



MEADOW LANE SUBDIVISION

LOW-PRESSURE SEWER SYSTEM DESIGN REPORT

PREPARED FOR:

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PROJECT No. 04-0405-D

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1.1 INTRODUCTION

This report summarizes the design of the low-pressure sanitary sewer facilities for the development of the Meadow Lane Subdivision. The site is located in Worcester Township, Montgomery County. Refer to subdivision plans titled "MJE Builders – Meadow Lane," prepared by Woodrow & Associates, Inc., dated February 4, 2005, as last revised. .

1.2 PROJECT BACKGROUND

1.2.1 Existing Conditions

The applicant, MJE Builders, is proposing the development of a 9.95 acre parcel located on Hollow Road approximately 850 feet southeast of the intersection with Skippack Pike (S.R. 0073), in Worcester Township, Montgomery County, Pennsylvania. The tract is currently zoned LPD Land Preservation District with a minimum required lot size of 80,000 square feet. The parcel consists of a vacant 1 story framed garage. The remaining tract area is meadow.

1.2.2 Proposed Conditions

The applicant is proposing a 4 Lot Subdivision and the construction of 4 Custom Single family homes on lots of 80,000 square feet or more. These lots will be constructed on the northern side of the Meadow Lane right of way (Not Opened). Construction will also include Meadow Lane that will provide access to the proposed lots as well as the land owned by Worcester Township. Adjacent lots owned by the Township and an adjacent subdivision by Zaveta Builders are also included in this design to allow for a total of 12 connections to the low pressure sewer main. The sewage planning for the area is such that the use of a traditional gravity sewer system is infeasible, and a central pump station is undesirable. The use of Low-Pressure Sewer Systems have been successful in applications similar to this site. Each lot shall be provided with a grinder pump and shall feed a low-pressure main in the roadway through a 1 1/4" PVC lateral. The main shall be 2" to 2 1/2" PVC depending on the location within the system. Ultimately, the sewage will be pumped to an existing pump station approximately 1900 feet from the intersection of Hollow Road and Meadow Lane.

1.3 METHODS OF ANALYSIS

Environment One Corporation's Low Pressure Sewer System Design Assistant software Version 6.0 was used to analyze and design the system. A copy of this software's manual is provided in the appendix. The methodology has been developed by Environment One through years of empirical data and standard engineering methods, and is outlined in the software manual attached.

Assumptions were made based on recommendations in the Environment One methodology and standard engineering practice. Each house provides a 300GPD flow to the system, each pump in operation provides an 11 gpm flow to the system, and a roughness value of 150 was assumed for the pipe.