



SFMTA

# Accessible Pedestrian Signals (APS) in San Francisco

Policy and Governance Committee

9-25-2018

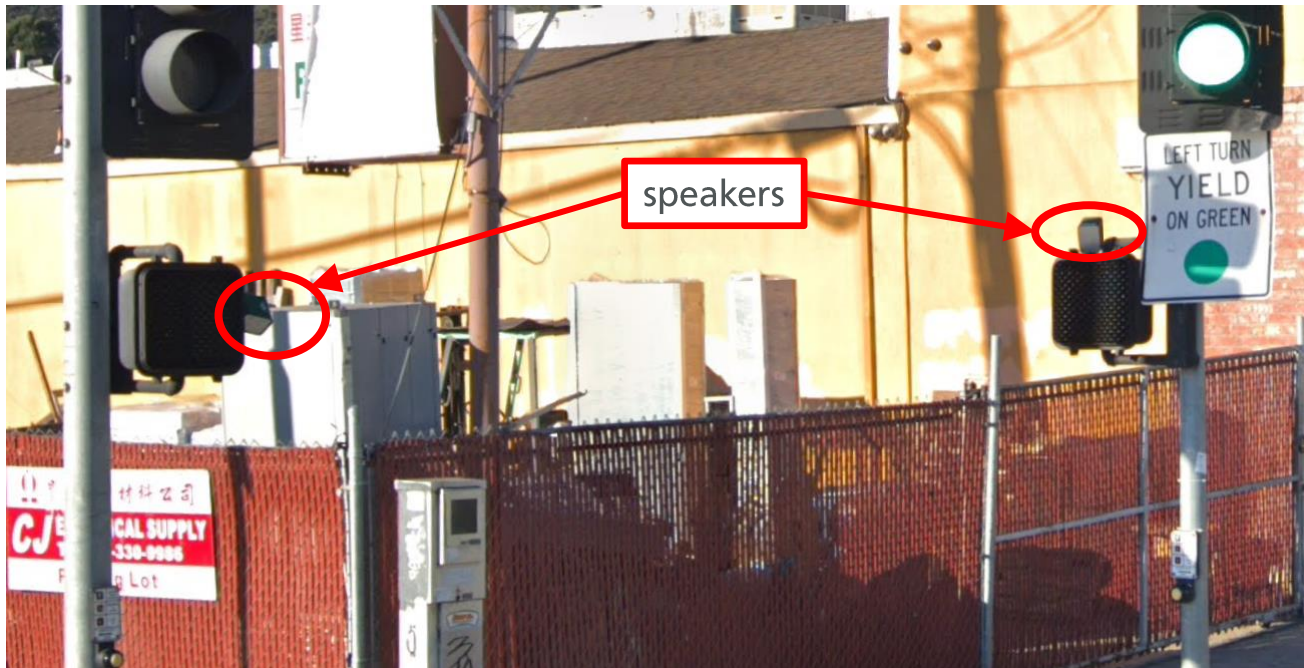
# APS Overview

- Assist persons with visual impairments to cross the street at signalized locations
- Communicate in a non-visual manner:
  - Slow tick tone to help users locate the button
  - During walk signal, button makes a rapid tick noise and vibrates
  - Button arrow & curb ramps aligned with crosswalk
  - Street name in Braille on button sign
  - Holding the button down 1 second provides audio description of your location
- Devices comply with standards:
  - CAMUTCD (California Manual on Uniform Traffic Control Devices)
  - PROWAG (Public Rights-of-way Accessibility Guidelines)
- APS button design and operation consistent throughout SF



# Older Devices

- Bird chirp & cuckoo noises from speakers
- Cities experimented with various devices
- California Standards were updated in 2012 – These systems no longer permitted going forward

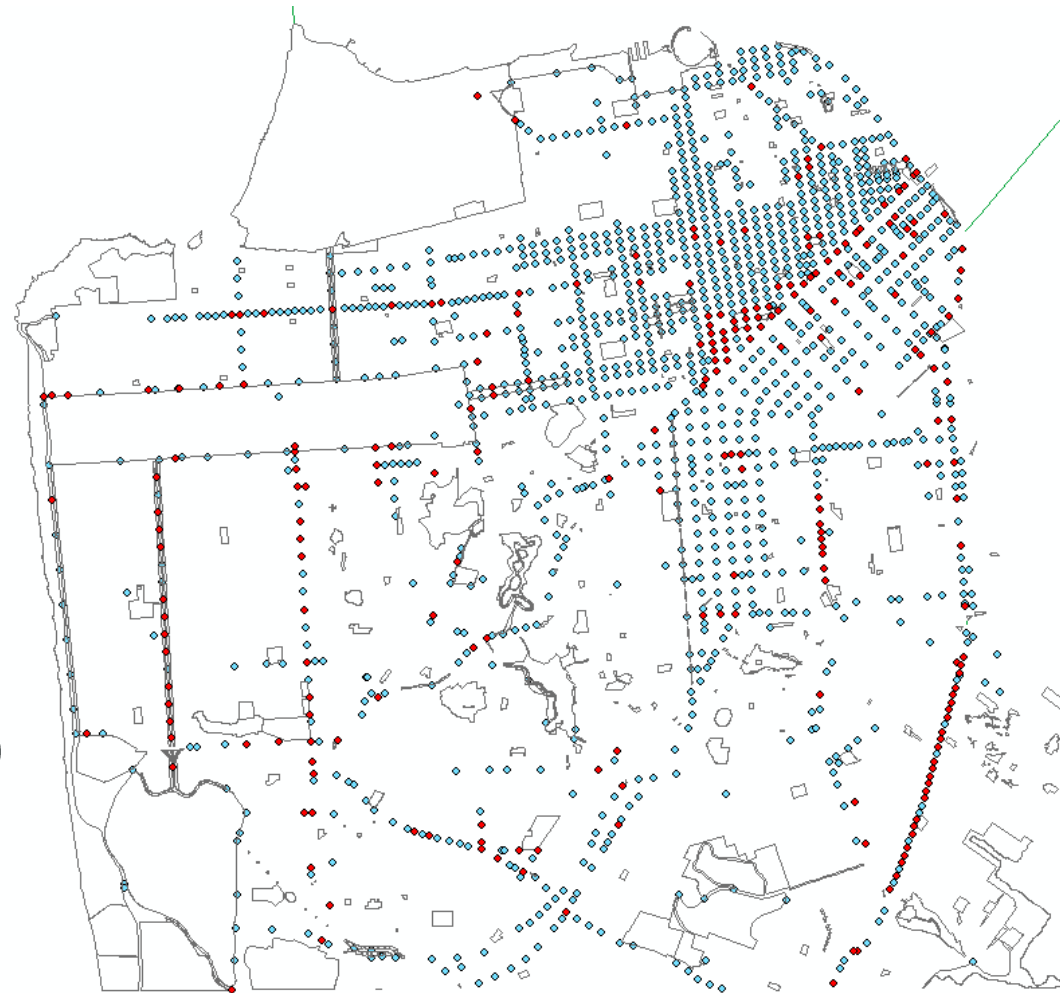


# APS Timeline

- Prior to 2003 – SFMTA experimented with several APS technologies at a few isolated locations
- 2003-2006 –Lighthouse for the Blind and other advocates approached City to improve conditions for persons with visual impairments. City worked with advocates on a pilot project to test APS in the field and develop an installation, design, and operation policy
- 2007 – City has 41 APS-equipped intersections. SFMTA Board approves agreement with all parties along with finalized installation policies, and design criteria. City agreed to spend \$1.6 Million and have a total of 80 intersections equipped with APS by end of 2009
- 2010 – City exceeds goal, with 116 locations with APS.
- 2012 – New California standards matched city's existing policies.

# Current Status

- 252 of 1232 signalized intersections in San Francisco have APS
- 100+ locations receiving APS in the next 3 years via various projects (Geary & Van Ness Bus Rapid Transit, Lombard Vision Zero, Various Streetscape projects on 2<sup>nd</sup>, Folsom, and Harrison Streets, Various Signal Upgrade Projects)
- Caltrans potentially funding 30 APS locations in their right-of-way



◆ = signalized intersection  
◆ = signalized intersection with APS

# Technical Challenges & Cost of APS

- Challenges for new APS installations:
  - Must have existing pedestrian countdown signals (PCS) for all crosswalks
  - Requires poles in good locations
  - Existing underground pipes may be damaged/full and can not accommodate additional wiring required by PCS and/or APS (~\$100,000 to replace)
  - Excavation for conduits & poles may necessitate new curb ramps (~\$160,000 for entire intersection)
- Minimum \$20,000 for materials and labor if above conditions met
- Upper range of \$1,000,000 for a full upgrade to replace all intersection components if existing poles, signals & underground pipes is old and/or or above requirements not met



19th Avenue and Judah Street



Alemany Boulevard and Santa Rosa Avenue

# APS Included in Capital Projects

- SFMTA Policy: **All new traffic signals and major signal upgrades will receive APS**
  - APS included with most large Streetscape, Muni Forward, Vision Zero, and Signal Upgrade Projects
  - Best to include APS installation with an existing signal upgrade due to cost efficiencies

# Public Request Process for APS

- Request received via 311 or other means
- Intersections are scored based on several factors including: nearby pedestrian generators, proximity to programs for the visually impaired, complex street geometry, complex signal timing, and presence of Muni
- Within 90 days of receiving request, constituent is informed of intersection rank and if an upcoming project will install APS.
- 71 locations requested. 20 being done in next few years under various projects
- Remaining locations will be selected based on available funding
- SFMTA website describes this request process





# Maintenance & Operational Concerns

- Maintenance Issues: Call 311 – Field Response within 24 hours by signal shop. Common issues: Button won't vibrate, audio messages too quick or not playing
- Volume concerns: Engineering will evaluate settings
- APS timing is tied to the pedestrian signal timing so the button tones and vibrations match the walk signal. No need to change APS timing when walk or flashing red hand timing is changed.
- Recent Conversation with Lighthouse for the Blind – Referred maintenance issues to our signal shop who replaced some damaged buttons.