

COMMUNICATIONS SUB-COMMITTEE
DRAFT SUMMARY REPORT
February 24, 2015

Preface

I would like to thank all of the members of this committee, the Access Board staff, and those from the general public who have come together in open dialogue to help one another better understand each and every perspective in relation to the dissemination of information through the nation's rail networks.

Principles

These guiding principles have been used in our work. They can help build a more inclusive environment.

1. Information being conveyed to passengers must be made available to all passengers regardless of disability. Whenever feasible, visual, tactile, induction loop, described video, electronic software, and other universally accessible means should be used so as to provide maximum inclusion of all people.
2. Audible announcements must also be made available visually and via induction loops.
3. Visual announcements (Variable Message Signs -VMS) must also be made available audibly and via induction loop. If the technology provides for high definition video, audio description and ALS should also be incorporated.
4. Pre-recorded or automated announcements are recommended over human announcements.

Signage Types – Proposed Requirements:

- A. Directional Signs** (includes directional Exit Signs) – Visual

- B. Designation Signs for Spaces** (includes Exit Signs) – Tactile & Visual, and The ISA shall be provided at required wheelchair spaces and priority seating and be located _____.
- C. Designation Signs for Elements** – Not Required to meet accessibility requirements.
- D. Non-Emergency Informational Signs** – Visual and Meet the size requirement for visual characters where possible (practicable).
- E. Non-Emergency Operational Signs** – Tactile & Visual, and Meet the size requirement for visual characters where practicable. Furthermore, where instructions for door latch/locks are provided they shall be both visual and tactile and be located _____. Where a pictogram is provided for these instructions a tactile description shall be provided directly adjacent to it.
- F. Emergency Informational Signs** – Visual & Tactile
- G. Emergency Operational Signs** - Visual
- H. Caution and Safety Signs** (includes icons and logos) - Visual
- I. Stop Identification Signs** (includes train designation, route, and final destination) – VMS, . All cars must provide variable message signs in two locations so that at least one sign is readable from every part of the car. The variable message signs must provide equal information as what is provided aurally. If stops are announced, the signs should announce stops, if emergencies are announced; the signs should announce emergencies, and so forth. Where cars provide route map tracking signs in two locations so that at least one sign is audible and visible from every part of the car.
- J. Menus and Directories** – At least one menu/directory must comply
- K. Employee Only Signs** – Not Required to meet accessibility requirements.

Additional Notes:

- Assistive listening - provide assistive listening (induction loops) throughout the train in bathrooms, meal cars, bedrooms and in bi-level rail cars - [Subcommittee has agreed to this – would make caveat that it is to be provided where audible announcements are intended to be heard]

- Evaluate technical feasibility of induction loops on rail cars - Subcommittee already thinks it is feasible.
- VMS must include audible versions
- Stop announcements, and other audible announcements should be pre-recorded, high quality messages.
- Human announcements should be kept to a minimum. This is especially important with station stop announcements.
- Service animal relief area information should be made available on the inside wall nearest wherever ISA is placed.
- All cars must provide variable message signs in two locations so that at least one sign is readable from every part of the car. The variable message signs must provide equal information as what is provided aurally. If stops are announced, the signs should announce stops, if emergencies are announced; the signs should announce emergencies, and so forth.² Where cars provide route map tracking signs in two locations so that at least one sign is audible and visible from every part of the car.
- Meet the size requirement for visual characters where practicable.
- Where instructions for door latch/locks are provided they shall be both visual and tactile and be located 10 inches of the latch/lock.
 - Where a pictogram is provided for these instructions a tactile description shall be provided directly adjacent to it.
- The ISA shall be provided at required wheelchair spaces and priority seating.
- At least one menu or directory shall comply with accessibility standards.
- Examine what factors should be used to determine equivalency of audible and visible messages. Oral announcements need to have the same level of clarity as visual announcements. This is why pre-recorded announcements are generally better.
- [make recommendation to the Board to do research on speech intelligibility and rail car acoustics
- Variable message signs legibility (e.g., font, case, style, and location) - [reference the ANSI A117.1 technical requirements for VMS Displays] A
- Emergency Notification Announcements must be available via Back-up power

- Visual emergency alerts (flashing fire alarms and such) in all parts of the rail cars -- compartments, main area, restrooms, etc. recommend NFPA 72 requirements with the use of VMS; what db level is in NFPA 72. Is it too loud? alarms can cause disorientation and additional dangers to people who are blind or have cognitive disabilities.
- **Lighting** - Recommend the Board do research on lighting as there is no requirements in the Standard for general or task lighting other than in elevators and at bus entry points.
 - Lighting in circulation areas, restrooms, sleeping compartments, step wells, and in any other areas. Step wells in particular raise issues: 1. Because they may or may not be level platforms; 2. It may or may not be a paved surface one is stepping down on to; 3. Distance to platform varies; and gaps may be difficult especially at night.
 - Task lighting and on-demand passenger controls
- **New Technologies** – Examine the potential for providing messages on hand-held devices such as smartphones – tri-mode communication

Draft Report with annotated comments

Principles

These guiding principles have been used in our work. They can help build a more inclusive environment.

1. Information being conveyed to passengers must be made available to all passengers regardless of disability. Whenever feasible, visual, tactile, induction loop, described video, electronic software, and other universally accessible means should be used so as to provide maximum inclusion of all people.
2. Audible announcements must also be made available visually and via induction loops.

[F. Maldari: Audible announcements must also be made available visually and via induction loops to the extent practical.]

3. Visual announcements (Variable Message Signs -VMS) must also be made available audibly and via induction loop. If the technology provides for high definition video, audio description and ALS should also be incorporated.

[F. Maldari: Visual announcements (Variable Message Signs -VMS) must also be made available audibly and via induction loop to the extent practical.]

4. Pre-recorded or automated announcements are recommended over human announcements.

[L. Hamlin: 2. Audible announcements must also be made available visually and ~~via~~ delivered to a hearing induction loop system.

3. Visual announcements (Variable Message Signs -VMS) must also be made available audibly and via a hearing induction loop system. If the technology provides for high definition video, audio description and ALS the hearing induction loop system should also be incorporated. NAD specifically asked to include ALS if high definition is available.

4. Pre-recorded or automated announcements should be provided whenever possible and appropriate, so long as the recording or automated announcement is high quality so the sound is clear and clean, and are preferable to live announcements.~~are recommended over human announcements.~~]

[A. Philips: 1. Information being conveyed to passengers must be made available to all passengers regardless of disability. ~~Whenever feasible~~

Excepting extreme situations resulting in undue burdens, such information should be conveyed through all means including but not limited to:, visual, tactile, induction loop, described video, electronic software, and other universally accessible means ~~should be used~~ so as to provide maximum inclusion of all people.

2. Audible announcements must ~~also~~ be made available visually and via induction loops.

3. Visual announcements through {Variable Message Signs -(VMS) must also be made available audibly and via induction loop. If the technology provides for high definition video, audio description and Assistive Listening Systems (ALS) should also be incorporated. Moreover, if high definition video is provided in cars, then announcements should also be made in American Sign Language.]

Signage Types – Proposed Requirements:

A. Directional Signs (includes directional Exit Signs) – Visual

B. Designation Signs for Spaces (includes Exit Signs) – Tactile & Visual, and The ISA shall be provided at required wheelchair spaces and priority seating and be located _____.

C. Designation Signs for Elements – Not Required to meet accessibility requirements.

D. Non-Emergency Informational Signs – Visual and Meet the size requirement for visual characters where possible (practicable).

E. Non-Emergency Operational Signs – Tactile & Visual, and Meet the size requirement for visual characters where practicable. Furthermore, where instructions for door latch/locks are provided they shall be both visual and tactile and be located _____. Where a pictogram is provided for these instructions a tactile description shall be provided directly adjacent to it.

F. Emergency Informational Signs – Visual & Tactile

[F. Maldari: ...Visual & Tactile to the extent practical. Reduced size visual and tactical signs are permitted when necessary due to space constraints.]

G. Emergency Operational Signs – Visual

[F. Maldari: ...Visual to the extent practical.]

H. Caution and Safety Signs (includes icons and logos) - Visual

I. Stop Identification Signs (includes train designation, route, and final destination) – VMS, . All cars must provide variable message signs in

two locations so that at least one sign is readable from every part of the car. The variable message signs must provide equal information as what is provided aurally. If stops are announced, the signs should announce stops, if emergencies are announced; the signs should announce emergencies, and so forth. Where cars provide route map tracking signs in two locations so that at least one sign is audible and visible from every part of the car.

[L. Hamlin: VMS: All cars must provide variable message signs (VMS) in two locations so that at least one sign is readable from every part of the car. The VMS variable message signs must provide information that is equivalent to that which is provided aurally: Please see my note below in order to cover both visual and aural information. If stops are announced aurally, VMS the signs should display the announced stops; if emergencies are announced aurally, VMS the signs should display the same emergency information announce emergencies, and so forth. Where cars provide route map tracking signs, those signs should be placed in two locations so that at least one sign is audible and visible from every part of the car.]

[A. Phillips: ~~Stop Identification Signs~~ Variable Message Signs (includes train designation, route, stops, all announcements, and final destination) – VMS, All cars must provide variable message signs in two locations so that at least one sign is readable from every part of the car. The variable message signs must provide equal information as what is provided aurally. If stops are announced, the signs should announce stops, if emergencies are announced; the signs should announce emergencies, and so forth. Where cars provide route map tracking signs in addition to Variable Message Signs, such signage should be provided in two locations of the car so that at least one sign is audible and visible from every part of the car.]

[F. Maldari: Stop Identification Signs (includes train designation, route, and final destination) – VMS, . All cars must provide variable message signs in at least two locations so that at least one sign is readable from every part of the car. The variable message signs must provide equal information as what is provided aurally to the extent practical. If stops are announced, the signs should announce stops, if emergencies are announced; the signs should announce emergencies, and so forth. In instances when there are unexpected emergencies the information provided on the VMS signs does not need to exactly match the information provided aurally. Where cars provide route map tracking signs in two locations so that at least one sign is audible and visible from every part of the car.]

[A. Gagne: All cars must provide variable message signs in at least two locations so that at least one sign is readable from every part of the car. The variable message signs must provide equal information as what is provided aurally . If stops are announced aurally, the visual message signs should ~~announce~~ display stops; if emergencies are announced aurally; the visual message signs should ~~announce~~ display emergencies, and so forth. Where cars provide route map tracking signs in two locations so that at least one sign is ~~audible and~~ visible from every part of the car.]

J. Menus and Directories – At least one menu/directory must comply

K. Employee Only Signs – Not Required to meet accessibility requirements.

Additional Notes:

- Assistive listening - provide assistive listening (induction loops) throughout the train in bathrooms, meal cars, bedrooms and in bi-level rail cars - [Subcommittee has agreed to this – would make caveat that it is to be provided where audible announcements are intended to be heard]

[L. Hamlin: Assistive listening system/hearing induction loop system - provide assistive listening system (hearing induction loop system) throughout the train in bathrooms, meal cars, bedrooms and in bi-level rail cars]

[A. Phillips: Assistive Listening Systems (ALS) - provide assistive listening (induction loops) throughout the train in bathrooms, meal cars, bedrooms and in single and bi-level rail cars -]

[F. Maldari: Assistive listening - provide assistive listening (induction loops) throughout the train in bathrooms, meal cars, bedrooms and in bi-level rail cars to the extent practical -]

- Evaluate technical feasibility of induction loops on rail cars - Subcommittee already thinks it is feasible.

[L. Hamlin: Evaluate technical feasibility of hearing induction loop system on rail cars - Subcommittee has information that this already thinks it is feasible.]

- VMS must include audible versions

[F. Maldari: VMS must include audible versions to the extent practical]

[A. Phillips: • Full visual access must always be provided for stop announcements, last calls for food, drinks, boarding, disembarking, and promotions as well as other audible announcements. This kind of access must be provided through the variable message signs, preferably using prerecorded messages.]

- Stop announcements, and other audible announcements should be pre-recorded, high quality messages.

[A. Phillips: Stop announcements and other audible announcements should be pre-recorded, high quality messages with corresponding visual messages provided simultaneously.]

- Human announcements should be kept to a minimum. This is especially important with station stop announcements.

[L. Hamlin: {Human} Live announcements from the crew should be kept to a minimum.]

- Service animal relief area information should be made available on the inside wall nearest wherever ISA is placed.
- All cars must provide variable message signs in two locations so that at least one sign is readable from every part of the car. The variable message signs must provide equal information as what is provided aurally. If stops are announced, the signs should announce stops, if emergencies are announced; the signs should announce emergencies, and so forth.² Where cars provide route map tracking signs in two locations so that at least one sign is audible and visible from every part of the car.

~~[L. Hamlin: All cars must provide variable message signs in two locations so that at least one sign is readable from every part of the car. The variable message signs must provide equal information as what is provided aurally. If stops are announced, the signs should announce stops, if emergencies are announced; the signs should announce emergencies, and so forth.² Where cars provide route map tracking signs in two locations so that at least one sign is audible and visible from every part of the car.~~

• VMS:All cars must provide variable message signs (VMS) in at least two locations so that at least one sign is readable from every part of the car. The VMS must provide information that is equivalent to that which is provided aurally: if stops are announced aurally, VMS should display the announced stops; if emergencies are announced aurally; VMS should display the same emergency information, and so forth. Where cars provide route map tracking signs, those signs should be placed in two locations so that at least one sign is audible and visible from every part of the car. We need to say this in a way

that it also means the reverse. With the growing use and popularity of VMS, less and less is audible. The necessary information (not the advertisements) need to be equally available.]

[A. Phillips: All cars must provide variable message signs in two locations so that at least one sign is readable from every part of the car. The variable message signs must provide equal information as what is provided aurally. If stops are announced, the signs should announce stops, if emergencies are announced,; the signs should announce emergencies, and so forth. 2- Where cars provide route map tracking signs , such signage should be provided in two locations of the car so that at least one sign is audible and visible from every part of the car.]

[F. Maldari: All cars must provide variable message signs in two locations so that at least one sign is readable from every part of the car. The variable message signs must provide equal information as what is provided aurally. If stops are announced, the signs should announce stops, if emergencies are announced; the signs should announce emergencies, and so forth. However for emergency announcement there may be additional information provided aurally that is not transmitted via VMS.]

- Meet the size requirement for visual characters where practicable.

[A. Phillips: All visual announcements must meet or exceed Meet the size requirement for visual characters ~~where practicable.]~~

- Where instructions for door latch/locks are provided they shall be both visual and tactile and be located 10 inches of the latch/lock.

[A. Gagne: Where instructions for door latch/locks are provided they shall be both visual and tactile and be located within 10 inches of the latch/lock.]

- Where a pictogram is provided for these instructions a tactile description shall be provided directly adjacent to it.
- The ISA shall be provided at required wheelchair spaces and priority seating.
- At least one menu or directory shall comply with accessibility standards.
- Examine what factors should be used to determine equivalency of audible and visible messages. Oral announcements need to have the same level of clarity as visual announcements. This is why pre-recorded announcements are generally better.

[L. Hamlin: Examine what factors should be used to determine equivalency of audible and visible messages. Oral announcements need to must have the same level of clarity as visual announcements.]

[A. Phillips: Oral announcements need to have the same level of clarity as visual announcements as well as vice versa. This is why pre-recorded announcements are generally ~~better~~ superior.]

- [make recommendation to the Board to do research on speech intelligibility and rail car acoustics]
- Variable message signs legibility (e.g., font, case, style, and location) - [reference the ANSI A117.1 technical requirements for VMS Displays]
- Emergency Notification Announcements must be available via Back-up power.

[A. Phillips: Emergency Notification Announcements, both aural and visual, must be available via Back-up power.]

- Visual emergency alerts (flashing fire alarms and such) in all parts of the rail cars -- compartments, main area, restrooms, etc. recommend NFPA 72 requirements with the use of VMS; what db level is in NFPA 72. Is it too loud? alarms can cause disorientation and additional dangers to people who are blind or have cognitive disabilities.

[L. Hamlin: Visual emergency alerts (flashing emergency alerts ~~fire alarms and such~~) in all parts of the rail cars...]

[A. Phillips: Visual emergency alerts (flashing fire alarms and such) in all parts of the rail cars -- compartments, main area, restrooms, etc. are recommended to comport with NFPA 72 requirements with the use of VMS; what db level is in NFPA 72. [Is it too loud? alarms can cause disorientation and additional dangers to people who are blind or have cognitive disabilities.]]

- Lighting - Recommend the Board do research on lighting as there is no requirements in the Standard for general or task lighting other than in elevators and at bus entry points.

[L. Hamlin: Recommend the Board do research on lighting as there is are no requirements ~~in the Standard~~ for general...]

- Lighting in circulation areas, restrooms, sleeping compartments, step wells, and in any other areas. Step wells in particular raise issues: 1. Because they may or may not be level platforms; 2. It may or may not be a paved surface one is stepping down on to; 3. Distance to platform varies; and gaps may be difficult especially at night.

- Task lighting and on-demand passenger controls
- New Technologies – Examine the potential for providing messages on hand-held devices such as smartphones – tri-mode communication.

[L. Hamlin: Examine the potential for providing messages that are viewed on VMS to also be available and accessible on hand-held devices such as smartphones – tri-mode communication.]

[A. Phillips: New Technologies Ways to Provide Access – Examine the potential for providing messages on platforms such as smartphones, tablets, and wearables ~~hand-held devices such as smartphones~~ — tri-mode communication accessibility must be provided in all modes of communication.]

[A. Gagne: http://www.google.ca/imgres?imgurl=http://images.nycsubway.org/maps/calcgno-2010-06-28c.gif&imgrefurl=http://www.nycsubway.org/wiki/New_York_City_Subway_Route_Map_by_Michael_Calcagno&h=1522&w=1172&tbnid=GoxqmAhi6wuSfM:&zoom=1&docid=Ty5EtWeep5rKnM&ei=-jLaVlqsAonnUp_TgvgF&tbnid=isch&ved=OCDIQMygAMAA]

[J. Lintz: A couple of the alphabetized sections could be concentrated into one, eg current D and E, and F and G.

B seems a bit vague. More on the lines of: "Designation Signs for wheelchairs and priority seating: tactile, visual and ISA should be located at eye and hand level." Some of the descriptive terms aren't very clear to me. For example, "Designation signs for Elements." This is perhaps clearer to experts reading the text?

Use "station" for the somewhat ambiguous "stop?"

K Employees Only signs --- "no requirements." Do any employees have disabilities?

Most of the Notes are repetitious. Maybe only save the following: Service animals relief areas; acoustics --- standards; backup power; visual and audible alarms --- (not too bright or too loud); Good lighting and clear voices; Use of smart phones and other current technology.

We need to ensure that the main cars have induction loops as well. The bedroom cars probably should be called sleeper cars.]

[G. Millis: The Washington Metrorail system has invested in accessibility in order to ensure the disability community in the DC service area has access to mass transit. We congratulate the RVAAC on its work to

improve accessibility in rail service, particular inter-city service for people with disabilities.

Any rule changes that have application to any particular rail mode need to expressly state on which mode the change will be required. For example, menus and animal service areas could be limited to inter-city service. They have no application on subway service.

Technology can assist in making rail station and rail cars more accessible. That technology though must be available and must be able to perform in complex environments. Environment can vary significantly depending on if the rail service is subway, commuter or inter-city railroad. The technology must also be financially feasible and operationally sustainable.

For example, rail cars for each type of service may require significant differences in order to install inductive listening technology. Rail stations are also different varying from complex, such as multi-level multi line stations such as Gallery Place Metro to simple outdoor stations serving a single line. More information on the feasibility and cost of installing inductive loops in rail facilities and cars is needed if this rule is to be proposed.

Similarly the language on signage also may pose technical challenges and operational concerns. An operational concern is that a variable messaging sign providing audible announcements must operate in environments with rail car noise, station announcements and announcements made by trains. Given the background noise level, announcements made by a variable messaging sign is likely not to be heard and especially as distance increases from the sign. A technical concern is that there is not room in Metrorail cars to install some of the signage discussed such as at end doors of subway cars.]