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ACCESSIBLE PEDESTRIAN SIGNALS

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You asked about “audible traffic signals” and the procedure for installing them. We describe the process for installing them in Connecticut and six other jurisdictions. We also summarize some of the factors that should be considered when deciding whether to install these signals.

SUMMARY

Audible traffic signals are included in the broader category of accessible pedestrian signals (APS), devices that use audible tones, verbal messages, or, in some cases, vibrating surfaces to alert visually impaired pedestrians about when it is safe to cross a street. Early versions of these traffic signals, usually installed near schools for the blind, used bells or buzzers to alert pedestrians. Today there are several different technologies available, including those with pushbutton controls, automatic volume adjustment, and tactile arrows that point in the direction of travel at the crosswalk.

In Connecticut, as in many states and cities, APS signals are usually installed at particular intersections at the request of a visually impaired individual. Some jurisdictions, such as Maryland, San Francisco, California, and Portland, Oregon, have devised specific criteria by which to rank those intersections most in need of APS.

CONNECTICUT APS INSTALLATION PROCESS

The process varies depending on whether the APS is being proposed for a local or state road, but in either case, the State Traffic Commission (STC) must approve the installation. According to James M. Jurczyk, Transportation Supervising Engineer for the STC, a request for an APS signal must first be made to a local traffic authority (LTA), regardless of whether the signal is to be installed on a local or state road.

In the case of proposed installation on a local road, and if the LTA supports the request, the town would prepare an appropriate design or hire a traffic engineer to do so. The LTA would then submit the design to the STC for approval.

If a request is made to an LTA for a signal proposed for a state road or highway, Jurczyk says that the Connecticut Board of Education and Services for the Blind (part of the Bureau of Rehabilitative Services (BRS) as of July 1, 2011) must confirm the need for the signal and verify that the necessary education and mobility assistance is provided to the visually impaired pedestrian. The LTA would then forward the request to the Department of Transportation's (DOT) Division of Traffic Engineering for consideration.

He states that DOT would design and install the audible pedestrian signal if the department deems it warranted. Jurczyk also states that audible pedestrian signals can only be included in a traffic control signal with an exclusive pedestrian phase (i.e., motor vehicle traffic on all approaches receives a red signal and pedestrian crossing is controlled by "Walk/Don't Walk" signals). He said STC approval would be required if the installation involves creating this exclusive pedestrian (or "walk") phase, which is considered a major signal revision. But STC approval for the design would not be required if the installation simply modified an existing exclusive pedestrian phase because DOT has blanket authority to make such minor revisions.

Jurczyk also notes that the decision to include an audible pedestrian signal should be based on the guidelines in the Federal Highway Administration's "Manual on Uniform Traffic Control Devices for Streets and Highways" (MUTCD) <http://mutcd.fhwa.dot.gov/pdfs/2009/mutcd2009edition.pdf> and the device designed according to MUTCD standards.

Bill Webb and John Waiculonis, orientation and mobility (O&M) specialists at BRS's Services for the Blind unit, estimate they receive about six requests a year to assess signalized intersections for their suitability for an APS installation, and that state O&M specialists "have been involved in well over one hundred APS installations throughout Connecticut" during the past 20 years.

FACTORS TO CONSIDER WHEN INSTALLING APS

According to "Accessible Pedestrian Signals: A Guide to Best Practices," prepared in 2009 for the National Cooperative Highway Research Program (NCHRP, <http://www.apsguide.org/>) the Americans with Disabilities Act (ADA), among other federal laws, requires state and local government programs and facilities, including sidewalks and crosswalks, to be accessible to people with disabilities.

The NCHRP report states that APS should be installed in new construction wherever pedestrian signals are installed and that draft federal public rights-of-way access guidelines are the best guidance for these new and reconstructed intersections. The report also notes that some states and municipalities have devised ways to rank existing intersections to determine which of these are best suited for retrofitting with APS (see below).

According to the report, states and municipalities deciding where to install the devices must consider the information available to visually impaired pedestrians and which crossings are in greatest need of APS. But it says that prioritization schemes should place only limited emphasis on factors related to frequency or likelihood of use by blind pedestrians.

"The information provided by APS may be necessary at any time, along any route, to residents, occasional travelers, and visitors," it states. "Intersections having high pedestrian volumes are likely to have pedestrians whose vision is sufficiently impaired so as to have difficulty using conventional pedestrian signals. Of greater importance in prioritizing crosswalks are factors related to determining whether sufficient acoustic information exists — at all times — to permit safe crossing at a particular intersection or crosswalk."

APS INSTALLATION PRACTICE IN OTHER JURISDICTIONS

The NCHRP report notes that Connecticut's "on request" installation process is fairly common among states and municipalities installing the devices. But some jurisdictions such as Maryland, San Francisco, California and Portland, Oregon, have devised specific criteria to rank intersections for possible APS installation. The information on all of the following six jurisdictions, except for San Francisco, is taken from the report. We list them alphabetically by state.

San Francisco, California

San Francisco, which agreed to install APS in 2007, has since installed these signals at 116 intersections. The city's APS program includes a detailed checklist for prioritizing APS requests and a maintenance program. More information on the San Francisco program is available on-line at <http://www.sfmta.com/cms/wproj/aps.htm>. The city's prioritization tool can be found at: http://128.121.89.101/cms/wproj/documents/APSRankingTool4_20_2010.pdf.

Atlanta, Georgia

APS installations in Atlanta are made in response to individual requests to the Traffic Engineering Department. An engineer evaluates the timing sequence and signalization and may meet with the requestor to discuss the issue. The city ranks requests by the date they were submitted and the intersection's traffic volume.

Maryland Department of Transportation

The Maryland DOT formed a committee in November 2000 to develop criteria for installing and scheduling the installation of APS. Committee members included representatives of the visually impaired community, traffic engineers, O&M specialists, ADA coordinators and DOT staff. The committee developed a prioritization checklist, which it used to score 40 intersections. The scores range from 14 to 46 out of possible total of 60. The DOT considers any intersection with a rating of more than 36 a high priority warranting APS installation.

Newton, Massachusetts

In this city a mayor's committee considers whether new signals should have APS, and refers its recommendations to the city public works department. Requests from individuals are referred simultaneously to the mayor's committee and the city traffic council. The council has 12 weeks to decide the matter. A city traffic engineer also consults with an O&M specialist at the Carroll Center for the Blind.

Charlotte, North Carolina

In Charlotte, APS devices are requested by citizens and installed after review by staff of Metrolina Association for the Blind, a private non-profit organization. In general, devices are installed in the order they are requested. The Charlotte/Mecklenburg Advocacy Council for People with Disabilities and the Metrolina Association for the Blind act as liaisons between the visually impaired person and the city.

Portland, Oregon

Portland established a formal APS policy in 1996. It assembled a stakeholders group, including members of the visually impaired community, and developed a policy in the course of three meetings. The key policy points include: APS is installed only on request; the intersection must have some unique or unusual characteristics warranting the installation; and referral to an O&M specialist (provided through agreement with the Oregon Commission for the Blind) is required.

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