



## Techno Metal Post Installs (112) Helical Piles for a Boardwalk on a Very Challenging Site Along the Slope of Highway A6A in Gentilly France

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<b>Project Name &amp; Location:</b>	Highway A6A Boardwalk Project - Gentilly, France
<b>Project Date:</b>	February - June 2016
<b>Project Type:</b>	Deep Foundation Support for Boardwalk
<b>Helical Pile Installation Contractor:</b>	(3) Techno Metal Post Installers
<b>Partners:</b>	Architecte P. Bertrand; Agence L'Anton paysagiste; J. Anglade BET bois; BESIconseil; A.Paquet
<b>Engineers:</b>	Guillaume Blestel; Stephane De Franssu
<b>Helical Piles Specifications:</b>	(112) Model P4 HD, 4.0" (101.6mm) Round Shaft Piles with 10" Helix Bearing Plates; Non-Galvanized
<b>Soils &amp; Installation Depths:</b>	Loose Fills Over Clay; Average Installation Depth of 25 ft. (7.5m)
<b>Installation Timeline:</b>	(4) Weeks
<b>Helical Pile Manufacturer:</b>	Techno Metal Post - Thetford Mines, QC Canada



### Project Description

The goal of the project is to design a helical pile foundation, using the data obtained from soil reports and engineering calculations. The foundation must support the determined loads and work with the configuration of the slope. In addition to this, the installation must be done without interrupting traffic on Highway A6A.



The boardwalk structure is 180 meters long by 4 meters wide. One half of the boardwalk is suspended approximately two (2) meters above the banks of Highway A6A. The Techno Metal Post engineering team has determined the proper model of piles to install, based on the load requirements and soil characteristics.

A noise barrier to reduce the traffic noise is integrated into the structure of the boardwalk. The foundation must be able to support all the oak wood structure and the siding material.



### The Proposed Solution by Techno Metal Post

Based on the expertise of the company, Techno Metal Post was able to complete the installation of piles in 4 weeks. The specialized installation equipment EM-1 and ET-1 were used on this inclined slope area. The 112 piles used are Model P4 HD: 4" x 0.313." [ 101.6mm x 8.0mm ] installed at depths of up to 7.5 meters. Three (3) Techno Metal Post certified installers completed the installation.



Considering the geotechnical investigation and the results of a load test, Techno Metal Post was able to propose a unique solution to support this structure in challenging conditions. Because of the specialized equipment used, the piles were installed from the top of the bank. This approach allowed traffic to run normally throughout the duration of the project.

The structure of the boardwalk was prefabricated in sections of 3 meters. The pile positioning was very important within a 5 mm tolerance. A crane was used to put each section on the helical pile foundation.



The boardwalk enables the citizens of the 'Plateau' and 'Chaperon Vert' neighborhoods, in Gentilly, direct access to the avenue Paul Vaillant Couturier and the station "Gentilly" RER B.

