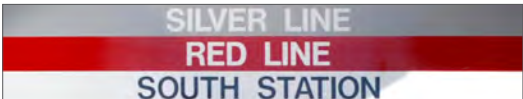
BUS STREET

INCONSISTENT ICONS



BUSWAY

INCONSISTENT STATION IDS

<p>FONTS</p>	 <p>Helvetica Bold</p>			<p>SINGLE-LINE ENTRANCES</p>
	 <p>Helvetica Medium</p>			
				
	 <p>Helvetica Condensed</p>			
	 <p>Microgamma Bold / Helvetica Medium</p>			
	 <p>Microgamma Bold / Eurostile Light</p>			
			<p>MULTILINE ENTRANCES</p>	

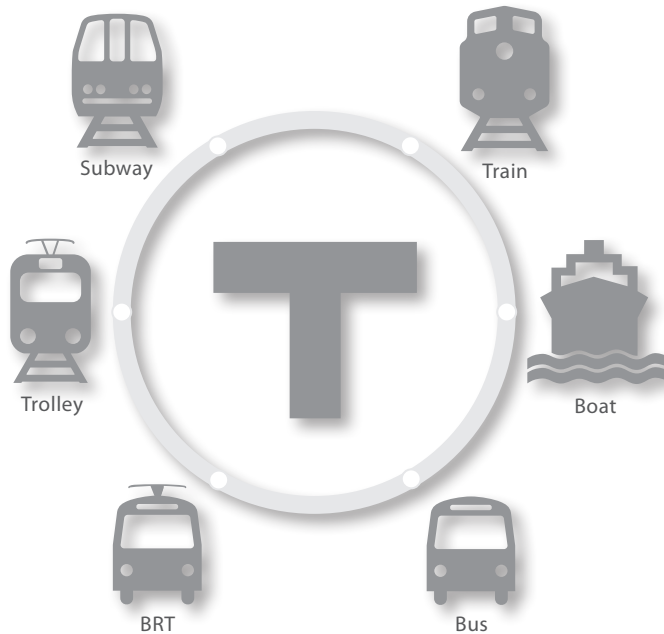
AD HOC SIGNAGE



The Solution: A Unified Signage System

Creating One Family of Signage

The MBTA is positioning the transit system as one interconnected network. The overarching goal of the new wayfinding system is to create a sense of unity and clarity among all modes of transit in order to improve customer perceptions of quality and dependability.



One-System Map

SINGLE-LINE STATIONS



Red Line



Orange Line



Blue Line



Green Line



Silver Line



Commuter Rail



Ferry

MULTILINE STATIONS



BUS



Busway



Bus Street

TACTILE/BRaille



Directional



Entry

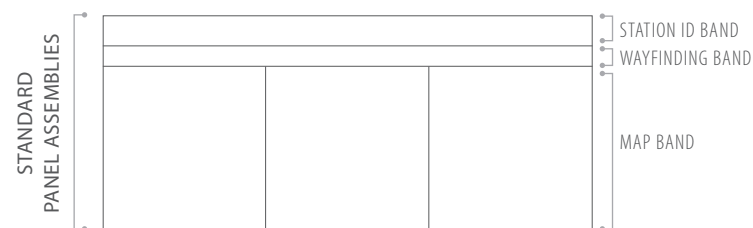
Signage DNA

Standardized Assemblies & Content

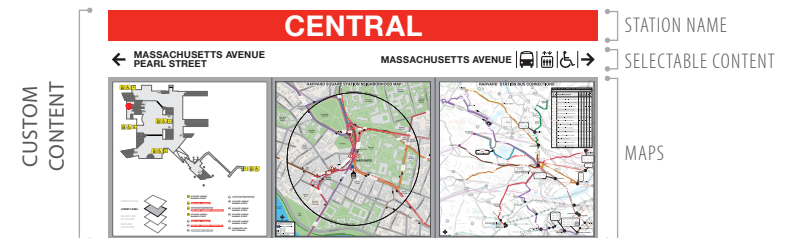
The new wayfinding signage system combines an extensive inventory of standard panel assemblies with the ability to apply customized, data-driven content resulting in location-specific wayfinding signage. A library of predefined colors, path icons, symbols, maps and fonts form a common vocabulary of communication for all modes of transit. The custom software application SignMaker™ uses these components to automate the design process.



Assembly



+



Identity

COLOR BANDS

- Red Line
- Orange Line
- Green Line
- Blue Line
- Silver Line
- Commuter Rail
- Ferry
- Bus

T-LOGO

Icons

PATHS

- Ambulatory (Left arrow)
- Accessible (Left arrow, wheelchair, and group of people)

SYMBOLS

- Parking (P in circle)
- Airplane
- Ferry
- Train
- Bus
- Escalator
- Stairs
- Person with P sign

Maps

ENTERING

- System
- Line
- Busway

EXITING

- Neighborhood
- Neighborhood Bus

Destinations

Custom-kerned fonts create consistent, ADA-compliant text:

HELVETICA NEUE MBTA BOLD

Helvetica Neue ADA Bus

LINE - DESTINATION

000

Pathway Clarity

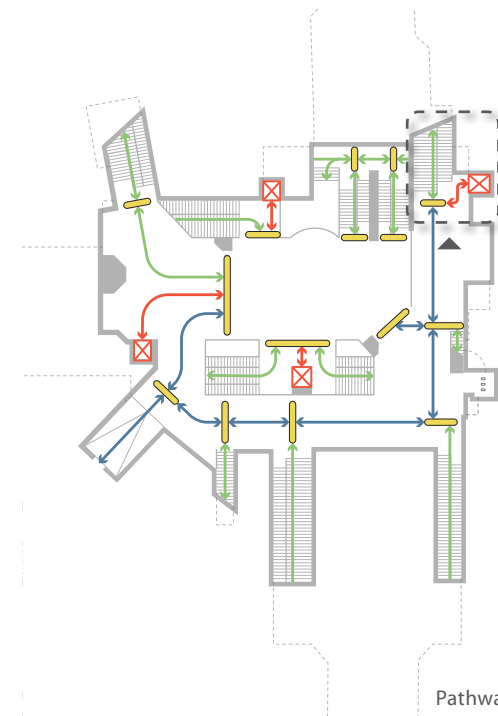
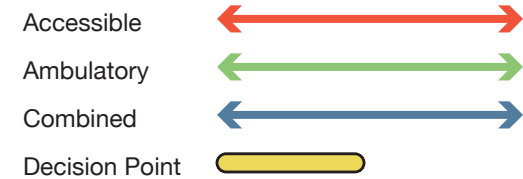
Locating Decision Points

Decision points are places along a circulation route where a path splits between accessible (elevators or ramps) and ambulatory (stairs or escalators), or where paths to different destinations diverge. The new wayfinding system is based on locating each and every path split within a station and placing signage to help customers continue along the appropriate path to their desired destination. Signs are defined by two characteristics: 1) Mounting (overhead or surface) and 2) Direction (in or out of the station), resulting in four sign types.



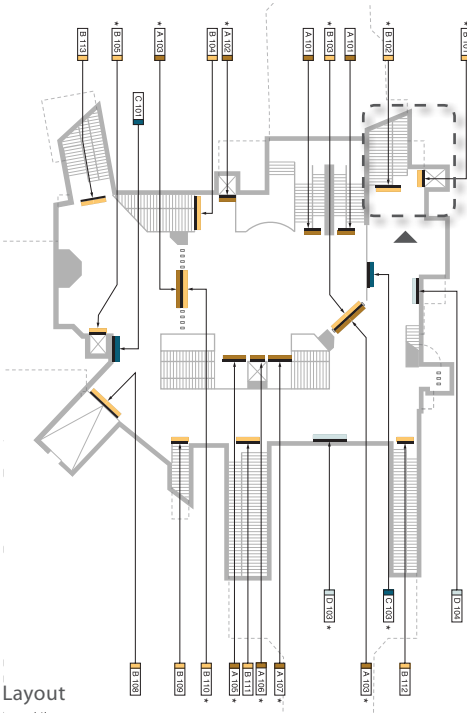
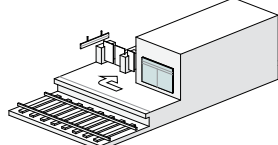
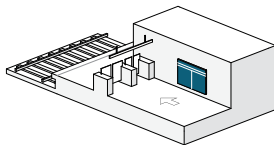
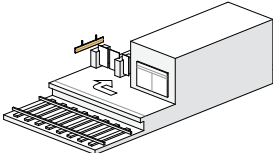
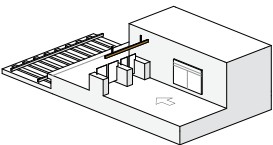
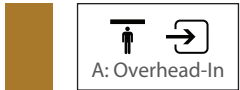
Decision point:
ambulatory & accessible paths split

Pathway Diagram

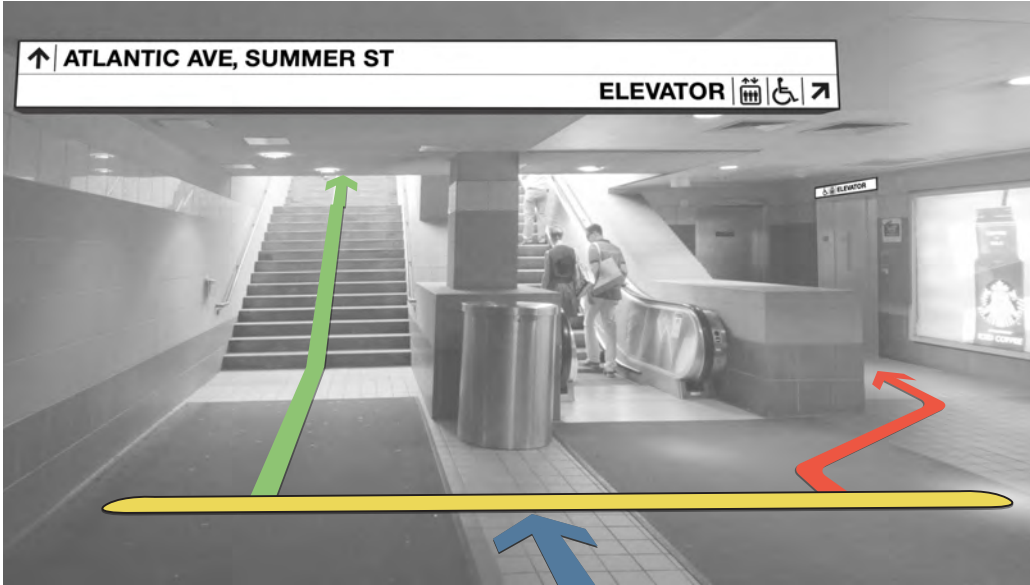


Pathway Diagram

Sign Layout - 4 Sign Types

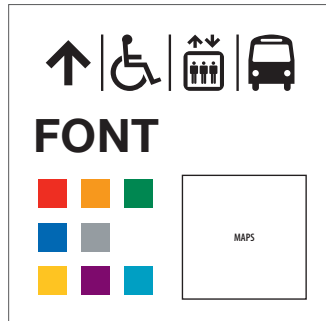


Sign Layout



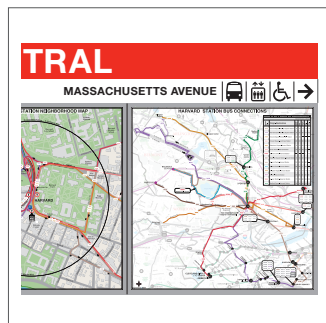
Signed decision point: ambulatory & accessible paths split

Keeping it Simple: CCC



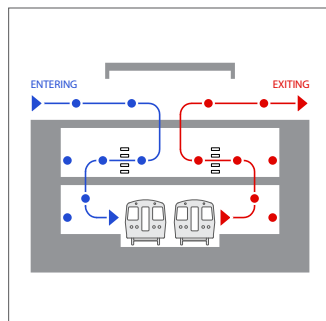
Correct

The foundation of the new signage system is a standardized, code-compliant vocabulary of symbols, fonts, colors and maps, along with the an accurate master database of destinations, modes and terms that may appear on signage.



Clear

Clarity is achieved through a comprehensive set of rules for organizing the placement of graphics and content on sign panels. Clarity is the judicious display of wayfinding information, arranged and presented to maximize the customer's ability to easily scan for information and navigate stations.



Consistent

The purpose of consistency is to instill trust in the users of the overall MBTA system – this is the sense that each station uses the same methods and conventions of communication. In turn, customers develop confidence that the signage everywhere is reliable, clear and correct.

Subway multiline stations



Subway single-line stations



Commuter Rail



Ferry



Tactile/Braille



Bus



Subway

Using Color to Enhance Wayfinding

The new wayfinding system uses color ovals corresponding to Subway line colors to display each line and destination, clarifying which lines and destinations are available within a station. For customers, this greatly improves the wayfinding information hierarchy along circulation paths, especially in complex multiline, multilevel stations.



4 Sign Types

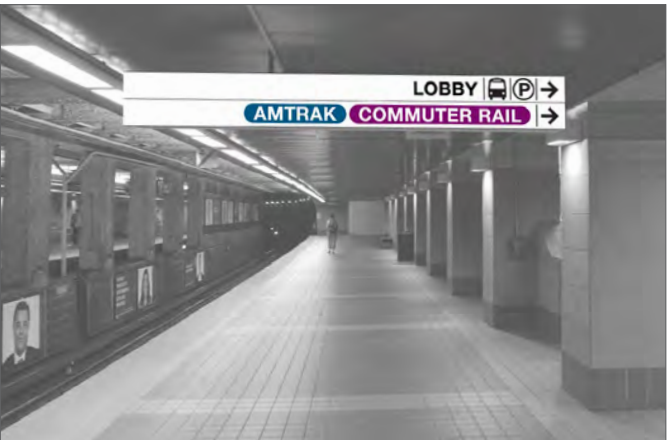
entering



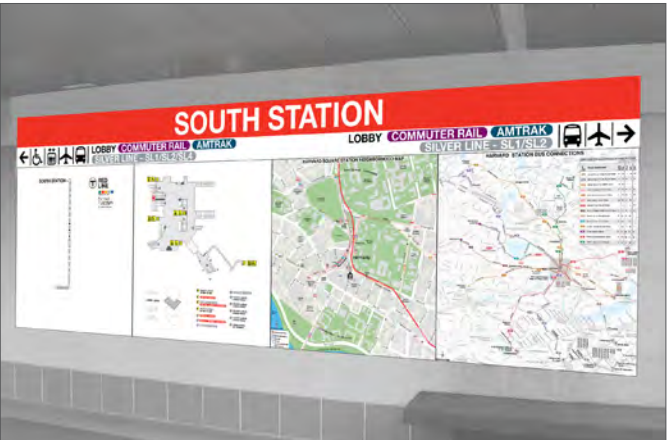
exiting



overhead



surface

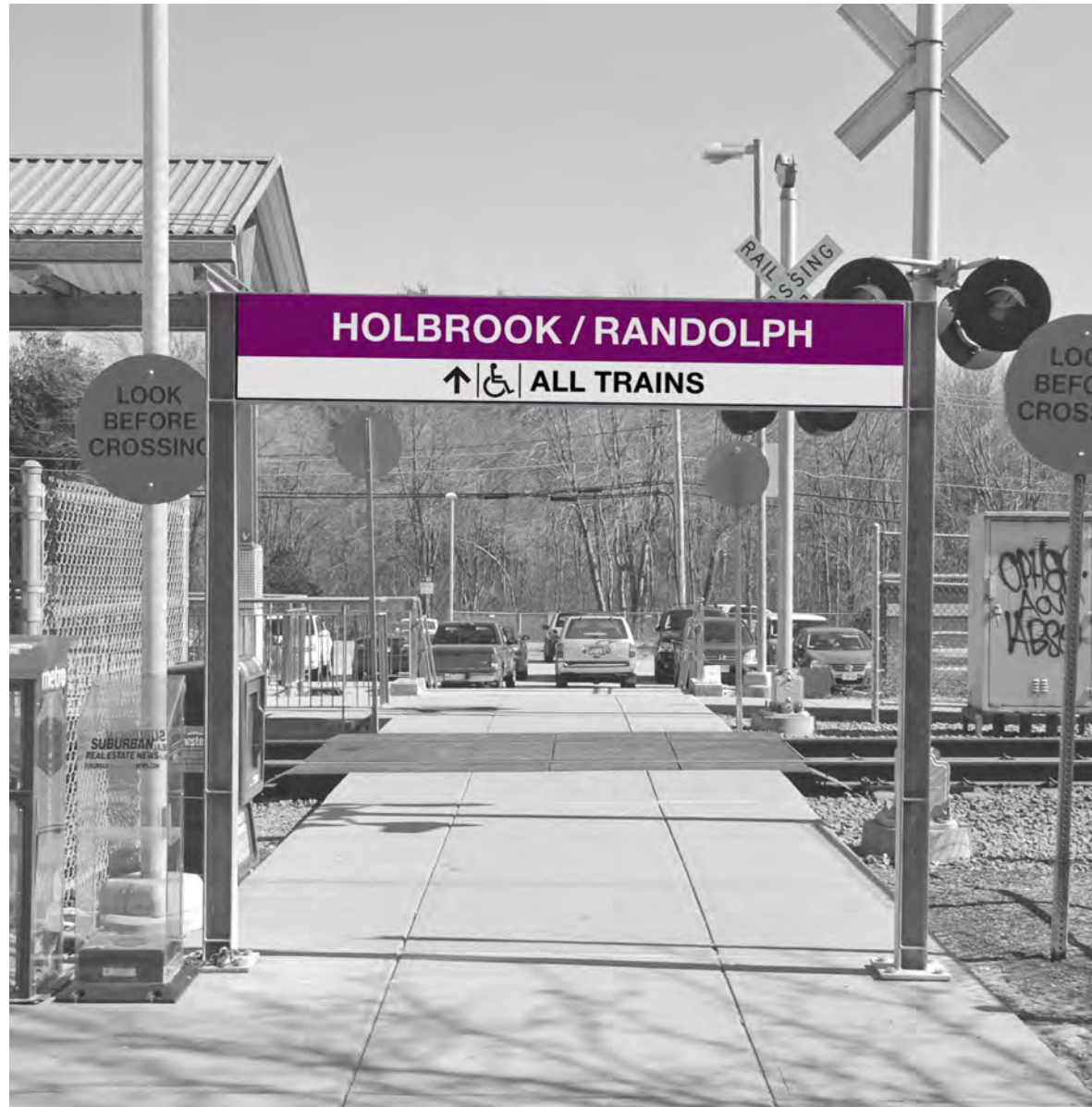


Application of the four sign types at a multiline subway station

Commuter Rail

Complementary Rail Signage

Commuter Rail stations are brand-identified with the Commuter Rail's signature purple color. Wayfinding signs draw on the same library of graphic components and conventions as used on the Subway system, adapted to serve the signage needs of the Commuter Rail.



Ferry

Incorporating the Ferry System

The Ferry system is color-coded with light blue to signify another “line” of transit, using the Subway’s traditional color banding system to identify terminals as part of a unified MBTA system. Wayfinding signage is typically simple, focusing on identifying line names and the locations of accessible paths.



Tactile/Braille

The Tactile/Braille signage system is comprised of three sign types: Directional, Informational and Room IDs. Directional signs are located at specific ADA-required points within a station, including station entries and platforms.

SignMaker™ TB automates the creation of ADA-compliant signs, with all dimensional metrics pre-defined within the software. The mounting location is also highly defined by ADA: signs must be mounted at the correct height in uniform locations, with an 18" square clear space in front of them, so that visually impaired customers may readily locate and make use of them. Without consistent placement relative to paths and architectural elements, Tactile/Braille signs are like finding a needle in a haystack for the customers who need them.



Bus

There are over 8,100 bus stops and 27 busways on the MBTA system. In the existing system there was no consistency in the appearance of bus berth or street signage. The new bus signage system creates a unified identity for buses - both on the street and at stations - that integrates visually and functionally with the overall graphic wayfinding program of the new signage system.

The creation of bus street signs is completely automated by a separate module of the SignMaker™ software: SignMaker™ BUS. Signs at station busways, created in the first SignMaker™ module, have many more design variables than street signs - including mounting, orientation, identity type and sign size. Busway signs are included in construction documents for station signage, while bus street signs are handled completely separately from station signage.



SignMaker™ Application

MBTA In-House

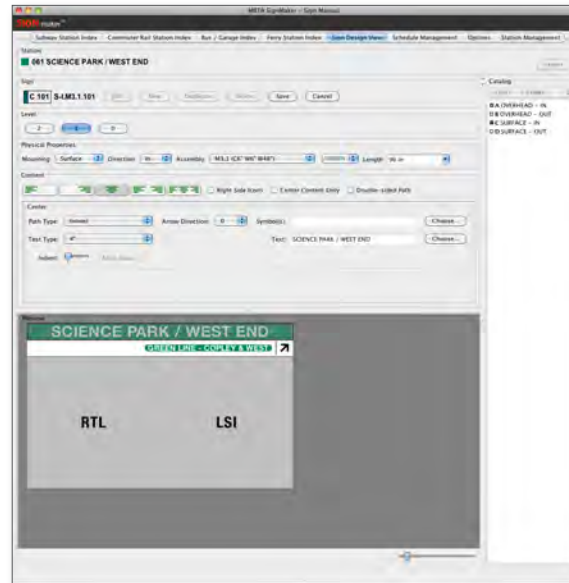
The traditional methods for designing signage have been replaced with a new methodology that utilizes a custom software application developed specifically to create MBTA wayfinding signs. All new signs are produced in-house by the MBTA using this software.

SignMaker™ is an innovative, menu-driven software application custom-developed for automating the design process. The interface automatically positions all signage elements, including sign panel sizes, colors, text, symbols, and maps. SignMaker™ simplifies the process of designing signage, and ensures that signs are correct, clear, and consistent from station to station.

The application includes three modules:

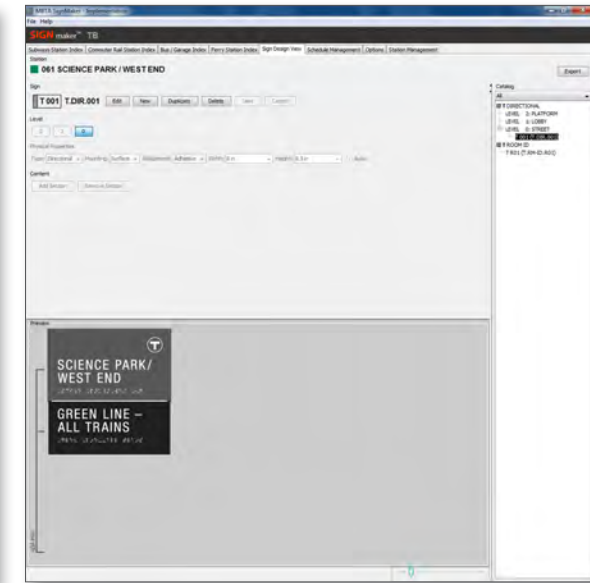
- SignMaker™ (visual wayfinding signage, including busway and garage signs)
- SignMaker™ TB (Tactile/Braille signage)
- SignMaker™ BUS (bus street signage - not used to create signage for stations)

The SignMaker™ application outputs scaled sign elevations and schedules for use in construction documents, as well as full-scale sign elevations used to fabricate the finished signs.



Application used for the creation of visual wayfinding signage (including busway and garage signage). It is a custom, menu-driven application for automating every aspect of the sign design process:

- physical properties (assembly)
- path type and sign content selection
- entire station catalog of signs
- sign schedules
- outputs half-inch scale sign files for construction documents
- outputs accurate full-size sign files for fabrication

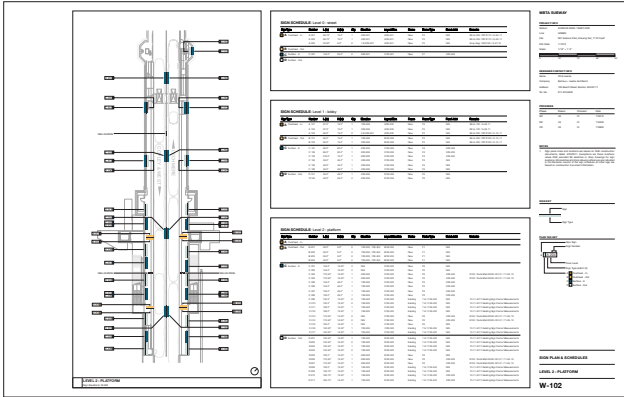


Application used for the creation of Tactile/Braille signage. It is a custom, menu-driven application for automating every aspect of ADA-compliant Tactile/Braille sign generation:

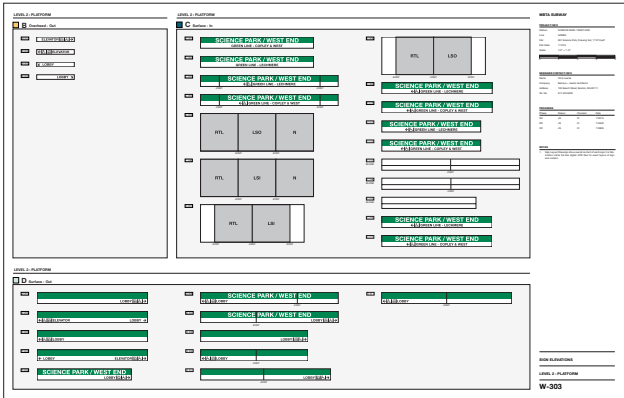
- braille generated automatically
- physical properties (size, mounting)
- sign content selection
- entire station catalog of signs
- sign schedules
- outputs one-and-a-half-inch scale sign files for construction documents
- outputs accurate full-size sign files for fabrication

Construction Documents

Finished Product



Create

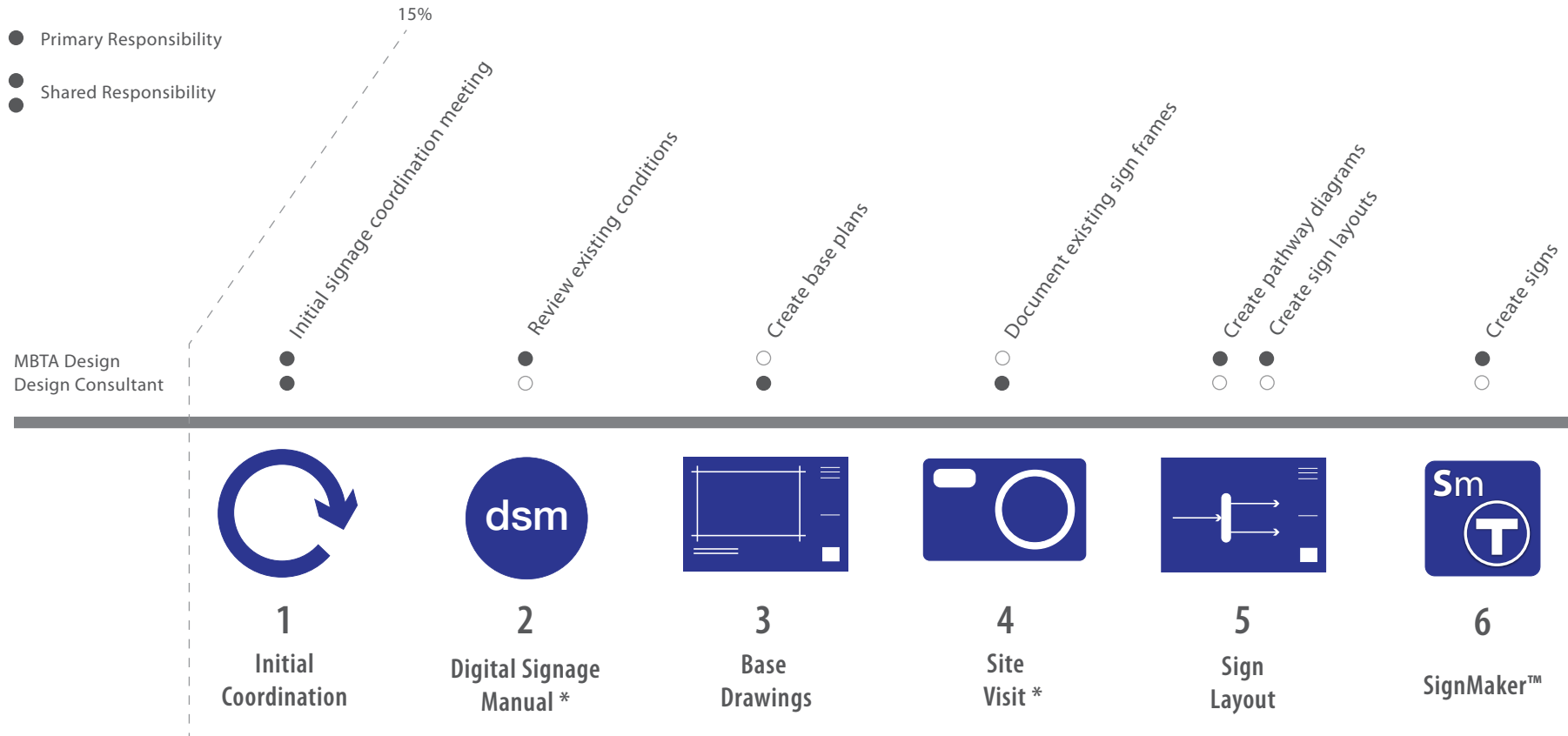


Produce

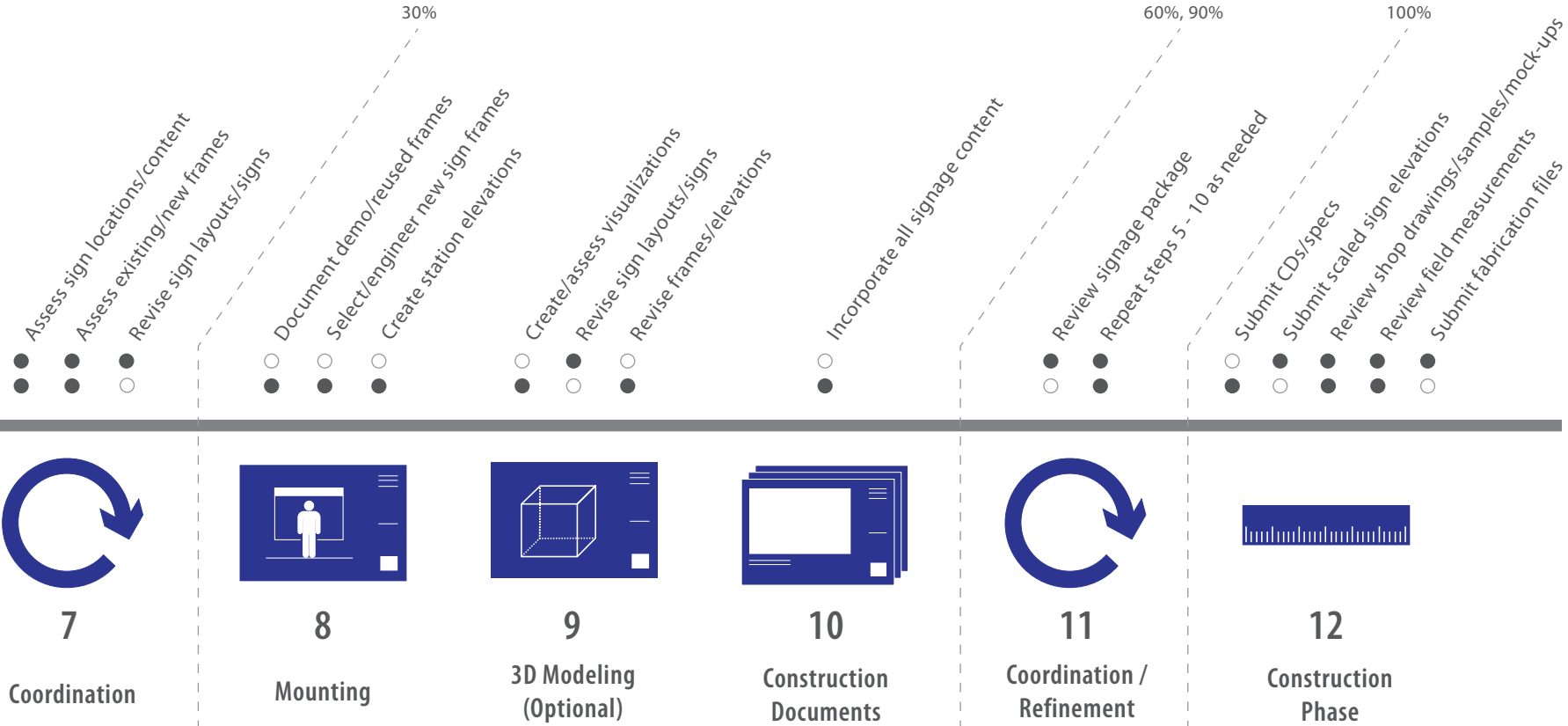


End-to-End Process

The End-to-End Process consists of those steps necessary to implement the new signage system at MBTA transit stations, from the initial coordination meeting through the construction phase. The overall steps are displayed below and consist of actions by both MBTA Design and Design Consultants. Chapter 19: End-to-End Process of the *MBTA Signage Guidelines* describes the steps in further detail, indicating the division of responsibilities, the templates used, and where coordination between the parties is required.














* Existing stations only



Responsibilities

The chart below identifies the division of responsibilities for the content (design, drawings) and documents (inclusion of signage content in construction documents) for each signage element, as well as resources pertaining to that element. Additional resources, including templates used to implement the signage system, are described in Chapter 19: End-to-End Process of the *MBTA Signage Guidelines*. All relevant resources are provided to Design Consultants by the MBTA to facilitate the implementation of the signage system.

SIGNAGE		RESPONSIBILITIES		RESOURCES		NOTES	
TYPES	ELEMENTS	MBTA	DC	MBTA Specs	MBTA Signage Guidelines chapters		
		Content by Docs by	Content by Docs by				
WAYFINDING		SIGNS	●	●	10400	3, 4, 5, 11 - 15, 17, 19	Wayfinding signage includes all Subway, Commuter Rail, and Ferry station wayfinding signage, as well as Garage and Busway signage. Templates used in the End-to-End Process, including a CAD library of standard frames/details, are discussed in Ch. 19 of the Guidelines.
		LOCATIONS	●	●	-	4, 5, 11 - 15, 17, 19	
		MAPS	●	●	-	3, 19, 20	
		DISPLAY CASES	●	●	10100	3, 19, 20	
		CAA SIGN	●	●	10400	18, 19	
		FRAMES/MOUNTING		●	●	10401	
TACTILE/BRAILLE		SIGNS	●	●	10426	3, 4, 16, 19	Tactile/Braille signage includes all code-required T/B signs. Templates used in the End-to-End Process, including a CAD library of standard mounting elevations, are discussed in Ch. 19 of the Guidelines.
		LOCATIONS	●	●	-	3, 4, 16, 19	
		FRAMES/MOUNTING		●	●	10401	
WARNING/ INFORMATIONAL		SIGNS	●	●	10400	18, 19	Templates used in the End-to-End Process, including a CAD library of standard frames/details, are discussed in Ch. 19 of the Guidelines.
		LOCATIONS	●	●	-	18, 19	
		FRAMES/MOUNTING		●	●	1040	
VMS			●	●	-	18, 19	The coordination of VMS with station wayfinding signage is discussed in Ch. 18: Related Systems of the Guidelines.
BUS		STREET SIGNS	●	●	10400	5, 17	Bus Street signage is handled by the MBTA separately from station signage.

SIGNAGE		RESPONSIBILITIES		RESOURCES		NOTES
TYPES	ELEMENTS	MBTA	DC	MBTA Specs	MBTA Signage Guidelines chapters	
		Content by Docs by	Content by Docs by			
T-LOGO	 LOLLIPOP SIGN -		● ●	10428	3, 11	The T-logo graphics and “lollipop” or “landmark ID” sign are discussed in the Guidelines.
CHARLIECARD	 SIGNS -	● ●		10400	-	CharlieCard graphics are not included in the Guidelines and are handled separately by the MBTA.
ELEVATOR	 ELEVATOR SERVICE SIGN	● ●		10428	-	Elevator Service signs are not included in the Guidelines and are handled separately by the MBTA. T/B elevator controls are discussed in relation to T/B signage.
	T/B CONTROLS		● ●	-	3	
EMERGENCY EGRESS	 ILLUMINATED EXIT SIGNS		● ●	10400	18	Standard exit sign graphics are discussed in Ch. 18: Related Systems of the Guidelines. Other egress signs are not included in the Guidelines and are handled separately by the Design Consultant. See Tactile/Braille for Tactile/Braille exit signage.
	STAIRWAY ID SIGNS		● ●	-	-	
	AREA OF REFUGE SIGNS		● ●	-	-	
	EMERGENCY EXIT/ALARM SIGNS		● ●	-	-	
EQUIPMENT LABELING	 ELEVATOR MACHINE RM SIGNS		● ●	-	-	Equipment Labeling signs are not included in the Guidelines and are handled separately by the Design Consultant.
	FIRE ALARM/SPRINKLER SIGNS		● ●	-	-	
TEMPORARY	 WAYFINDING SIGNS	● ●		-	3, 4, 5, 11 - 15, 17	Temporary wayfinding sign graphics are designed the same way as permanent wayfinding sign graphics, and are handled by the MBTA. Temporary A-frames are discussed in the Guidelines, while Advisories are not.
	A-FRAMES	● ●		-	18	
	ADVISORIES	● ●		-	-	

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