

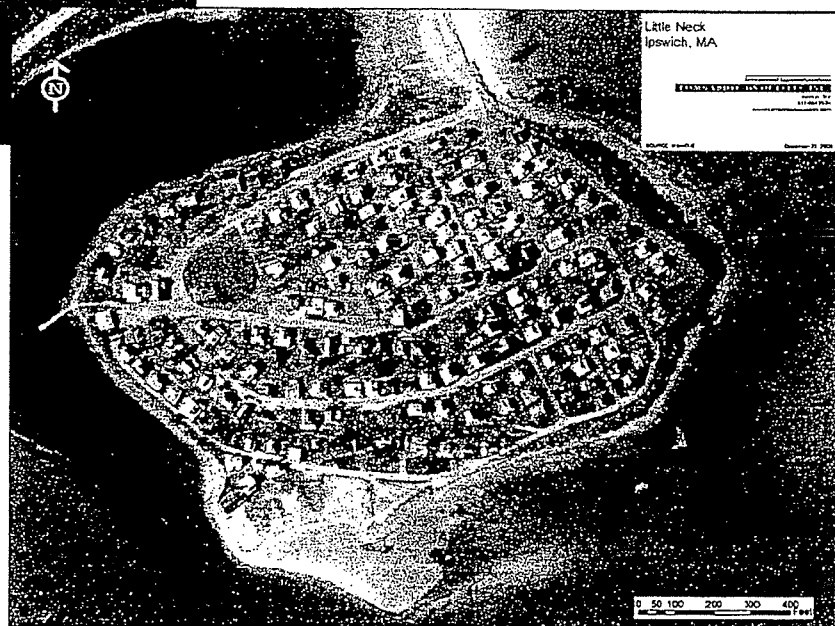
Little Neck, Ipswich, MA

Program Management Master Plan

for

Feoffees of the Grammar School

February 4, 2005



Submitted to:

Feoffees of the Grammar School
c/o Mr. Donald Whiston
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Submitted by:

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1. PROGRAM DESCRIPTION

The Feoffees of the Grammar School ("Feoffees") are under an administrative consent order ("ACO") with the Massachusetts Department of Environmental Protection ("MADEP") to correct inadequate wastewater management for the 167 houses on Feoffees' property on Little Neck in Ipswich, MA.

Little Neck contains 210 separate parcels on which there are a total of 167 homes. Of these, 143 are seasonal residences (April 1 to November 30). The remaining 24 are year-round residences. Additionally, there is a community center building.

1.1. Program Scope

The Scope of the near-term Little Neck wastewater project to comply with the ACO consists of wastewater collection from the 167 houses and Community Center, temporary storage and transfer to trucks for off-Little Neck disposal. Project Components include the following:

1. Sewer Collection System, with 2 pump stations
2. Holding Tank/Transfer Facilities/Building
3. Management Information System (MIS)
4. Wastewater Pumping Contract
5. Entrance Pump Out Facility

1.2. Program Schedule

1.2.1 Near-term Implementation Schedule

The Schedule for the collection system and holding tank project is being dictated by the ACO. The major milestones for the project from the ACO are presented in Table 1-1.

TABLE 1-1: PROJECT MILESTONES FROM ACO

Milestone	Due Date
System Design and MADEP Approval	Nov 30, 2004
Construction Start	Jan 2, 2005
O&M Plan Submission to MADEP	Mar 1, 2005
Construction or Main System Completed	June 1, 2005
All Home Connections Completed and current septic/cesspool systems abandoned	Nov 1, 2005

TABLE 1-2: NEAR-TERM PROJECT IMPLEMENTATION SCHEDULE

LOMBARDO ASSOCIATES, INC.

TABLE 1-3: PROJECT BUDGET

Project Budget		
Near Term	Construction	
	Collection System	
	Contract Agreement 1/20/05	\$2,122,594
	Construction change orders budget	\$100,000
	Holding Tank Budget	\$830,000
	Entrance sewage transfer station Budget	\$200,000
	MIS Budget	\$100,000
	Contingency (15%)	\$502,889
	Subtotal	\$3,855,000
	Engineering	
	Subtotal	\$861,000
	Construction & Engineering Total	\$4,716,000
	Legal Fees	\$100,000
	Financing Budget	\$200,000
	Program Contingency	\$300,000
	Subtotal	\$600,000
	Capital Cost	\$5,316,000
	1-Year O&M Prepayment ¹	
	Seasonal	\$261,135
	Year round	\$69,307
	Subtotal	\$330,000
	NEAR-TERM TOTAL	\$5,646,000
Cost per Property		\$33,808

¹ O&M Prepayment is required for cash-flow purposes

2. CAPITAL COMPONENTS

2.1. Collection System

Due to the fast track nature of the project, changes were necessary to the documents for which bids were received on December 21, 2004. A \$100,000 budget allowance is provided for changes known as of January 10, 2005 and potential changes during construction.

2.2. Holding Tank & Transfer Facilities

The wastewater collected by the proposed sewer system will be conveyed to a holding tank, where it will be pumped out and transported to a treatment facility. The design basis is three days of design wastewater flow plus contingency. Thus, based on the 2004 summer water use data, the Little Neck holding tank is sized at 120,000 gallons. The holding tank and transfer facilities will be located at the Little Neck ballfield.

A preliminary budget for the Holding Tank Construction Cost is \$830,000. It is planned to issue an Invitation for bids on or about February 14, 2005.

2.3. Outside Entrance Pump Out

The option for the Outside the Entrance Pump Out Facility is subject to approval by the Ipswich Conservation Commission. The following is a schedule for the permitting of this option with the Conservation Commission:

	Date
Initial Hearing	February 9, 2005
Continuance Hearing	February 23, 2005
Permitting Decision	TBD

In addition to the Ipswich Conservation Commission, there are a number of other permitting requirements. These are outlined below:

- Chapter 91 Waterways License with Massachusetts DEP
- Environmental Notification Form with Massachusetts EPA Unit
- 404 Water Quality Permit with US Army Corps of Engineers
- Federal Coastal Consistency Concurrence with the Massachusetts Office of Coastal Zone Management

The entrance sewage transfer station costs are budgeted at \$200,000, solely as a placeholder amount.

2.4. MIS

A Management Information System (MIS) will be developed for the Little Neck wastewater management system. A schematic of the MIS is presented in Figure 2-1. The MIS will enable real-time flow and operations monitoring.

The MIS costs are budgeted at \$100,000.

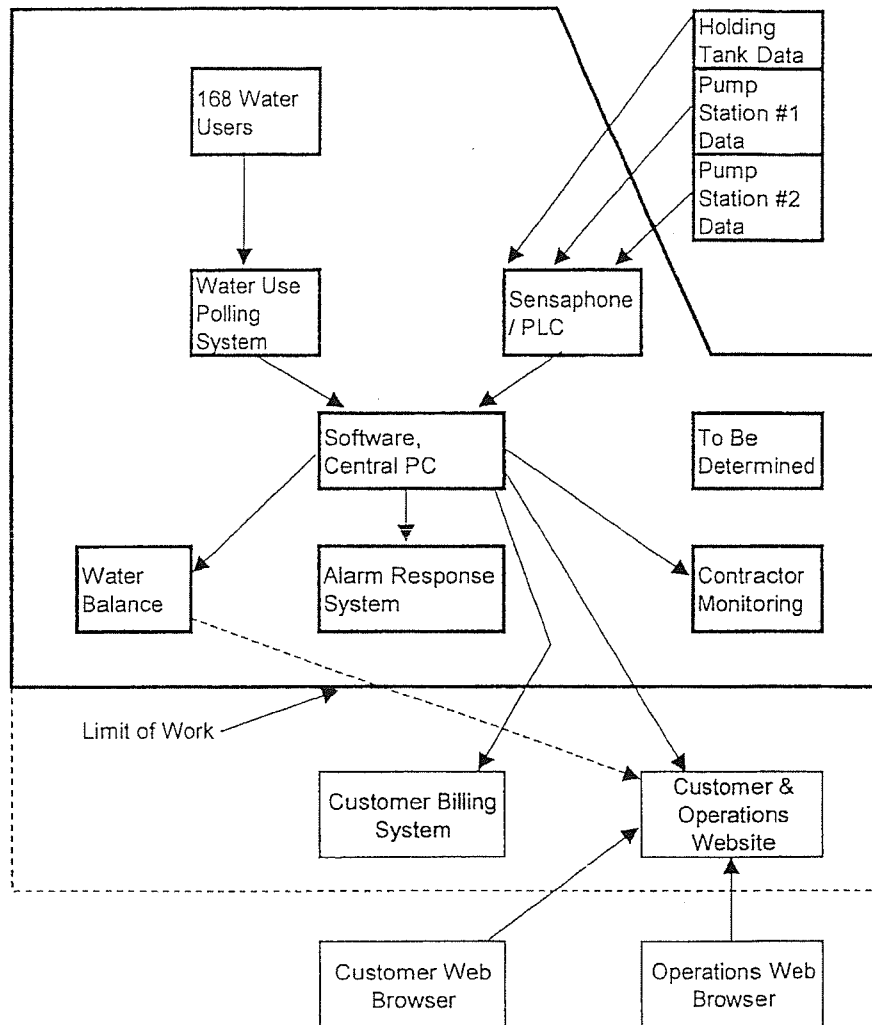


FIGURE 2-1: LITTLE NECK MIS SCHEMATIC

2.5. Long Term Solutions

Three potential long term solutions have been identified for Little Neck wastewater management. They are as follows:

1. **Connection to the Ipswich sewer system with untreated Little Neck wastewater.** This option has political issues associated with it due to Great Neck growth and development concerns that may prevent its implementation.
2. **Construction of an on Little Neck WWTP and clean water connection to the Ipswich sewer system discharge pipe.** This is the presently preferred option as it has minimal political and environmental issues and appears to be implementable, however, at a higher cost than option 1.
3. **Horizontal directional drilling (HDD) and connection to the Ipswich WWTP.** This option has a number of environmental challenges. It requires crossing the Ipswich River and other environmental resources and acquisition of easements for which land owners have denied. Discussions with the Trustees of Reservations are continuing. The Trustees will be requesting compensation for an easement under their property.

3. O&M COMPONENTS

3.1. Pump Out Contract

Wastewater pumping and disposal costs will be based upon actual wastewater generation, which is assumed to equal 85 percent of water use for budgeting purposes. It is estimated that the wastewater will be pumped and disposed of at a cost of approximately \$0.10 per gallon. The estimated cost to pump will be \$255,400 annually.

A Request For Proposal (RFP) will be issued in the near future.

3.2. Administration and Management

Billing and O&M activities are to be outsourced to the Town of Ipswich or a private sector contractor. It is estimated that annual administrative and system management costs will be \$40,000.

3.3. Pump Station O&M

Pump station O&M costs are estimated at \$5,000. per year.

3.4. Annual O&M User Charges

The annual O&M charges are presented in Table 3-1. They are comprised of:

1. Pump-out Contract
2. Pump station O&M
3. Administration and management
4. Contingency

TABLE 3-1: ESTIMATED ANNUAL CHARGES

Annual Charges	
1. Pumping	
April-Nov	\$229,921
Jan-Mar, Dec	\$25,481
<i>Subtotal</i>	\$255,402
2. PS O&M	\$5,000
3. Management	\$40,000
4. Contingency (10%)	\$30,040
Total	\$330,442

It is estimated that annual user charges and revenue will be approximately:

Average Fee for Seasonal Home ¹	\$ 1,815 x 143 users = \$261,135
Average Fee for Year-Round Home ²	\$ 2,877 x 24 users = \$ 69,307
	<u>\$330,442</u>

1. April - Nov pumping, management, & PS O&M costs, contingency distributed to 167 users.
2. Total pumping costs distributed to 24 users & management & PS O&M costs, contingency distributed to 167 users.

APPENDIX A: MONTHLY STATUS REPORT

Status as of February 4, 2005

Item	Activity	Status
1	Collection System	Notice to Proceed Issued February 2, 2005 to RJV Construction
		Construction Schedule is 120 days
		Electrical System Coordination Meeting scheduled for February 10, 2005
2	Holding Tank	13 options analyzed to address environmental and traffic concerns
		Bid Announcement issued February 4, 2005
		Bid Opening scheduled for March 3, 2005
		Construction estimated to begin March 28, 2005
3	Entrance Pump Out Facility	Conservation Commission Initial Meeting Feb 9, 2005
4	MIS	Contract with MIS provider to submitted to Feoffes in February
5	Pump Out Contract	RFP to be issued in early March
6	Long Term Solution	Discussions with Trustees continuing