



FREQUENTLY ASKED QUESTIONS

update: January 2016

Why are mileage markers important?

People enjoy trails for a variety of reasons. Mileage markers help recreational users track progress as they walk or run. Bike commuters can use markers to pace their travel and get a sense of distance to their destination. For all trail users, mileage markers provide a tool to precisely determine one's location along a trail system. This is vital information when someone seeks the assistance of emergency personnel and facilitates the reporting and tracking of a maintenance concern.

Are markers necessary if Smart Phones can provide location data?

Smart phones do provide location data that can support 911 dispatching – but they do not resolve all issues with the geo-positioning of a person along a trail.

1. Some users turn off location services due to battery usage, privacy concerns or international calling plans (an issue for tourists).
2. Line of sight is critical for accurate location by GPS-enabled smart phones. Trees can prevent accurate signals to satellites and can create up to a ¼-mile error.
3. Cellular phones depend on triangulation between towers. A three-tower signal does provide accuracy – but it is not uncommon for a phone to catch only two towers with less accuracy.
4. Precise Smart Phone location data doesn't inform 911 Center operators how to reach someone along a trail (point of entry, presence of bollards, obstructions, etc.)
5. When near a State highway facility, a cellular phone call may be routed to Caltrans' Vallejo 911 Center where local knowledge of trails may be unavailable. The City of San José-branded signs offer a tool for Caltrans staff to redirect the calls to San José's 911 Center.

What were the City's goals in developing an integrated marker and signage system?

Staff studied existing markers, signage and striping found in San José, as well as along trails in the United States and Europe. It found that many systems had a single purpose of guiding users about distance travelled. San Jose's mileage markers seek to accomplish the following:

- Create a physical address to support location of incidents and maintenance concerns.
- Support more efficient use of existing technical and staff resources.
- Create a highly visible marker system.



- Supply precise location data to the 911 Center.
- Incorporate trails in the surrounding roadway network for 911 Center purposes.
- Create logical and memorable graphics to remind users of the specific trail system.
- Use reflectivity to supporting viewing at all times of day and night.

How are markers integrated with the 911 Center?

Staff studied operations in San José's 911 Center and found that trails are not commonly depicted on roadway maps.

1. The precise location of mileage markers are now depicted on roadway maps found on dispatcher screens.
2. Trails are recognized as a pedestrian/bike road on the roadway map screen.
3. Corresponding data for each marker is supplied including the presence of locked bollards, vertical obstructions, pavement conditions, and other issues that can slow or limit access.

Why do markers include a graphic of an animal, plant or other object?

San José is developing an interconnected network of 35 trail systems. The name of some trails may not be known, or may be confused with others. Attributing a graphic and name to each trail system via the markers builds user awareness and offers one additional piece of data for 911 Center staff to verify location.

What are the project's anticipated benefits?

- Emergency response times should be quicker with precise location and access data.
- Customer service is likely improved with no change in resources (no new 911 Center software or hiring of new emergency services personnel is required.)
- The mileage marker numbering convention supports regional deployment. Recently, the City of Santa Clara has expressed interest in deploying markers based on the San José system.

Why are markers posted so frequently?

Installing the markers at ¼ mile increments was viewed as an optimum distance to address the meandering trail alignments with limited lines of sight without contributing to visual clutter. The quarter mile spacing was also recommend by the Police Department.

Where can I find more information about the markers, signage and striping?

San Jose's Trail Signage and Mileage Marker Guidelines are posted on the trail program web site.

