

Te Hiko Street Stormwater Upgrade



VALUE: \$1,500,000.00 **LOCATION:** Porirua **COMPLETION DATE:** June 30th 2008

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Scope of Works

The scope of this contract was to install a new large diameter storm water system in a built up residential area.

The bulk of the pipe line was installed in the road reserve which involved the use of large machinery and an extensive health and safety plan.

Project	Value	Project Details
Pipe Laying	\$950,000.00	Install 270 metres of 1600mm Concrete pipe with depths up to 5 metres across main thoroughfare (Titahi Bay Road) and 800 mm below sea level. Install 400 metres of 1350mm concrete pipe with depths up to 4 metres. Some of this pipe was installed in residential sections between houses that required positive shoring and the under pinning of the properties foundations. We installed several inlets to the new system ranging from super sumps to wing walls. We had to move a 160mm sewer line (200 meters off) and a 200mm water main (600meters) to get the large diameter stormwater pipes in the roadway.
Pavement & Surfacing	\$95,000.00	With a large diameter pipe comes a large reinstatement project in itself. The works involved over 6000 square metres of road construction. We reconstructed half of the entire roadway. This all beam tested to below 1mm deflection and was paved with a 40mm Mix 16 Asphalt with a water proof underlay as per PCC specifications required.
Structures & Manholes	\$195,000.00	There were over 15 manholes ranging in size and depth form 1050mm to 3000mm and 1 to 4 .5 metres invert. There was a large insitu box chamber 4 metres by 5 by 4 metres deep. placement of 150 tonne of Rock Armour.
Health & Safety	\$45,000.00	We are a company committed to Health and Safety. This project involved excavating under the river 5 metres and maintaining the flow. The deep trenches where shored where required all without incident. We had seven internal audits on the site by our Health and Safety Representative and two external audits conducted by PCC Network Controller. During the audits there was a reported improvement notices issued by our internal auditor for trench safety. The on site staff reviewed the results of the audit and corrected the hazard.
Traffic Management	\$45,000.00	Compiling of TMP that included maintaining the flow of traffic and pedestrians for the area. Obtaining temporary road closures and road opening notices. One lane traffic and Stop/ Go procedures, Operating traffic lights, Contra Flow, etc...
Environmental Management	\$65,000.00	We submitted and were approved an Environmental Risk Management Plan to GWRC. The methodology we used for controlling the silt run off from the dewatering was to set up a large settlement pond. There was one investigation conducted by GWRC by a minor breach in a storm event. The silt coming from the stormwater pipe was recording 146 parts per million and we are allowed 50 parts. It was determined that the surplus silt was coming from up stream of our works area. To date nothing has come from it.

Tender Price:	\$1,400,000.00	
Final Contract Price	\$1,500,000.00	Installing a large pipeline in a built up urban environment always poses the risk of clashes with the services no matter how much investigation was carried out in the design phases. We had to shift a couple hundred metres of sewer line and had to shift 500 metres of watermain. In addition the consultant engineer changed the pipe make up to Hydura concrete with a sacrificial liner on the large diameter stormwater pipes. This added to the costs dramatically. If the pipe material was not changed we would have finished under budget.
Sub-Contractors	\$45,000.00	As we wanted to progress the project we engaged Lighting Contractors to shift the light poles and a paving company to pave the roadway.
Contractors Performance	All of the works were completed to specification, and on time. The weekly and daily reports were all submitted on time highlighting risks, health and safety, environmental concerns etc...	

Commencement dates	Completion Date	Original Due Date	Extended Due Date	Explanation of Differing Dates
December 2007	June 30 th 2008	June 30 th 2008	Nil	Nil