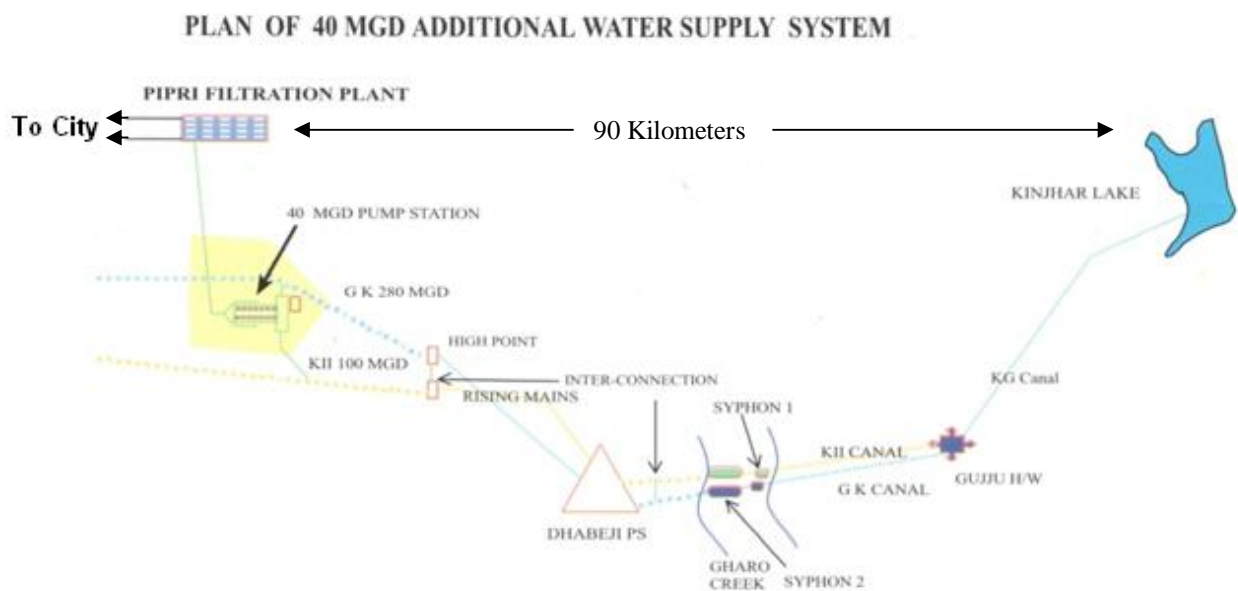


Construction of 40 MGD (Million gallon per day) Additional Potable Water Supply for Karachi

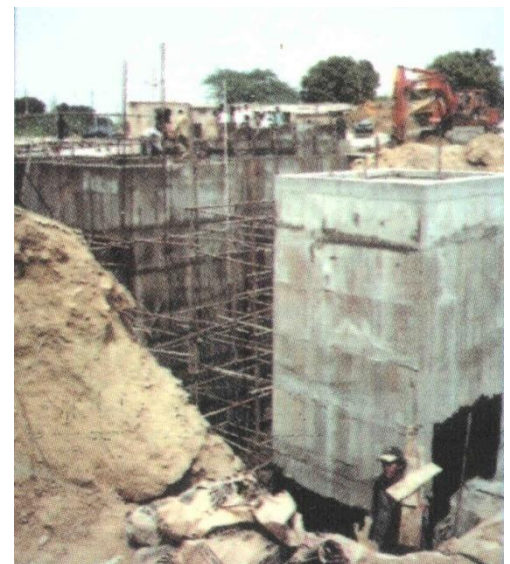
Background of Work

100 MGD Water Supply Scheme World Bank funded Project K-II was completed at a cost of Rs.10.50 Billion. Subsequent study was carried out which provided a tip that by utilizing spaces available in both conduits K-II conduit (100 MGD) and GK Conduit (280MGD Capacity) an additional supply of 40 MGD water may be available on a very meager low investment. It was proposed that by laying of additional Syphon No.1 i.e. 84” dia PRCC Pipe at the end of GK Canal and Syphon No.2 i.e. 66” dia PRCC/Steel Pipes at Gharo Creek and by making interconnections. The additional water of 40MGD will be available and by providing 40 MDG Pipri Pumping facility the water will be pumped to the bulk water transmission lines through the existing 72” dia and 54” dia Main Water pipelines. It was estimated that the total investment of the scheme shall be recovered within three months after commissioning i.e. pay back in terms of on prevailing water rates @Rs.73 per 1000 gallon. The component of Syphons by laying of 84” dia PRCC pipes and 66” dia MS pipes and making interconnections was executed by us on EPC basis.



Scope of Work

- ✚ Excavation of Trenches: 350 meter in length at Syphon No.1 for laying of 84" dia PRCC pipes alongwith dewatering of the standing water and excavation works below water table round the clock through the Well Point System and heavy duty submersible pumps powered by heavy duty electrical generators. Construction of Chambers at Syphon No.1 both upstream and downstream end to make connections with adjacent K-II Conduit under running water.
- ✚ Excavation of Trenches: 2135 meters in length at Syphon No.2 Gharo Creek for laying of 66" dia PRCC/66" dia Steel pipes alongwith dewatering of standing water in Gharo Creek and for excavation below water table round the clock through the Well Point System and heavy duty submersible pumps all powered by heavy duty electrical generators. Construction of chambers at Syphon No.2 both upstream and downstream ends to make connections with adjacent K-2 Conduit under running water.
- ✚ Construction of interconnection chambers between K-II Conduit and GK Conduit and to make connection by breaking of specified walls of both conduits under running water at Dhabeji Pump house, Thatta.
- ✚ Construction of Chamber at Forebay High point and to make connections with K-2 and GK Conduit by breaking of specified wall under running water at Dhabeji District Thatta.
- ✚ Excavation in soil: 49226.00 Cu.m
- ✚ Excavation in hard rock: 3782.00 Cu.m
- ✚ Excavation in under water or below ground water table: 32760.00 Cu.m
- ✚ Dewatering for different operations: 149540.00 Cu.m
- ✚ (For excavation, base concrete, laying & jointing of pipes, concrete encasing, Construction of allied civil and mechanical structures).
- ✚ Pouring of concrete in allied structures below NGL:4445.00 Cu.m
- ✚ Stone Pitching Works: 1350.00 Sq.m
- ✚ Making of service Roads: 2.185 K.M
- ✚ Clearance of bushes: 23300.00 Sq.m



- ✚ Fabrication and fixing of steel specials, Bends, Guide Channels, Penstock gates, Construction of road culverts, cutting / reinstatement of Roads, crossing of National Highway through thrust boring, Protection works from trench wall collapsing for existing bridges, Electric/Telephone poles and existing 100 MGD water conduit passing throughout the alignment, Road positions etc. Providing and fixing of 60" Dia valve.
- ✚ Under water connection works by engaging divers with special tools / equipment required for underwater works.



Client

Karachi Water & Sewerage Board, Karachi.

Supervision

H.Q Engineer 5 Corps, Pakistan Army Liaquat Barracks, Karachi

Location

Gharo, Dhabeji District Thatta



Cost of Works

Total cost of the project was Rs. **60.00** Million
Note: PRCC Pipes 84" and 66" dia were provided by the Employer free of cost.

Year of Completion

May 6th, 2001

