

## Automotive Client

# Automotive Research and Development (R&D) Facility with High Speed Test Track

To meet the market demand for new products in China, this automotive OEM built its first Chinese R&D facility in Guangzhou. SSOE's relationship with this client extends more than 30 years and includes experience at no less than 10 of their facilities throughout the world. With robust expertise in R&D facilities and knowledge of China's governmental standards for design and construction, SSOE was a clear choice for this project.

SSOE was selected to design an R&D facility that consolidated multiple facilities throughout Guangzhou, bringing the team together in a new location to foster more efficient internal collaboration. R&D areas included trial manufacturing, materials testing, body testing, aesthetic design, crash testing, and EMC chambers. Individual buildings were connected with access roadways separate from normal vehicle flow. The main site access was limited to one entry point in order to control entrance to the campus. The most notable design feature was an onsite high-speed test track for new product development. For the client, it was important to also build an on-site recreational facility reflective of its corporate culture. As part of the design process, SSOE interviewed individual client user groups to find out specific functions, demands, and cultural aspects.

The facility was constructed with an emphasis on use of recycled, renewable, and non-polluting materials. Though the campus had large power requirements, SSOE integrated features that provided the highest possible energy efficiency such as water conserving plumbing fixtures and strategies to reuse the power generated from processes, such as the engine dynamometers. A grey water system was incorporated to minimize overall water consumption and was used to provide the most cost effective method of supplying water for the testing processes on the test track. Such systems were designed to provide less than a five year return on the client's investment.

### value promise

Energy saving features with less than five year ROI.

**size** 3.7 million sq. meters

**location** Guangzhou, China

### highlights

Dual-language project

Developed the basis of design

Master planning

Campus-style design including an administrative area, utility building, recycling center, sewage treatment facility, gas station, hazardous material storing, garage, and guard houses.