



CENTRAL TEXAS REGIONAL
MOBILITY AUTHORITY

INNOVATION
BRIEF

Augmented Reality on the 45SW Trail

WHY 45SW?

A large portion of 45SW Toll is located in the Edwards Aquifer Recharge Zone, which is an environmentally sensitive region for karst (cave) features that serves as a vital component of the community's drinking water resource. The need to highlight the region's importance to the public makes 45SW the ideal venue for Augmented Reality implementation.

The 45SW Trail is a 4.5-mile bicycle and pedestrian shared-use path that runs along 45SW from FM 1626 to MoPac and Escarpment Blvd. This path encourages multi-modal transportation, as well as active and healthy recreation for the community.

The Mobility Authority partnered with Austin-based creative agency Chocolate Milk and Donuts to develop the mobile application Trail Explorer by CTRMA.

The Mobility Authority established the Innovation Team in Fall 2018 to stay informed on emerging mobility and transportation technology and introduce opportunities for these emergent technologies and ideas through projects, programs, partnerships and policies. These innovation briefs give high-level updates about what the Mobility Authority is up to.

What is Augmented Reality?

Augmented reality (AR) is perhaps best described as an interactive technological advancement that blends the real world with a virtual one. By incorporating the technology into mobile app features, users can experience augmented reality anywhere. The benefits of AR are far-ranging and can certainly enhance the engagement strategies of an organization for purposes related to:

- Entertainment
- Cognitive Understanding
- Environmental & Historical Education
- Active Participation

By using AR to convey ideas and reinforce messaging, the likelihood that an audience will connect and invest in the information an organization is sharing increases.

The Mobility Authority's Goals

The Central Texas Regional Mobility Authority (Mobility Authority) is committed to providing Central Texans with innovative multimodal transportation options that offer alternative methods of travel and ease traffic congestion while encouraging healthy and active lifestyles. We design, construct, and implement pedestrian and cyclist friendly facilities like Shared Use Paths, sidewalks and



A 45SW Trail user triggers an Augmented Reality animation of a live oak tree growing on the path using the Trail Explorer by CTRMA mobile app.

cross-street connections as part of every project (if feasible). Our goals on the 45SW Toll pertaining to environmental sensitivity and enhanced quality of life were intrinsic to the project. The augmented reality app, Trail Explorer by CTRMA, is the perfect method of sharing the beauty and rich history of the region while fostering education and environmental stewardship with the public.

Trail Explorer by CTRMA

Trail Explorer by CTRMA is the Mobility Authority's new mobile app that features augmented reality and narration in both English and Spanish. The app is free to download and adds an entertaining interactive and educational element to the 45SW Trail. Trail Explorer by CTRMA brings

imagination to life by letting users explore the history of Central Texas with a conservationist lens to provide a captivating experience for the public using augmented reality. The mobile app allows the public to engage with the educational signs along the 45SW Trail.

FAST FACTS

In addition to two welcome signs found at each of the 45SW Trailheads, signage complemented by the Trail Explorer by CTRMA app with **audio narration** (●) and **augmented reality** (○) are:

1. Prehistoric Creatures of the Sea ● ○
2. The Land Before Texas ●
3. Hill Country Today ●
4. Animals of the Region ● ○
5. Butterfly Social ● ○
6. Human History:
People of Central Texas ●
7. What's Taking Root ● ○
8. Regional Water Sources ●
9. Karst Features ● ○
10. Edwards Aquifer ● ○
11. Protecting Our Water ●
12. Pathways to Conservation ●
13. A Tale of Two Counties ●

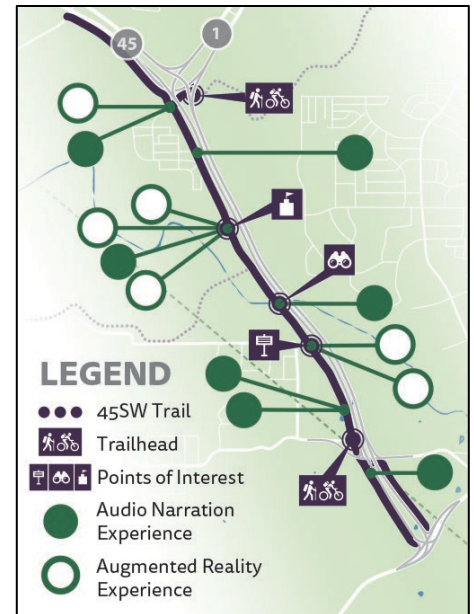


App users can trigger life-size Augmented Reality animations comparing the Mosasaur, a prehistoric sea creature, to a Great White shark and a human swimmer.

Trail Meets Tech

The app utilizes the camera on the user's phone to scan brackets on signs along the trail that trigger an interactive experience. Trail Explorer by CTRMA offers:

- **Augmented Reality:** Animations bring the public up close to unique nature experiences including a life-size Mosasaur, a swarm of butterflies and so much more.
- **Audio Narration:** A narrated companion guide to the signs educates listeners on interesting facts and historic information and is offered in both English and Spanish.
- **Photo and Social Sharing Capability:** Users can capture and share the AR experiences with family and friends using their phone's camera.



- **GPS Guidance:** The map feature shows a user his/her location on the trail and provides alerts about each upcoming experience.

Fostering Environmental Stewards

Because of the location of 45SW, preservation of the Edwards Aquifer Recharge Zone was of paramount importance to the Mobility Authority. Furthering that mission, educating

the public on the importance of conservation is a key aspect of the 45SW Trail signs and the Trail Explorer by CTRMA mobile app.

Future Use

Currently, Trail Explorer by CTRMA is only found on the 45SW Trail; however, the Mobility Authority is considering expanding the app to shared-use paths on future and existing roadway projects.

The future locations capable of utilizing Trail Explorer by CTRMA will also feature augmented reality and educational signage highlighting location-specific topics.

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