

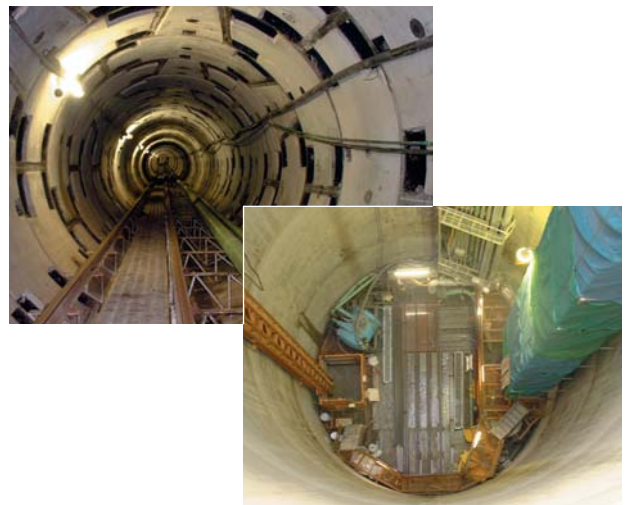
On-land Civil Engineering

Through its dredging and reclamation business to create industrial zones, TOA has accumulated a lot of technical know-hows and has achieved to take long strides for on-land civil engineering businesses. We have completed many construction projects of roads, water supply and drainage, bridges, railway bridges and land development for plants and housing with its highest level of technology and abundant experiences. All of these are considered to harmonize with the natural environment so that people can enjoy their richness in life as well. Each and every project has different characteristics, such as remarkable contents representing change in time, newly required concepts on new infrastructure, and satisfaction of new functions.

We are expecting that projects for all-round development, which require our integrated power of technology, planning and execution, will be born in both domestic and global markets in the future. Toward these projects in the near future, TOA continues to strive to create an ideal relationship between our corporate companies.

Construction of New Shibakawa Tunnel

Shibakawa is a river without a headspring, and the deterioration of water quality due to wastewater from various sources became a problem with ever increasing concern. This project was promoted to improve such condition. To introduce clean water from Arakawa River for purification by constructing Shibakawa water tunnel. It was difficult to recycle the sludge generated by the construction work that contained large quantities of water using existing technologies and equipments. So, we introduced the sludge recycling system into this work to shield tunnel work of 2,300m long to recycle the sludge generated by the construction work. A total of approximately 5,300m³ of excavated mud was recycled for use as banking material. Our efforts are highly rated and acknowledged as the model for effective recycling work, winning the Chairman's Award of the Recycling Promotion Committee.



Dangozaka Service Area, Chuo Expressway

The Chuo Expressway underwent reconstruction work between the Uenohara interchange and the Otsuki junction in order to ease congestion resulting from increased traffic volumes and to provide more parking space at rest areas, and extension work along the full expressway was completed.

The work consisted of 1) widening inbound and outbound traffic lanes covering 1,334m on the expressway proper over a length of 2,230m and 2) expansion of the Dangozaka service area, and TOA's civil engineering capabilities were fully up to the task.

Since the bridge connecting to the service area facilities was no longer enough to reach them, we removed the bridge to the Tokyo side after performing strengthening work, repairs and painting.





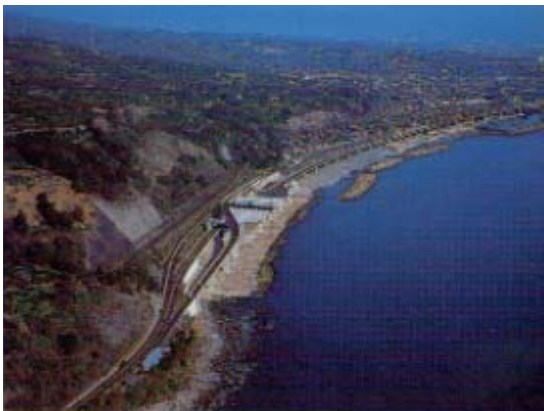
Kotonoumi Clean Center, Nagasaki

TOA was awarded a contract for the construction of a sewage treatment facility. The new facility provides sewage treatment for the drainage of the farming and fishing communities in the Negoto area of Nagasaki and required high levels of engineering in the treatment facilities, sewage and civil engineering.



Seisho Bypass Improvement Work

The Seisho Bypass Improvement Work, commissioned from Japan Highway Public Corporation, was completed within the scheduled construction period without any accident. The project was to extend the existing Seisho Bypass along the coastal route in order to alleviate the traffic congestion in Odawara city, Kanagawa Prefecture. As for the topography around the site, there is a hill with steep slopes. Along the entire length of the 1.9km extension, TOA was in charge of the work area of 366m and the substructure section of the Hayakawa Bridge.



Newly Completed Projects

MM21 Yokohama Subway

The Minato Mirai line has now opened in Yokohama and been highly appreciated for its innovative spatial design. The Minato Mirai station, which TOA worked on in the form of Joint Venture, create a pleasant atmosphere of future potential of the MM21 area and the ships in the port nearby.



Kanigasawa Tunnel

This is a drainage tunnel 1,900m long with an interior cross-section of 9m² meters. It was completed as part of emergency works for disaster relief.

