

Leaf Pedestrian Bridge (USA)



Project description

The Leaf Pedestrian Bridge, in the City of Lone Tree, was built to reduce vehicle congestion on Lincoln Avenue by alleviating signal progression disruption and also provide a safer connection between popular destinations on both the north and south side of Lincoln Avenue for pedestrians and cyclists.

As the city continues to grow, it is increasingly important to provide alternative transportation routes for pedestrians who may live or work on one side, but want to take advantage of amenities that require them to cross Lincoln Ave.

The 170-foot-long bridge has a cable-stayed design and feature a 78-foot-tall leaf-shaped mast on its south end.

mageba scope

Considering all design requirements, and the benefit of making the bearings as small and unobtrusive as possible for aesthetic reasons, bearings of the RESTON® SPHERICAL type were selected for use.

The bearings at one end of the structure had to be designed to resist uplift forces in some circumstances, and all bearings are subject to substantial rotations.

The installed bearings are made almost entirely of steel, except for their sliding interfaces, which consist of stainless steel and ROBO®SLIDE, mageba's far superior alternative to PTFE.

Since ROBO®SLIDE is not only many times more resistant to wear and abrasion than PTFE, but also able to resist much higher pressures, the RESTON®SPHERICAL bearing can resist very high pressures when loaded, resulting in a smaller bearing size than would arise with other bearing types.

Highlights & Facts

mageba Products:

Type:	RESTON®SPHERICAL bearings
Feature:	ROBO®SLIDE sliding material
Installation:	2018

Structure:

City:	Lone Tree, CO
Country:	USA
Type:	Pedestrian bridge
Length:	170 feet (52 m)
Owner:	City of Lone Tree
Contractor:	Hamon Infrastructure
Architect:	Fentress Architects
Designer:	Thornton Tomasetti

The bridge is located in the City of Lone Tree in Colorado



Installation of a spherical bearing at Location B2



A guided sliding uplift type of spherical bearing at Location B1

