

GTFS Wheelchair Accessibility Data

Making wheelchair
accessibility of our transit
systems explicit.

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Updated Sept 2022



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Why?

1. **Your customers!**
2. **ADA (US)**
3. **Unruh Civil Rights Act (CA)**
4. **CA Transit Data Guidelines**



ADA

Requires that agencies make reasonable accommodations to ensure services are provided to people with disabilities “comparable to the level of designated public transportation services provided to individuals without disabilities using such system.”

All transit agencies are required to adhere to ADA Title II or III

[Case law against LACMTA](#) establishes that failure to provide adequate trip planning services is a violation of ADA for “failing to provide paratransit services comparable to its regular public transportation”.

It could be reasonably assumed that failure to provide a comparable trip planning experience would be interpreted of being in violation of ADA as well.

Unruh Civil Rights Act

“All persons within the jurisdiction of this state are free and equal, and no matter what their sex, race, color, religion, ancestry, national origin, **disability, medical condition**, genetic information, marital status, sexual orientation, citizenship, primary language, or immigration status are **entitled to the full and equal accommodations, advantages, facilities, privileges, or services in all business establishments of every kind** whatsoever.”

[CA Civil Code Section 51](#)

[Website Accessibility Case Law](#)

Likely applicable to

- Traveller information and travel planning tools
- Provision of explicit wheelchair access information, language translations and DRT trip planning

California Transit Data Guidelines

“Include complete wheelchair_boarding data for both stops.txt and trips.txt”

“Include sufficient data instops.txt, pathways.txt, and levels.txt to navigate to, from, and between any boarding zone to street level with varying physical abilities including pathway_mode and num_stairs where applicable. This includes but is not limited to any stops that use parent_station in stops.txt as well as all significant or named transit facilities where an infrequent visitor may be concerned about accessibility.”

[CA Transit Data Guidelines v2](#)

Explicit Wheelchair Accessibility Data:

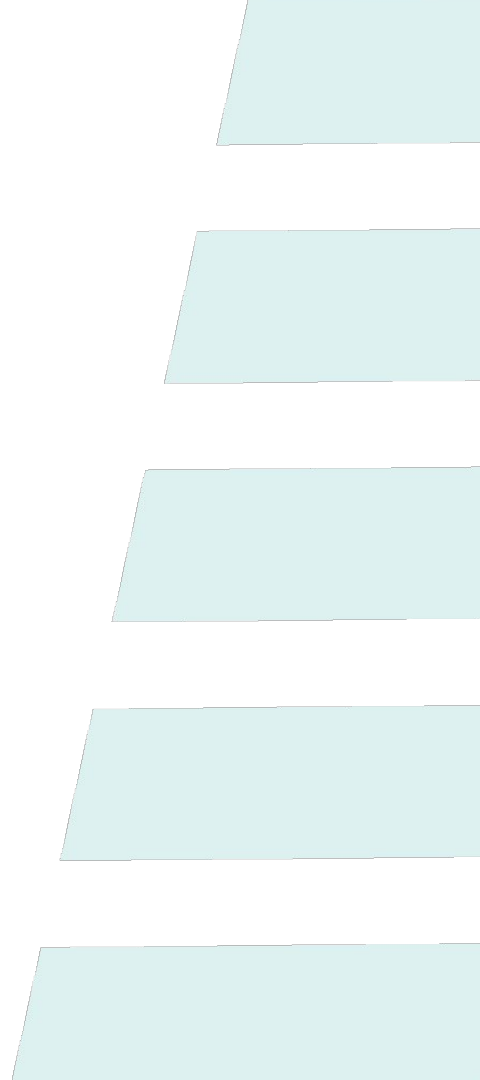
- The wheelchair_boarding field has a valid, non-null value for every entry in stops.txt.
- The wheelchair_accessible field has a valid, non-null value for every entry in trips.txt.
- **Where applicable**, sufficient data is included within stops.txt, pathways.txt, and levels.txt to navigate to, from, and between any boarding zone to street level with varying physical abilities

[CA Transit Data Guidelines v3 Release Candidate](#)



What does it look like?

To your customers



What Does Accessibility Look Like?

The screenshot shows the Google Maps interface with a route from Ronald Reagan Washington National Airport to National Mall. The route is highlighted in orange. The map includes labels for various locations such as McLean, Falls Church, Arlington, and Washington. A green arrow points to the 'Wheelchair accessible' option in the 'Routes' section.

Route options Close

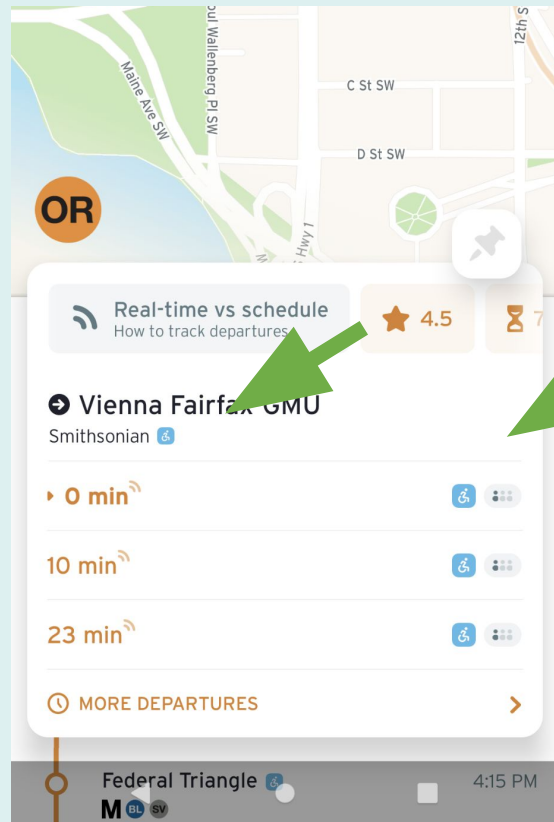
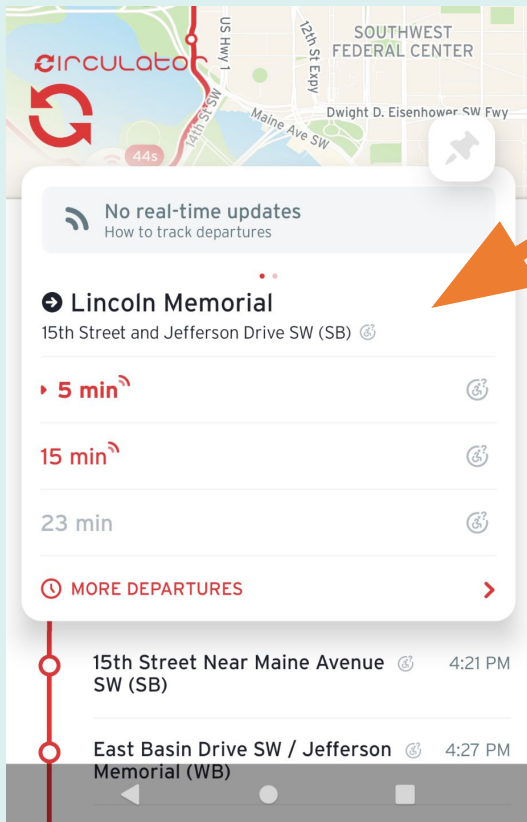
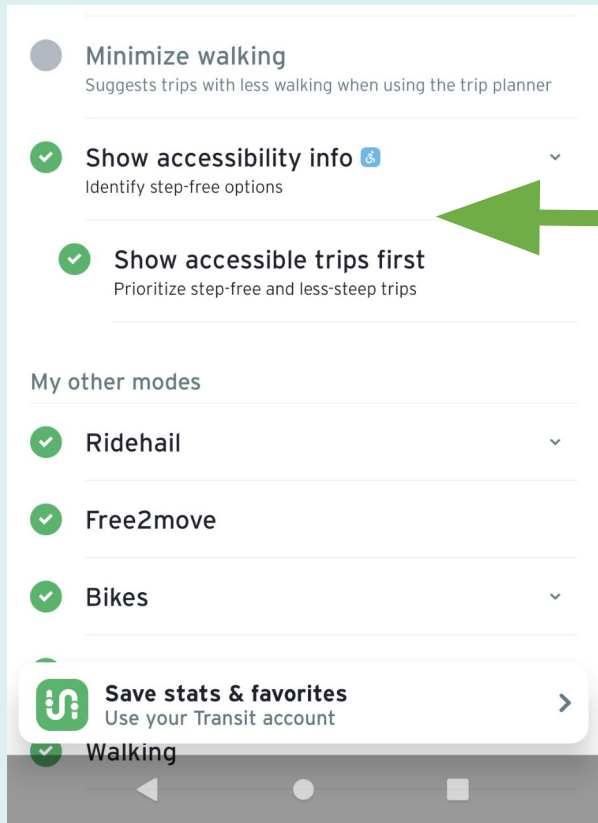
Prefer

- Bus
- Subway
- Train
- Tram and light rail

Routes

- Best route
- Fewer transfers
- Less walking
- Wheelchair accessible

What Does Accessibility Look Like?



Source: TransitApp

Where can we specify wheelchair Accessibility

...in GTFS



For Trips

*Should I use this
route/trip?*



www.rodjonesphotography.co.uk, CC BY 2.0, via
Wikimedia Commons

Simple Stops

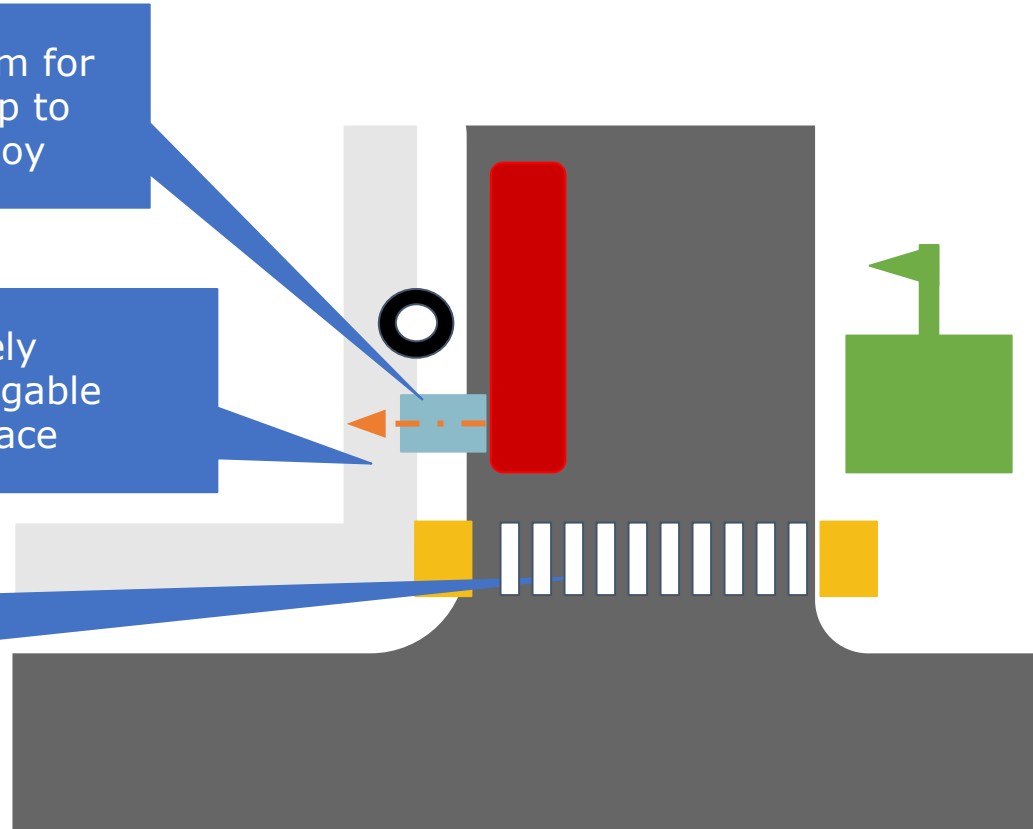
Should I board or exit a vehicle here?

Room for ramp to deploy

Safely navigable surface

Safely connect to stop-area destinations.

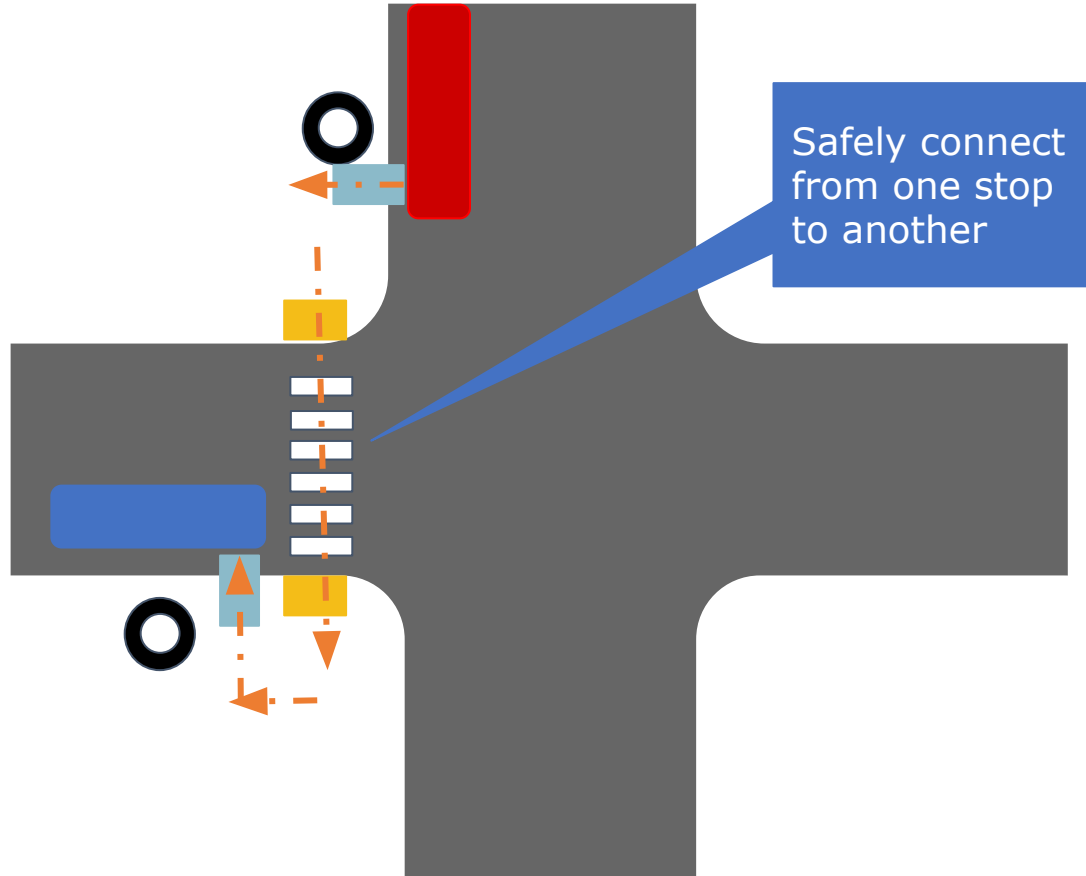
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Stop Groups

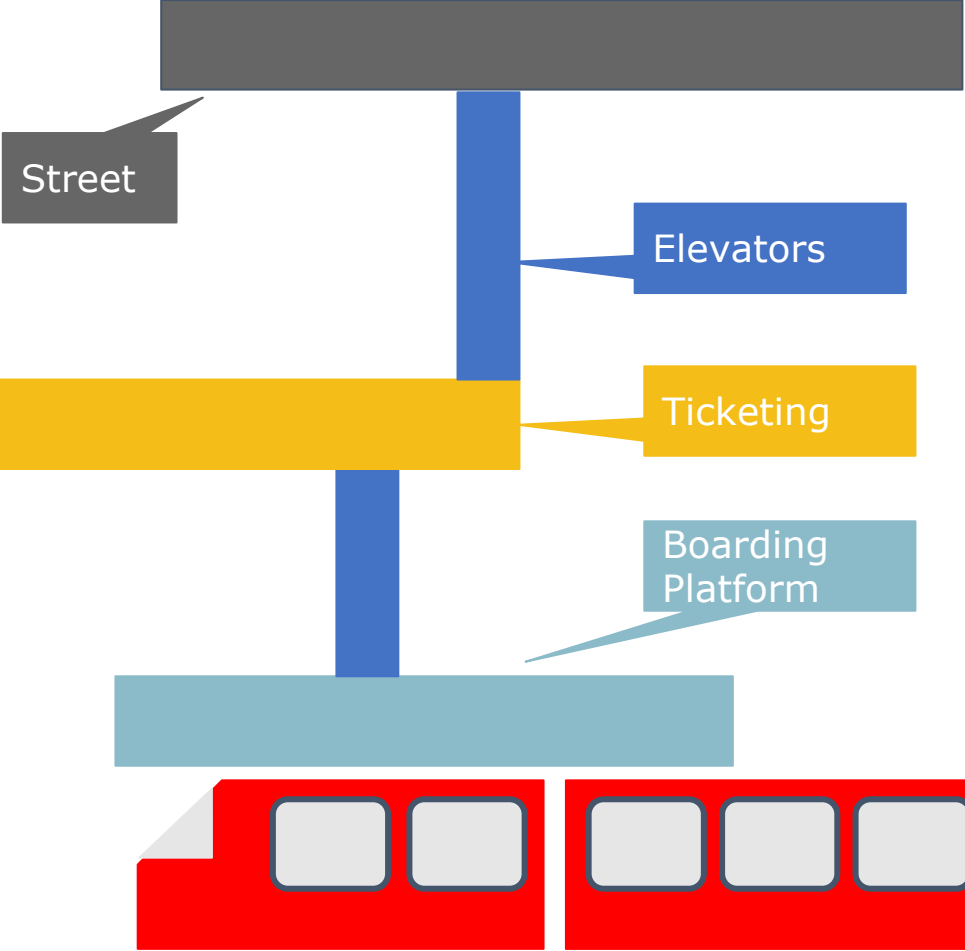
*Is this a place I
should transfer?*

What is the route?

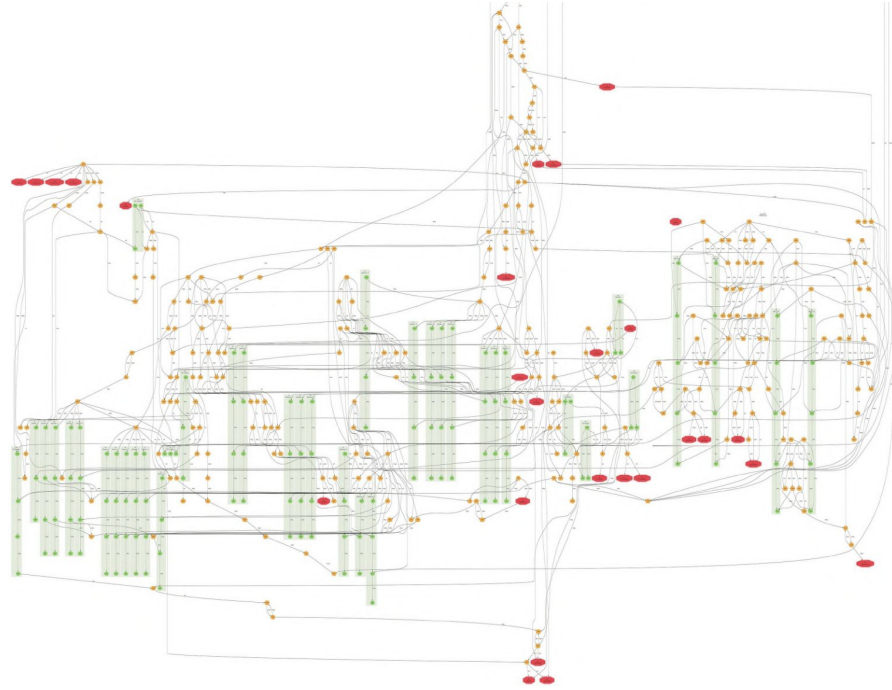


Complex Stations

*How should I get to
Platform B in my
wheelchair?*



Very Complex Stations



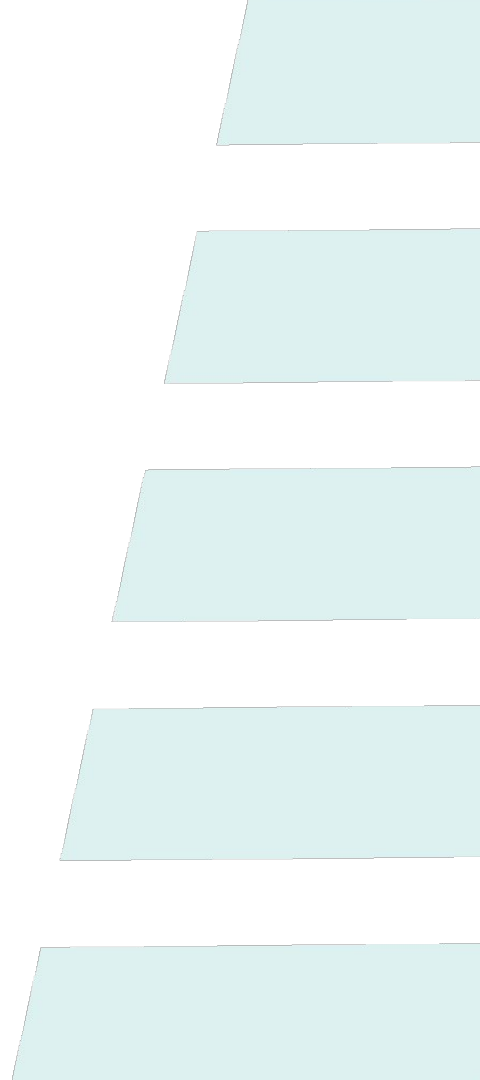
California Transit Data Guidelines

What is "where applicable" for needing Pathways?

1. **Stop serves rail**
2. **Stop record has parent or is a parent**
3. **Stop is close to another stop (<~300')**
4. **Stop is far from roadway ROW (>~10')**
5. **Stop name contains "transit center" or "station"**

How do we add it?

...in GTFS



For Trips

Use `wheelchair_accessible` field in `trips.txt`

Should be specified in GTFS Schedule for planning ahead, but should also updated in [GTFS Realtime](#) if it changes.

0 or empty - No accessibility information for the trip.*

1 - Vehicle being used on this particular trip can accommodate at least one rider in a wheelchair.

2 - No riders in wheelchairs can be accommodated on this trip.

* *Goal is to minimize the # of stops with this value.*



For Simple Stops

Use wheelchair_boarding field in stops.txt

0 or empty - No accessibility information for the stop.*

1 - Some vehicles at this stop can be boarded by a rider in a wheelchair.

2 - Wheelchair boarding is not possible at this stop.

**** Goal is to minimize the # of stops with this value.***



For Stop Groups

Use `wheelchair_boarding` field in `stops.txt`

Use `pathways.txt` to describe routes between stops.

Defined by: `pathway_id`, `from_stop_id`, `to_stop_id`

`pathway_mode`: e.g. **walkway, stairs, escalator, elevator**

`stair_count`: **specify if there are any grade separations**

`max_slope`: **specify if not easily navigable by wheelchair**



For Complex Stations

1. **Plan the effort*** by consulting resources like:
 - a. [Kisio Pathways Data Collection Guide](#)
2. **Leverage tooling like:**
 - a. [GTFS Station Builder](#)
3. **Validate accuracy visually with graph visualization tools like:**
 - a. [GTFS Station Builder](#)


**If can't do it all at once, plan a phasing which adds detail or specific stations over time - prioritizing most important information first.*



Who is already publishing?



In California

	Wheelchair Boarding	Pathways
Bay Area 511		
San Diego MTS		
Monterey Salinas		
NCTD		
Nevada County Connects		
Torrance		
Eastern Sierra		



Nationally

	Wheelchair Boarding	Pathways
WMATA	✓	✓
MBTA	✓	✓
LIRR	✓	
DART	✓	
MARTA	✓	
NYC DOT Ferry	✓	
Maryland Transit Administration	✓	
Metro Transit (MN)	✓	

Concerns



Liability

Protections:




1. Usage License and Terms of Use

See [recommended text](#)



2. Caveats at UX level



← from Nationals Park
to National Mall

26 min (1.3 miles)   

via Half St SE and Washington Ave SW

 Use caution—walking directions may not always reflect real-world conditions 

Nationals Park
1500 S Capitol St SE, Washington, DC 20003

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UX Caveats

4:09 PM - 4:24 PM
(15 min)



4:13 PM from M St SE & S Capitol SE
5 min every 20 min

 [Add to Calendar](#)

 Use caution—wheelchair-accessible directions may not always reflect real-world conditions

4:09 PM  **Nationals Park**
1500 S Capitol St SE, Washington, DC
20003

 Walk



Temporarily Inaccessible

If a stop is usually wheelchair accessible, but becomes temporarily unavailable, you can either or both of:

1. Update and re-publish stops.txt or pathways.txt with updated wheelchair_accessibility or steps (*preferred if long-term*)
2. Add an alert for a specific time range to the stop with the type: ACCESSIBILITY_ISSUE and optionally the severity level (*necessary if unplanned*)



Note: There are proposed improvements to the realtime component to pathways. If interested, contact hello@calitp.org