



Orchids footbridge

Geneva, Switzerland / 2024

Owner
Client
Scope
Architect

Canton de Genève
Commune de Bellevue
tender design
Groupe H



BALANCE AND DURABILITY

The project to connect the Champ-du-Château neighborhood with Vengeron Beach has been meticulously designed to blend harmoniously into the natural landscape and promote a balanced relationship with its environment. Its S-shaped design, as seen from the plan, integrates smoothly among the existing groves and natural relief, thus preserving the area's unique character. The existing trees have been carefully preserved by adopting a route that avoids any felling.

Its curved shape and varying depths offer a pleasant experience for cyclists and walkers, providing them with new perspectives of the environment. Instead of seeking to stand out in the landscape, the design aims to harmoniously integrate the footbridge with its surroundings, which contributes to the overall enhancement of the area.

The chosen structural solution is a continuous steel beam 125 meters long, featuring a box or trough section. This trough section is asymmetrical: the south parapet is deeper to protect users from the noise pollution of the nearby highway traffic. The dimensions of the beam are carefully calculated to effectively distribute the bending moment, which optimizes material usage while creating an architecturally interesting dynamic.

Structurally, the footbridge is designed as a continuous structure, without the need for support devices or expansion joints. This choice aims to minimize future maintenance work while ensuring an economical and robust structure. Most of the construction will proceed without significant disruption to road traffic. Only a few lanes will be slightly reduced to allow the use of a mobile crane, causing limited nighttime traffic interruptions.



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