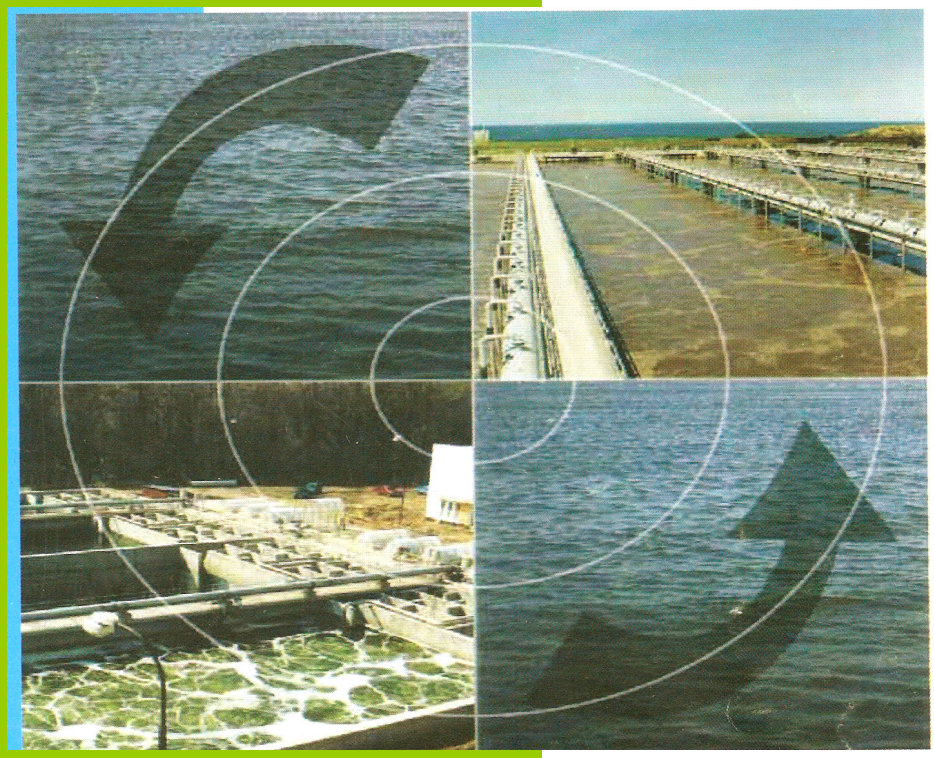
# U I D S S M T

## UNDERGROUND DRAINAGE SCHEME



# DETAIL PROJECT REPORT
# FOR
# MANGARULPIR MUNICIPAL COUNCIL,MANGARULPIR
# DIST.-WASHIM

**DEC. – 2007**


**PREPARED BY**

**KIKALE ASSOCIATES**

**CONSULTING ENGINEERS,**
**230, Ramchand Malukchandnagar**
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**Baramati, Dist. Pune**
**PH; 98230 25340**

**EXECUTIVE SUMMARY**

The MANGARULPIR Municipal Council has awarded the work of preparation of Detailed Project Report, Detailed Engineering and Design of the sewerage scheme for MANGARULPIR Town and Detailed Estimation of the Project to M/S. Kikale Associates, Consulting Engineers, Baramati, Pune.

The survey of the MANGARULPIR town is carried out and accordingly sewerage system has been designed based on the Manual on sewerage and sewage treatment published by CPHEEO and also as per the guidelines of UIDSSMT.

MANGARULPIR is an important town in WASHIM district of Maharashtra State. It is situated at 63 Km from WASHIM. The area covered by MANGARULPIR Municipal Council area is 433 Ha . The population of MANGARULPIR town is 27815 as per 2001 census and the population Projected for the year 2040 is 56887 souls. At present MANGARULPIR town gets water from the tube wells and reservoir. The water is supplied at a rate of water supply is 135 lpcd.

The details of the proposed underground drainage scheme are as follows:
The topography of MANGARULPIR town is such that the general slope of the town is towards North. The total area is divided in to two drainage zones and the total flow is ultimately collected at pumping station no PS 1 which pumps the flow to the proposed STP of 5 mld capacity with Cyclic activated sludge process. The gross cost of the proposed sewerage system is **Rs. 1173.42 Lakhs.**

Project Component consists of collection system, Pumping station, pumping main and sewage treatment plant. As the pipes are to be laid in Municipal or Highway Roads, no land acquisition is required.

All the proposed locations of pumping stations and S.T.Ps are decided in co-ordination with Municipal Council officials and it is understood that there would be no problem in undertaking of land.

Implementing agency should carry out the works in co-ordination with other related organizations (viz) Traffic Police, Public Works Department and other Local Body Authorities and in accordance with code of conduct.

6.0 The details of the proposed underground sewerage scheme are as follows:

**1) Population**

| Year | Population | Wastewater flow (mld) |
|---|---|---|
| 2010 | 32745 | 3.49 |
| 2025 | 43123 | 4.24 |
| 2040 | 56887 | 5.13 |

**2) Collection System**

Total length = 30 Km

Diameter = 150 mm to 600 mm

Pipe material = RCC NP2, NP3 and NP4 pipes

**3) Rising Main**

| SR. No. | Description | P.S.1 | P.S.2 |
|---|---|---|---|
| a) | Diameter | 400 mm | 200mm |
| b) | Length | 50 m | 750 m |
| c) | Material | D.I k9 pipe | D.I k9 pipe |

**4) Pumping Machinery**

| Description | P.S.1 | P.S.2 |
|---|---|---|
| Pumps(1DWF) | Submersible pumps | Submersible pumps |
| Discharge (lps) | 70 | 13 |
| Head | 11 | 14 |
| H. P | 20 | 5 |
| Nos | 2W+1S | 2W+1S |
| (½DWF) | Submersible pumps | Submersible pumps |
| Discharge (lps) | 35 | 6 |
| Head | 11 | 12 |
| H.P | 10 | 2 |
| Nos | 1W+1S | 1W+1S |

**Sewage Treatment Plant**

| Description | STP 1 |
|---|---|
| Capacity | 5 mld (Phase – 1) |
| Type | SBR Technology |

**Current Status**

The project is submitted to the Municipal Council.

# MANGARULPIR UNDERGROUND SEWERAGE SCHEME

## SUMMARY OF COST

| Sr. No. | Name of Subwork | Amount in Rs. |
|---|---|---|
| 1 | **Working Survey** | 300000.00 |
| 2 | **Sewage Collection System** | 64170265.99 |
| 3 | **Sewage Pumping Station No.-1** | |
| 3A | Civil Works | 1243708.69 |
| 3B | Mechanical & Electrical Works | 5590257.00 |
| 3C | Rising Main For PS-1 | 353024.95 |
| 4 | **Sewage Pumping Station No.-2** | |
| 4A | Civil Works | 586973.14 |
| 4B | Mechanical & Electrical Works | 2756254.14 |
| 4C | Rising Main For PS-2 | 271984.11 |
| 5 | **Sewage Treatment Plant( STP1-5mld)** | 31720453.46 |
| 6 | **Miscellaneous Works** | 973202.23 |
| | **Total** | **107966123.71** |
| | Add Escalation Charges (10%) | 9376113.06 |
| | **Cost of the Scheme** | **117342237.00** |