ON-LAND CIVIL ENGINEERING

Operations

With a century-long history as a highly-reputed, reliable contractor in marine construction and engineering, TOA also has accumulated experience and expertise in on-land civil engineering through the completion of various projects. Among the projects are roads, bridges, railways, tunnels, water dams, river dikes and water gates, water supply and drainage systems, sewage collection and treatment facilities, land development, and environmental mitigation and rehabilitation programs. In each and every project, TOA has devoted all of its capabilities to faithfully execute its duties and responsibilities as a contractor, enhancing TOA's reputation as one of the most trustworthy contractors in Japan.

Paiton Ⅲ Power Plant (Indonesia)

The construction of a supercritical pressure coal-fired power generation plant was completed in April 2012 in Paiton, which is situated in East Java Province in the Republic of Indonesia, creating the largest coal-fired power plant in the country. Construction of the power plant was ordered by PT Paiton Energy, a company that was established through a joint venture as an IPP. Toa Corporation was in charge of the comprehensive civil engineering and construction work for this project.

2nd Magsaysay Bridge and Butuan City Bypass Road (Philippines)

In the Republic of the Philippines, the road network bears 90% of the passenger traffic and 50% of the cargo transportation, but many roads in various areas are unpaved or too narrow to keep up with the growing volume of traffic. Funded by an aid-loan from Japan's ODA program, the Government planned a bypass road in Butuan City to improve traffic conditions and bolster the economy in the northeastern region of Mindanao Island. In this connection, the Philippines awarded a contract to a joint venture of TOA and Nippon Steel Corporation to build the 2nd Magsaysay Bridge, a steel cable-stayed bridge with a total length of 882m, a two-lane bypass road with a total length of 8.1km, and two link roads with a length of 1.33km and 2.9km respectively to connect the bypass road with the existing main road.

Rehabilitation of Sewage Drainage System (Tokyo, Japan)

The sewerage network in downtown Tokyo, was constructed nearly one century ago. The Tokyo Metropolitan Government started a project to rehabilitate the sewage drainage network through reconstruction and refurbishment. TOA was awarded a contract to reconstruct the drainage system for surface runoff in Chiyoda ward. Against the construction site of narrow streets with heavy traffic and a dense concentration of buildings, TOA's highly-qualified engineers dealt with various difficulties and utilized the shield tunnel method to complete the drainage system, which measured 2,058m in length with an inner diameter of 2,200mm, on schedule without any accidents.

Kozuchi 2nd Tunnel on National Route 45 (Iwate, Japan)

Work on the No. 2 Kozuchi Tunnel on National Route 45 in Kamihei-gun, Iwate prefecture, has been completed.
This project involved the construction of a new tunnel between Kozuchi and Otsuchi in Otsuchi-cho on the Kamaishi-Yamada Road, which runs for 23 kilometers from the city of Kamaishi to the town of Yamada, and is a section of the Sanriku Coast Expressway that is undergoing reconstruction as a part of the Early Recovery Leading Project for the Great East Japan Earthquake.
The opening of the Kamaishi-Yamada Road is expected to mitigate traffic congestion on National Route 45 and National Route 283, and also be effective as a measure to prevent natural disaster.

■ Client
Ministry of Land, Infrastructure, Transport and Tourism
■ Construction period
October 2013 to March 2017
■ Site of construction
Kamihei-gun, Iwate prefecture

■ Project outline
Tunneling work (NATM blasting excavation) L=975m; slope construction (slope frame construction, ground anchor) A=1,075m^2, P=51 piles, stone & block masonry (large-size blocks) A=253m^2

Kesen Ohashi Bridge (Iwate, Japan)

Construction has been completed on the Kesen Ohashi Bridge on National Route 45 in Rikuzentakata, Iwate prefecture.
This project called for the full-scale restoration of the Kesen Ohashi Bridge, for which Toa Corporation had carried out restoration work by building a temporary bridge, as the Kesen Ohashi Bridge had collapsed when it was struck by a tsunami caused by the Great East Japan Earthquake in 2011.
Before the earthquake, the bridge had been supported by four piers. For the restoration, the design called for the bridge to be supported by two piers and be four meters higher than the temporary bridge.
Although there were limitations on the period during which work operations could be carried out in the river because of the upstream migration of salmon and the release of salmon fingerlings into the river, the contributions made by Toa Corporation by carrying out construction work around the clock will make it possible to open the bridge early.

■ Client
Ministry of Land, Infrastructure, Transport and Tourism
■ Construction period
May 2014 to June 2016

■ Project outline
Steel pipe pile and sheet pile foundation work (P1: dia. 1,000, L=43.5m, n=48 piles, P2:dia.1,000, L=42.0m, n=48 piles), bridge pier jacket construction, unloading work, slope embankment construction, work on restoration of farmland, temporary works, etc.