



**WEST HEMPFIELD TOWNSHIP**

**LANCASTER COUNTY, PENNSYLVANIA**

# **ACT 537 SEWAGE FACILITIES PLAN AMENDMENT**

**Prepared by:**



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**West Hempfield Township  
Act 537 Sewage Facilities Plan Amendment**

**Table of Contents**

<b>Description</b>	<b>Page No.</b>
Preface.....	1
Introduction .....	3
Identified Needs Areas .....	4
Proposed Plan Amendment for Raintree Road Area .....	5
Raintree Road Planning Area.....	7
Description of Project .....	8
User Cost Analysis.....	11
Consistency Review and Permitting Considerations.....	13
Justification for Selected Alternative.....	15

**Attachments**

Attachment 1	Grinder Pump Datasheet
Attachment 2	Preliminary Project Cost Opinion
Attachment 3	Engineer's Cost Opinion for Homeowner
Attachment 4	PNDI Documentation
Attachment 5	PHMC Documentation
Attachment 6	Public Notice and Public Meeting Agenda
Attachment 7	Public and Local Planning Agency Comments
Attachment 8	Response to Comments
Attachment 9	Plan Adoption by Resolution

**Figures**

Figure 1	Proposed Sewer Extension
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**Tables**

Table 1	Raintree Road Area Parcel Inventory
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## **PREFACE**

The Pennsylvania Sewage Facilities Act (Act 537) was enacted by the Pennsylvania Legislature on January 24, 1966. The act, officially titled Public License Law 1535, number 537, provides for the planning and regulation of community and individual wastewater systems within the Commonwealth of Pennsylvania. To comply with the regulations provided in Act 537, local municipalities are required to prepare, adopt, and follow an official sewage facilities plan reflecting the policy set forth in Act 537 as follows:

1. To protect the public health, safety, and welfare of its citizens through the development and implementation of plans for the sanitary disposal of sewage waste.
2. To promote inter-municipal cooperation in the implementation and administration of such plans by local government.
3. To prevent and eliminate pollution of waters of the Commonwealth by coordinating planning for the sanitary disposal of sewage wastes with a comprehensive program of water quality management.
4. To provide the issuance of permits for on-lot sewage disposal systems by local government in accordance with uniform standards and to encourage inter-municipal cooperation to this end.
5. To provide for and ensure a high degree of technical competency within local government in the administration of this Act.
6. To encourage the use of the best available technology for on-site sewage disposal systems.
7. To ensure the right of citizens on matters of sewage disposal as they may relate to this Act and the Constitution of this Commonwealth.

The Act 537 Plan is to include all reasonable planning parameters related to the planning of wastewater systems for the local municipality as described in detail in Section 5(d) of the Act. In order to ensure that the municipality's Act 537 Plan is sensitive to changing conditions, the rules and regulations promulgated under the Act require the local municipality to review and, if necessary, revise its Act 537 Plan whenever it is determined that the Plan no longer provides for adequate facilities to meet the sewage service needs of the municipality.

During preparation of an Act 537 Plan or Plan Update, a municipality is required to study problem areas and set forth various alternatives available to eliminate these problems. To avoid duplication of effort and facilities, the planning accomplished under this Act must be coordinated with adjoining municipalities. Furthermore, once the plans are adopted by the local agencies and approved by the Pennsylvania Department of Environmental Protection (PA DEP), the municipalities must implement the plans. Failure of the municipality to implement an Official Plan can lead to severe restrictions on the growth of that area as well as subjecting the municipality to enforcement action. Act 537 Plans must also address areas that have growth potential and must clearly demonstrate the municipalities' approach to provide service needed to serve this growth. Where projected growth is scattered/sparse and dependent on the use of subsurface sewage systems, the plan must carefully evaluate soil limitations and subsurface conditions. Through the process of revising and supplementing Official Plans during the subdivision and land development process, an up-to-date planning document can be maintained. The Plan in this form can and should be used routinely by governing officials in determining how the municipality will grow.

The regulations governing Pennsylvania's Sewage Facilities Planning have been amended many times since 1966. A major revision occurred in 1974 when Act 208 was adopted. This Act required each municipality to have a certified sewage enforcement officer (SEO) in order to issue permits for the installation of subsurface sewage disposal systems. In addition, with the passage of Chapters 71 and 73 of Rules and Regulations of PA DEP, the Act 537 planning process became part of the Commonwealth's comprehensive program of water quality management.



## INTRODUCTION

The last significant update of the West Hempfield Township's (Township) Official Act 537 Sewage Facilities Plan was prepared in March of 2006 and was approved by the PA DEP on August 27, 2007. It was prepared as part of the Lancaster Area Sewer Authority's (LASA) Regional Comprehensive Act 537 Planning efforts. The Township's Official Sewage Facilities Plan (Plan) was developed in accordance with the requirements of the Pennsylvania Sewage Facilities Act (Act 537) and PA DEP regulations. The existing Plan captures the following guiding objectives:

1. Provides for adequate present and future capacity in collection, conveyance, and treatment facilities to provide public sewerage service for those areas zoned for medium-and high-density residential, commercial, and industrial development; and
2. Provides for the extension of the public sewer system to service areas with a high percentage of potential or existing malfunctioning on-lot disposal systems (OLDS).

In addition to the aforementioned objectives, the Plan shares some similar planning objectives with the Lancaster County Comprehensive Plan. These objectives are as follows:

1. Encourage the use of public wastewater facilities for all development and uses within Urban Growth Boundaries.
2. Promote the efficient use, operation, and expansion of public wastewater facilities.
3. Coordinate the extension of public wastewater facilities with phased development inside the future growth areas. The extension of public wastewater facilities to rural lands located outside of growth areas should be restricted to areas of documented existing sewage needs.
4. Plan for sewage-related infrastructure capable of conveying and treating flows generated from future growth at a density consistent with the County's growth management plan should the municipality choose to zone land for future use at the County's targeted density rate of 5.5 dwellings per acre.
5. Plan for sewage-related infrastructure to accommodate anticipated 20-year population growth within existing urban growth boundaries.
6. Ensure adequate funding for the operation, maintenance, and planned expansion of public wastewater facilities.

7. Protect natural resources in the region, such as agricultural areas, watercourses, floodplains, high quality watersheds, groundwater, wellhead protection areas, wetlands, unique geologic features, mature woodlands, natural diversity sites, and scenic rivers from negative impacts that may be associated with some types of wastewater facilities.
8. Wastewater treatment discharges to high quality and exceptional value waters should be discouraged.
9. Protect agricultural operations and cultural, historic, architectural, and archaeological resources in the region from wastewater facilities.
10. Ensure the proper operation and maintenance of on-lot disposal facilities.

## **IDENTIFIED NEEDS AREAS**

As part of the 2006 sewage planning effort, four (4) OLDS needs areas that require public sewerage were identified within West Hempfield Township:

- Ironville Area
- Klinesville Area
- Raintree Road Area
- Grubb Lake Area

These areas were selected based upon the results of the completed Sewerage Needs Surveys, well testing, and field investigations.

Alternatives were evaluated for collection and conveyance or on-site treatment for each of the developments. The West Hempfield Township OLDS Needs Area Sewerage Alternative Summary Table below provides a summary of the alternatives investigated, the associated cost estimates (as determined in 2006), the alternatives that were selected at that time, the timing planned for implementation, and the current status of the selected alternatives.

### West Hempfield Township OLDS Needs Area Sewerage Alternative Summary Table

Alternate Number	Alternate Description	Project Cost	Selected Alternate	Implementation Time Period	Status
<b>IRONVILLE AREA</b>					
I-1	Gravity Collection & Conveyance to Columbia Borough	\$2,401,000	\$2,401,000	5-year	Completed
I-2	Gravity Collection & Pump St. w/ Discharge to LASA	\$2,934,000			
<b>KLINESVILLE AREA</b>					
K-1	Gravity Collection to Columbia Borough	\$895,000	\$895,000	5-year	Completed
<b>RAINTREE ROAD AREA</b>					
R-1	Gravity Conveyance to Farmdale P.S.	\$2,069,000			
R-2	Community Pump Station to Farmdale P.S.	\$950,000	\$950,000	10-year	Deferred
R-3	Community Treatment System w/ Stream Discharge	\$966,000			
R-4	Community OLDS	\$686,000			
<b>GRUBB LAKE AREA</b>					
G-1	Gravity Flow to Existing LASA System on Marietta Ave	\$1,741,000			
G-2	Gravity Flow to Proposed Hempfield Hill Estates Interceptor	\$1,095,000	\$1,095,000	Beyond 10-year	Pending
Total for West Hempfield Township Alternatives:			\$5,341,000		

### PROPOSED PLAN AMENDMENT FOR RRAINTREE ROAD AREA

The Raintree Road Area was the smallest identified needs area in terms of population and density, and is the most remote in terms of proximity to an existing sewer service area. The area is along Raintree Road, south of Marietta Avenue. This area did not have any identified sewerage needs in previous studies before the current Plan was adopted. The Raintree Road needs area, as determined in the Plan, encompassed a total of approximately 16 parcels representing about 23 Equivalent Dwelling Units (EDUs). It included 15 homes/businesses and a parcel with 8 dwellings that utilize a community system/holding tank. During the needs assessment completed as part of the official Plan update in 2006:

- 4 of 8 (50%) of the OLDS systems surveyed were confirmed to be failing;
- An additional two (2) OLDS (25%) were suspected malfunctions;
- One (1) (13%) was identified as a potential malfunction.

Three (3) of the parcels with OLDS confirmed to be failing had well testing data that confirmed bacteriological contamination, and an additional parcel in the area was also identified with bacteriological contamination. Therefore, all of the wells within this area which had been tested were contaminated with higher than acceptable bacteria concentrations.

A total of four (4) alternatives were originally evaluated for the Raintree Road Area. The selected alternative in the Plan was to serve the Raintree Road Area with gravity sewer lines flowing to a community based pumping station that would eventually discharge to the LASA's Farmdale Pumping Station. In order to fund the sewer extension projects required to serve the OLDS needs areas identified in the Plan (including the Raintree Road Area), LASA proposed to pay 100% of the project costs through the Bond Redemption and Improvement (BRI) Fund and/or, as a secondary funding source, bond proceeds. It was envisioned that the customer and/or member municipality would be required to reimburse LASA up to two-thirds (2/3) of the project costs. LASA, as provided through the Municipal Authorities Act, had intended to collect up to 2/3 of the project costs through a Special Facility Fee for the three LASA sewer extension projects identified in the Township selected for implementation within 10 years including the Raintree Road Area. The LASA Board was to determine a Special Facility Fee for each project on a cost per customer basis, and intended to charge all customers within the sewer extension projects a Special Facility Fee in a manner to be determined by the Authority Board in accordance with the Municipal Authorities Act.

During LASA's pre-design activities, it became apparent that the selected alternative, estimated at \$950,000, was too costly given the limited number of EDUs to be served, and that the project would result in an unusually high cost for these customers. Therefore, LASA began to explore additional alternatives that had not been considered during planning. At the time that the Plan was developed, the Township and LASA were unfamiliar with low pressure sanitary sewer systems (LPSS) and were therefore reluctant to seriously consider such an option. Since this time, experience has been gained with LPSS, standards have been developed, and the Township and LASA have become more comfortable with this type of approach for providing sewer service.

Utilization of a LPSS, by its nature as a pressurized system, allows more flexibility regarding horizontal and vertical alignment than a traditional gravity collection system. This has allowed the Township to re-examine adjacent parcels which were previously discounted due to excessive technical challenges and costs. In addition, the Township's sewage connection ordinance requires mandatory connection to all parcels within 150-feet of public sewer. This was not contemplated in the original Plan adoption.

This Act 537 Sewage Facilities Plan Amendment is therefore proposed for two primary reasons:

1. The selected alternative has been revised. While the ultimate disposal of sewage from the Raintree Road Area at LASA's treatment facility will be the same, the collection system being proposed has changed from a gravity collection system with community pumping station to a low-pressure sanitary sewer system (LPSS) with individual grinder pump units for each customer/parcel.
2. The planning area has increased to accommodate adjacent parcels that previously could not be served due to technical or cost prohibitions that are no longer an issue with the LPSS alternative.

## **RAINTREE ROAD PLANNING AREA**

Entech Engineering, Inc. has been retained by LASA to assist with planning and design required to assist the Township and LASA with providing a sewer service extension to the Raintree Road Area. The proposed planning area (Raintree Road Area), as within the attached Figure 1, was delineated based on parcels within it meeting one or more of the following four (4) criteria:

- Original parcels identified in the original Raintree Road needs area in the Plan as adopted and approved in 2007.
- Parcels adjacent to or in the vicinity of the original needs area that have OLDS systems which were previously identified as Confirmed Malfunctions that can now reasonably be served by the proposed LPSS.
- Parcels adjacent to or in the vicinity of the original needs area that have OLDS systems that are considered Potential Malfunctions because of well tests indicating bacteriological contamination, and because of the parcel size and soil limitations, are likely to have no suitable location for a replacement OLDS drain field.

- Parcels within 150-feet of the proposed public sewer facilities to comply with the Township's sewage connection ordinance.

Table 1 as attached provides a summary of parcels within the proposed planning area. As a result of the above criteria, the following table summarizes parcels to be provided public sewer:

**Raintree Road Area Sewer Extension Summary Table**

Original Parcels	Original EDUs	Additional Parcels	Additional EDUs	Total EDUs	Flow (GPD)	Equivalent Population
16	23	28	29	52	18,200	139

Total flow for the preferred LPSS alternative is 18,200 gallons per day based on a design flow of 350-gallons per EDU. EDUs to be served are predominantly residential with some existing light commercial, including a service garage and some small light manufacturing. The equivalent population served is 139 as determined using the 2010 census data for West Hempfield Township of 2.67 persons per household.

## DESCRIPTION OF PROJECT

The new selected alternative for the Raintree Road Area is a LPSS with individual grinder pumps coupled with directional boring. Over the last decade, directional boring has become more common. It requires a smaller crew, limited excavation, less pavement and site restoration, and generally results in less environmental and highway occupancy permitting and impacts. Figure 1 as attached provides a conceptual plan for the LPSS main alignment and the approximate location of lateral tie-in locations. The point of connection to LASA's existing facilities is LASA's gravity manhole BRV1-36A at the intersection of Bridge Valley Road and Heather Lane. A total of five (5) LPSS mains of 1-1/2-inch to 2-inch diameter and totaling approximately 6,700 feet in length will be required to serve the project. The majority of LPSS main will reside within the PennDOT right-of-way (ROW) for Marietta Avenue and the Township ROW for Raintree Road. The remaining three (3) LPSS mains will require acquisition of private easements which will be formally acquired at the beginning of detailed engineering design and permitting.

The LPSS project will generally proceed according to the following key steps:

1. Act 537 Sewage Facilities Plan Amendment advertisement, adoption, and approval.
2. Location of Grinder Pump Units – Entech will meet with each parcel owner to identify the location of existing OLDS facilities, establish a proposed grinder pump location, and identify the proper location of the control panel and electrical disconnect.
3. Land survey and acquisition of easements. This includes recordation of a 10-foot wide easement for each parcel for the LPSS lateral and grinder pump unit. LASA will bear the cost of the grinder pump units and will retain operation and ownership. The customer will use the grinder pump service in accordance with the LASA Rules & Regulations and the Grinder Pump and Easement Agreement.
4. Detailed engineering design and permitting. Will proceed after approval of the Act 537 Sewage Facilities Plan Amendment by PA DEP.
5. Installation of LPSS mains and appurtenances by the Township and/or its Contractor.
6. Installation of grinder pump units by LASA and/or its Contractor.
7. Provision of electrical service by the customer.
8. Tie-in of existing sewer lateral to the grinder pump inlet stub by the customer. Includes start-up and the LASA inspection.
9. OLDS abandonment by the customer including septic tank pump-out and tank abandonment according to the Township's SEO.

LASA will be responsible for operation and maintenance of the grinder pump units, and the customer will have the right to use the grinder pump unit in accordance with the LASA Rules & Regulations and the Grinder Pump and Easement Agreement. The parcel owner will be responsible for payment of quarterly sewer rental fees in accordance with LASA's current rate schedule and electrical costs for operation of the grinder pump unit. LASA will maintain necessary spare grinder pumps in the event of a pump failure. Information on a typical grinder pump employed for these types of projects appears in Attachment 1. It is LASA's intent to provide a single grinder pump unit for each parcel, and during design it is anticipated that a single grinder pump model will be selected that can accommodate most if not all parcels within the service area. LASA has experience with semi-positive displacement grinder pumps that can operate over a wide pressure range. This offers the flexibility to accommodate future additional connections. When designed properly, additional zones can be added rather easily as the community grows.

The terminal main running along Marietta Avenue has been preliminarily sized at 2-inches. Given the proposed flows from the project at 17,850-gpd (about 12-gpm) and typical peaking factors for diurnal and peak flow considerations, the force main size has adequate reserve capacity to accommodate some additional flow from adjacent undeveloped parcels not included in the planning area that may be developed in the future and are consistent with land planning requirements.

Sanitary sewage generated from the Raintree Road LPSS system will be conveyed to the Farmdale Pumping Station, the discharge of which ultimately is conveyed to LASA's Susquehanna Water Pollution Control Facility. This facility has a design capacity of treating 15 million gallons of wastewater per day, and it utilizes preliminary, primary, and secondary treatment processes to achieve compliance with its National Pollution Discharge Elimination System (NPDES) Permit. Both the Farmdale Pumping Station and the treatment facility have adequate capacity to handle the flow associated with the preferred alternate being proposed. The LPSS system being proposed will have less impact to the Farmdale Pumping Station versus the community pumping station that was previously proposed.

LASA represents an example of effective implementation of regional wastewater treatment. This method has numerous positive aspects, since regional wastewater treatment facilities often allow for more efficient management and monitoring, and also minimizes the number of pollution source points. LASA has grown and adapted over the years so as to accommodate the changing needs of its diverse member municipalities and to meet increasingly stringent regulatory requirements. The LASA facility has a history of compliance with PA DEP requirements and continually evaluates its treatment system to optimize its effectiveness and efficiency. The continued utilization of LASA as a regional wastewater treatment provider is a common sense objective of the Township. For these reasons, a community based OLDS or community based package treatment facility has not been considered further in addressing the Raintree Road Area. Conveying sanitary sewage to the LASA facility at the least cost which is environmentally sensitive and consistent with planning objectives is the ultimate preferred alternative for this project.



## **USER COST ANALYSIS**

LASA and the Township began meeting to discuss the scope of work, the sharing of costs, and the impact by LASA's purchase of the Columbia Sewer System. The framework of an agreement has been developed whereby the Township is selling its collection system to LASA and will use the proceeds to pay approximately 1/3 of the project costs and would supply in-kind service for portions of the construction of the Raintree Road sewer project, which would include the installation of the LPSS sewer mains and laterals. Without an exhaustive financial analysis, both LASA and the Township agreed that the Township's total contribution (including in-kind services and cash) would represent two-thirds of the cost of the project. LASA would be responsible for the final one-third cost of the project, which would include installation of the grinder pump units, supplying of LPSS main appurtenances for installation by the Township (including manholes, valves, air release valves, etc.), and tie-in of the LPSS main to LASA's gravity collection system (including required manhole linings). A preliminary cost estimate of the project as developed by LASA during pre-design activities is presented in Attachment 2.

Under the selected alternative, the cost to each connecting customer will consist of the following main items:

1. Provision of home wiring including circuit breaker, branch circuit, wiring of grinder pump control panel, and wiring of outside disconnect.
2. Providing tie-in of the house sewer line to the new grinder pump gravity inlet stub.
3. OLDS abandonment including septic tank pump-out and abandonment according to the Township SEO's requirements.
4. Standard tapping fee. Assessed on a per EDU basis. No Special Facility Fee will be assessed.
5. Inspection fee. One inspection will be required by LASA for grinder pump unit installations.
6. Connection fee.

The engineer's probable cost opinion for each connecting customer is presented in Attachment 3. The total initial cost for each customer is estimated at \$6,155 including associated tapping, inspection, and connection fees. This will vary for customers with multiple EDUs (tapping fees assessed per EDU). Electrical service costs and tie-in costs are for a typical residential connection, but may vary depending on the existing electrical service in the home and the specific location of the OLDS system on the lot. Tie-in costs for parcels with multiple EDUs will likely be more extensive, but because of economies of scale are likely to be less on a per EDU basis. It should be noted that LASA often offers a payment plan for the tapping fee, which ensures affordability of the project for new customers, by allowing monthly payments to be made for a period of up to 15 years including a small administrative charge.

LASA was formed over 50 years ago in March of 1965 in order to implement a master sewage collection and treatment plan developed by the Suburban Lancaster Joint Sewer Board. The LASA's service area presently serves eight municipalities (the original six plus Manheim Township and Columbia Borough), and serves a population equivalent of over 100,000, including about 1,300 businesses. Although the Authority bills nearly 37,000 users directly, it also serves portions of Manor Township and West Hempfield Township through bulk service agreements. LASA is among the ten (10) largest sewage authorities in the Commonwealth and operates the second largest treatment facility in Lancaster County.

The quarterly sewer rate effective January 1, 2016 for LASA residential customers is \$89.40, or about \$358 per year. Based on a survey of 42 different agencies conducted in 2015, sewer rates in the region ranged from a low of \$232/year to a high of \$923/year, with a median of \$420 per year. In comparison, LASA's residential rate was the 14<sup>th</sup> lowest out of the 42 surveyed, and well below the median. Since the early 1970s when LASA began operations it has averaged about a 2% per year rate increase, which is well below the average inflation rate over that time. A LASA residential customer's sewer rate includes less than \$150 per year for debt service, the balance being used for operation and maintenance costs (including administration) or added to the capital reserve.

The population in West Hempfield Township as per the U.S. Census in 2010 was 16,153. The median household income is \$70,816 per the 2010-2014 American Community Survey. The Governor's "Sustainable Water Infrastructure Task Force Report, 2008" recommended a rate up to 1.5% of the median household income (MHI), up to \$1,062 for the Township. Similarly, the US EPA considers wastewater costs reasonable if they are below 2% of MHI. LASA's yearly rate of \$358 per year represents a rate of just over 0.5%, below both guidelines. The USDA Rural Utilities Service (RUS) typically utilizes 1% of MHI for debt service as the threshold for grant eligibility. Given approximately \$150 per year debt service for LASA customers, the average West Hempfield Township resident would incur only 0.2% of MHI for debt service. The sewer rates imposed by LASA therefore appear affordable.

## **CONSISTENCY REVIEW AND PERMITTING CONSIDERATIONS**

Title 25, Chapter 71.21(a)(5) of the Pennsylvania Code requires that each alternative which is available to provide for new or improved sewage facilities for each area of need be evaluated for consistency with the objectives and policies of Comprehensive Plans, state water plans, plans developed under Chapter 94, plans developed under the Federal Water Quality Act, anti-degradation requirements, Pennsylvania's prime agriculture land policy, plans adopted by the county and approved by PA DEP under the Storm Water Management Act, wetland protection, protection of rare, endangered or threatened plant and animal species as identified by the Pennsylvania Natural Diversity Inventory, and the Historical and Museum Commission. The alternatives and workable options identified to serve the sewage planning needs of LASA's member municipalities involve expansion of the existing sewer service area to areas with existing needs and areas zoned for future development. The selected alternative in this Plan Amendment for the Raintree Road Area is not fundamentally different than the original gravity collection and pumping station alternate with regard to the consistency review completed at the time of the Official Plan adoption and approval. The two alternatives are similar in nature; therefore, the existing consistency determination is deemed satisfactory and an exhaustive consistency review is not necessary. However, as part of this planning process, three specific concerns have been reviewed:

1. Protection of Plant and Animal Species of Concern - As designated by the Department of Environmental Protection, Bureau of Forestry, Pennsylvania Game Commission, Pennsylvania Fish Commission, and/or Contained in the Pennsylvania Natural Diversity Inventory (PNDI). The Preferred Alternate will include the construction of new sewage collection and conveyance facilities. PNDI investigations have been made and have indicated that there are no species of concern that would be impacted. A response letter from PNDI is included in Attachment 4.
2. Pennsylvania Historical and Museum Commission Site Assessment - The Preferred Alternate will include the construction of new sewage collection and conveyance facilities; as such, the conceptual layouts have been sent to PHMC for evaluation. Their response letter is included in Attachment 5.
3. Wetland Protection Under Chapter 105 - The locations of known wetlands in the Township are shown on the inventory of OLDS and Private Wells Map in the Official Plan. Wetlands represent severe restrictions for future development; therefore, the wetland locations will be used as a guide for review of subdivision plans in the future.

Based on a field visit completed on October 29, 2015 by Entech's Wetland Scientist, several stream crossings that will likely be required for the project's LPSS mains and laterals were identified. However, no fringe wetlands associated with these crossings were identified. Therefore, no wetlands are anticipated to be impacted as a result of construction of new sewerage collection and conveyance facilities. PA DEP Chapter 105 encroachment permitting for the stream crossings will likely be required. A total of up to four (4) Utility Line Stream Crossing GP-5 general permits are anticipated. Since the total linear length of project impacts will not exceed 250-feet, the Pennsylvania State Programmatic General Permit #2 (PASPGP-2) will be applicable. The associated permit applications will be submitted concurrent with the PA DEP Part II permit application for construction of domestic wastewater facilities.

In addition to the Chapter 105 general permitting and PA DEP Part II application, permit applications will be prepared for Erosion & Sedimentation Control (E&SC), Penn DOT Highway Occupancy (HOP), and possibly for NPDES Stormwater Associated with Construction Activity.

## JUSTIFICATION FOR SELECTED ALTERNATIVE

Consistent with LASA and the Township's responsibility to protect the health, safety, and welfare of its residents, the Township and LASA have thoroughly evaluated the options presented above. Following are further explanation of the selected alternative. The selected alternative will be subject to comments from PA DEP, the LCPC, and the general public.

### A. Identify the Selected Alternative:

#### 1. *Sewerage in Raintree Needs Areas*

Two general options were originally evaluated for handling wastewater produced in the Raintree Road Area: pumping to the Farmdale Pump Station or treating and disposing of the water at a community treatment facility. The possibility of conveying wastewater into LASA's existing system has intrinsic advantages over treating wastewater from this new service area separately since it is more consistent with the objectives of LASA as a multi-municipal sewer authority, which looks to minimize the number of treatment facilities in a region. The costs of installing a gravity interceptor are much higher than those of constructing a community pump station and force main in order to convey the wastewater to Farmdale. With additional analysis, even this lower cost for the community pump station was ultimately considered excessive, and a new preferred alternative of a LPSS sewer system needed to be developed. Although LASA would prefer not to increase the number of grinder pump units or pump stations in its system, it is apparent that this option will result in a cost effective project that benefits the maximum number of parcels practical. In light of these factors, and considering the general goal of minimizing the number of treatment facilities in the region, the option of constructing a LPSS sewer system, as shown in Figure 1, is the selected alternative for the Raintree Road Area.

## **2. *Future Wastewater Disposal Needs***

The Official Plan identified several sewer extension projects that were to be implemented within the next 10 years. These areas have been identified as having sewage needs that in part must be addressed to help prevent anticipated higher than normal OLDS failures or due to a lack of adequate replacement areas. Additionally, development will be directed to areas adjacent to existing public sewer service areas to minimize the amount of nitrates being discharged to the groundwater resources by OLDS. The selected alternative adequately addresses the Raintree Road Area's current and future sewage needs.

## **3. *Operation and Maintenance (O&M) Considerations***

LASA currently maintains other LPSS systems. It has experience providing the maintenance on LPSS grinder pump units and LPSS mains that is required to ensure long-term successful operation of these types of systems.

Despite the advantage in capital cost, concerns about long-term operating and maintenance requirements were justifiable when low-pressure sewers were first introduced and had no established record of long-term performance. However, advances in technology and engineering have reduced O&M requirements and improved reliability. Many LPSS in Pennsylvania have been around for 15 years or more, with limited O&M requirements.

## **4. *Cost Effectiveness***

The alternative selection was made with careful consideration given to cost. The most significant site-specific factors impacting sewer system construction cost are:

- Topography (flat, rolling, steep)
- Soil conditions (rocky, high water table, tractable)
- Impact and restoration costs (roadway, earth stabilization, environmental, waterway)
- Line sizes

The proposed use of the LPSS, coupled with directional boring, addresses these factors.

**5. *Available Management and Administrative Systems.***

The LASA board, comprised of representatives from each member municipality, makes decisions regarding finances at monthly meetings. LASA maintains a full-time staff that includes an Executive Director, an Engineering Director, a Financial Director, a Maintenance Director, a Plant Director, office staff, a complete sewer and conveyance system team, and a complete treatment plant staff including laboratory technicians. LASA also retains a Consulting Engineer. LASA is adequately organized to properly manage the alternative selected.

**6. *Environmental Soundness and Compliance with Natural Resources Planning and Preservation Programs.***

The selected alternative is consistent with relevant environmental soundness considerations and natural resource planning and preservation programs.

**B. *Selected Financing Plan***

Developers within LASA's member municipalities will continue to be required to provide sewerage in their areas of development in such a way that will accommodate the municipalities', LASA's, and other involved sewerage provider's objectives. In order to fund the sewer extension projects required to serve the OLDS needs areas identified within LASA's service area in West Hempfield Township, LASA intends to pay 100% of the project costs through the Bond Redemption and Improvement (BRI) Fund and/or, as a secondary funding source, bond proceeds. The customer and/or the member municipality would be required to reimburse LASA 2/3 of the project costs. LASA would also be willing to finance the tapping fee, the connection fee, and the special purpose fee as the particular project may dictate.

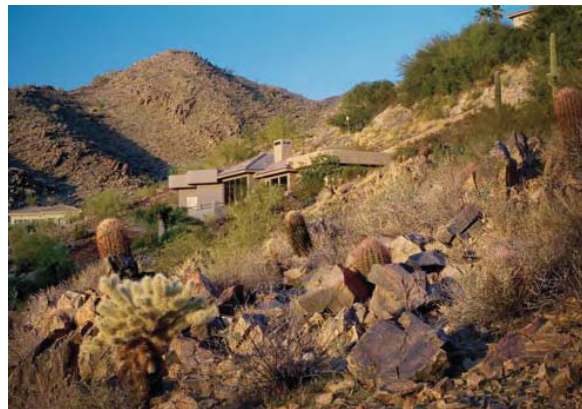
Acknowledgement – Portions of this Plan Amendment were adapted from the West Hempfield Township Act 537 Official Sewage Facilities Plan dated March 2006 and the LASA Regional Act 537 Plan dated March 2006; both as prepared by ARRO Engineering, Inc.

**ATTACHMENT 1**  
**GRINDER PUMP DATASHEET**



**A**NYWHERE

**YOU SET  
YOUR  
SITES**



**E/ONE  
SEWER  
SYSTEMS**

**WILL SET  
YOU  
FREE**



**Environmentally Sensitive  
Economically Sensible™**



# E/ONE SEWER™ SYSTEMS GIVE YOU THE FREEDOM TO SEWER ANYWHERE –



**E/ONE SEWER™ SYSTEMS ARE COST-EFFECTIVE**, highly reliable central sewer systems that can be installed in any terrain flat, wet, rocky, even on sites with dramatic elevation changes. Plus, they are much more affordable than conventional gravity sewers, which require major excavation, and much safer for communities than septic systems, which can eventually fail, polluting ground and recreational water and endangering public health.

Front cover: E/One Sewer Systems  
installations (from  
top): Paradise Valley AZ,  
Wilder, KY, Kitsap  
Peninsula, WA  
This page: Oak Grove, MN  
Page 3: Canton, GA



# AT A FRACTION OF THE COST OF GRAVITY SEWERS.

**With E/One, you can set your sites higher – or lower.** In fact, you can site new homes in formerly infeasible locations – rugged hills, isolated flatlands, coastal areas, below grade, or sites with high water tables.

For the developer or prospective homebuilder, E/One frees you to utilize the best sightlines on any plot – regardless of the location of the sewer main or septic field. This means better sightlines, aesthetics, and views, as well as the possibility of utilizing “difficult” or orphan lots, and maximizing the density of any development.

E/One Sewer systems also feature a lighter “footprint.” That’s because they follow the contour of the land, so they can go anywhere without destroying the landscape. Even around existing features like mature trees, streams, and rock formations.

They’re easier to install than conventional gravity sewers, so they greatly reduce the high cost of sewerage. And they’re highly reliable. So they lower operating costs.

Environmentally sensitive. Economically sensible. Plus the freedom to build anywhere.

**Break the restrictions of gravity – and enjoy true freedom.**





# THE E/ONE SEWER SYSTEM.

## HERE'S HOW THE E/ONE SEWER SYSTEM WORKS:

The E/One system stores, grinds and pumps wastewater under pressure to a treatment site or central sewer, depending on the location. Because the output is pressurized, the wastewater can be transported horizontally up to a mile, or uphill some 185 feet vertically. Because the system does not rely on gravity to carry the waste, it provides more options for siting and building, as well as system renovations.

## WHY THE E/ONE SYSTEM IS BETTER THAN GRAVITY:

Both the gravity sewer and the E/One Sewer system are known as central sewer systems. Most cities and villages use central sewerage, which simply means that waste is transferred, usually by pipe or a main, to a central treatment plant.

Gravity sewers are the "original" central sewers, with origins in the Roman aqueducts. Unfortunately, the technology behind gravity sewers is also centuries old: they're bulky

systems using a large main and usually require major excavation to install. They must be accurately placed and bedded along a continuous downward grade and often involve large, costly lift stations. Plus they're expensive and not entirely efficient in transporting waste because they can tend to leak, and can be compromised by storm water infiltration.

## ENGINEERED TO DO ONE JOB PERFECTLY.

The Extreme series grinder pump, the heart of the E/One Sewer, is the industry leader in ruggedness, watertight design, serviceability and reliability. It provides wastewater storage, grinding, and pumping in a single unit. Translation: it lowers operating costs, the cost of waste collection, and reduces maintenance.

The E/One grinder pump is engineered to do one thing perfectly and in the process, provides the best value for homeowners, builders, developers and municipalities.

## THE LEADER IN RELIABILITY.

The technically superior E/One Sewer system employs highly sophisticated technology that results in a 10 year average mean time between service calls, and requires no preventive maintenance. Plus, low upfront costs, reduced operating expenses, and the ability to be installed at any site, regardless of the challenges of topography.



## DEFY GRAVITY WITH E/ONE.

The beauty of the E/One Sewer system is that, unlike conventional central sewers, it defies gravity. Because installation follows the natural contour of the land, it is ideal for all terrain, including land that is flat, wet, rocky, or hilly. It gives the freedom to sewer anywhere including sites where old septic systems have contaminated water and posed severe public health issues.





# HOW DOES IT WORK? WHY IS IT BETTER?



low-profile cover that blends seamlessly into the environment but provides easy access for servicing operations.



## HOW WILL IT LOOK?

Aesthetics are a major consideration for homeowners. The E/One Sewer system is virtually out of sight — the only visible part is a

The E/One Extreme series indoor unit was specifically designed for installation in a basement mechanical room or in the slab foundation. Its clean look fits unobtrusively into any environment.

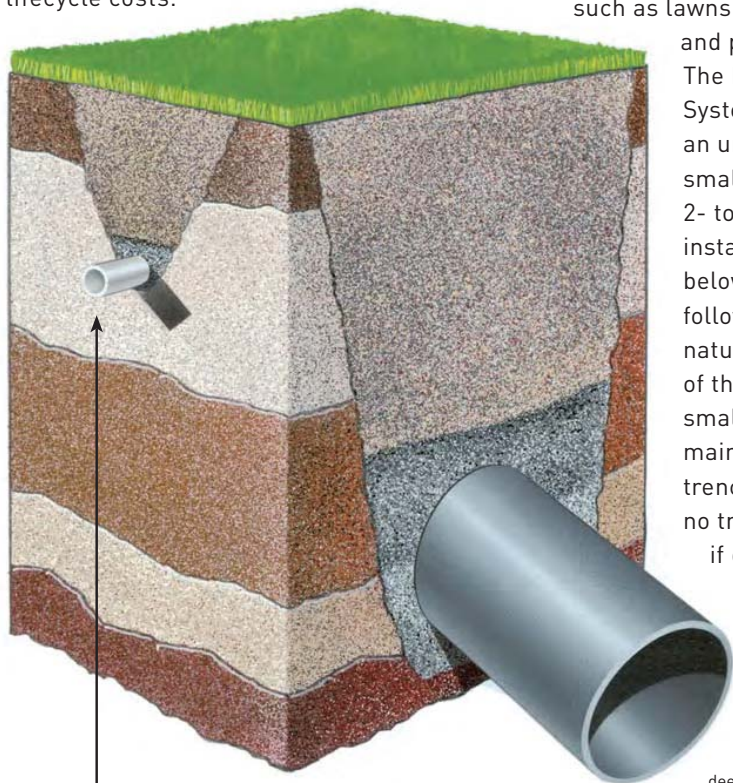
## PRICED RIGHT FOR INSTALLATION. AND FOR THE LONG TERM.

E/One can solve sewerage problems and replace failing septic systems at a fraction of the cost of conventional gravity sewers. E/One Sewer systems sharply reduce both front-end installation costs and overall lifecycle costs.

## WHEN IT COMES TO SEWER SYSTEM TECHNOLOGY, BIGGER ISN'T BETTER.

Conventional gravity sewers can use up to a 24-inch large-diameter pipe, or main, which requires major excavation and severely disrupts the landscape and any built structures

such as lawns, driveways, and plantings. The E/One Sewer System uses an unobtrusive, small-diameter 2- to 4-inch main installed right below the frostline, following the natural topography of the land. The small-diameter mains mean small trenches — or, no trenches at all if directional boring is used.

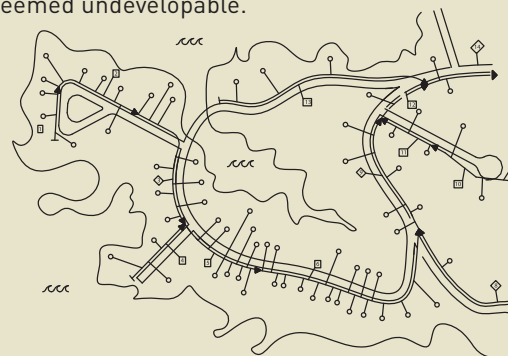


E/One Sewer System: 2-4" main, installed to follow the contour of the land.

Gravity system: large 24" main. Installation requires deep excavation.

## SET YOUR SITES ANYWHERE

Multi-branch E/One Sewer systems serve the entire community and give engineers, developers, community planners, and homeowners the freedom to sewer anywhere, on any kind of site. Even sites that — to date — have been deemed undevelopable.



## SEPTIC SYSTEMS – POTENTIAL TIME BOMBS IN OUR MIDST

While septic systems may be a common way of disposing of residential sanitary waste, they are, at best, a temporary solution and come at a high cost to public health. Around the world, septic systems have degraded ground and recreational water, creating serious



safety problems. Because of failing septic systems, water is not safe to drink. In addition, failing septic systems decrease real estate values. E/One Sewer systems can go wherever septic systems were initially used, reclaiming water quality and quality of life while providing an efficient, cost-effective solution to wastewater disposal and treatment.



## “Without the E/One Sewer System...



**...we wouldn't be standing here today.”**

Situated on a steep Kentucky hillside overlooking the Ohio River and Cincinnati beyond is a breathtaking piece of real estate. But difficult terrain, uncertain easements, and expensive gravity sewerage solutions made it unattractive to prospective developers. Until recently.

The developer chose the E/One Sewer system to provide a simple, effective, and inexpensive solution for this problematic parcel. Only shallow, contour-hugging, small-diameter lines are needed to carry wastewater, which is critically important due to the extensive bedrock at this site. Best of all, the E/One system cost a fraction of the other alternatives.

## “Compared to gravity systems, we saved 50% on Operation & Maintenance with E/One Sewers



**...and 75% on installation.”**

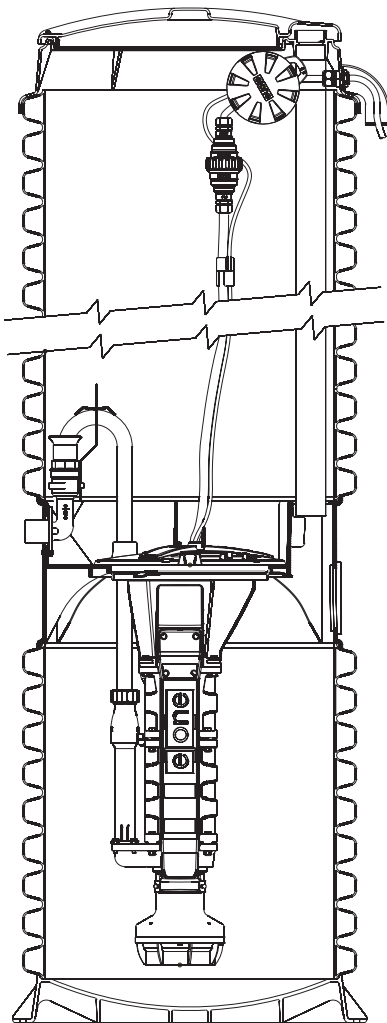
Nestled between the Cascade and the Olympic Mountain ranges, the Kitsap Peninsula boasts 300 miles of scenic coastline in the Puget Sound. So when failing septic threatened that pristine coast, municipal engineers found a cost-effective solution – and an ally – in E/One Sewer systems.

They compared the construction and O&M costs of four distinct sewer collection systems, and E/One's pressure system came out on top – in both categories. Compared to a gravity system, the E/One system was less than a quarter of

the cost to install, and less than half projected O&M.

Nearly 350 E/One grinder pumps and six miles of high-density polyethylene pressure main were installed along the waterfront. A careful analysis of the operating and maintenance costs revealed that after seven years, only 16 service calls per year were required – less than half the number projected. And the mean time between service calls was 22 years – more than double the pre-project estimate of 10 years. The cost of those repairs came in at 68 percent less than projected.

# DH071/DR071



## General Features

The model DH071 or DR071 grinder pump station is a complete unit that includes: the grinder pump, check valve, HDPE (high density polyethylene) tank, controls, and alarm panel. A single DH071 or DR071 is a popular choice for one, average single-family home and can also be used for up to two average single-family homes where codes allow and with consent of the factory.

- Rated for flows of 700 gpd (2650 lpd)
- 70 gallons (265 liters) of capacity
- Indoor or outdoor installation
- Standard outdoor heights range from 61 inches to 160 inches

The DH071 is the “hardwired,” or “wired,” model where a cable connects the motor controls to the level controls through watertight penetrations.

The DR071 is the “radio frequency identification” (RFID), or “wireless,” model that uses wireless technology to communicate between the level controls and the motor controls.

## Operational Information

### *Motor*

1 hp, 1,725 rpm, high torque, capacitor start, thermally protected, 120/240V, 60 Hz, 1 phase

### *Inlet Connections*

4-inch inlet grommet standard for DWV pipe. Other inlet configurations available from the factory.

### *Discharge Connections*

Pump discharge terminates in 1.25-inch NPT female thread. Can easily be adapted to 1.25-inch PVC pipe or any other material required by local codes.

### *Discharge*

15 gpm at 0 psig (0.95 lps at 0 m)  
11 gpm at 40 psig (0.69 lps at 28 m)  
7.8 gpm at 80 psig (0.49 lps at 56 m)

## Accessories

E/One recommends that the Uni-Lateral, E/One’s own stainless steel check valve, be installed between the grinder pump station and the street main for added protection against backflow.

Alarm panels are available with a variety of options, from basic monitoring to advanced notice of service requirements.

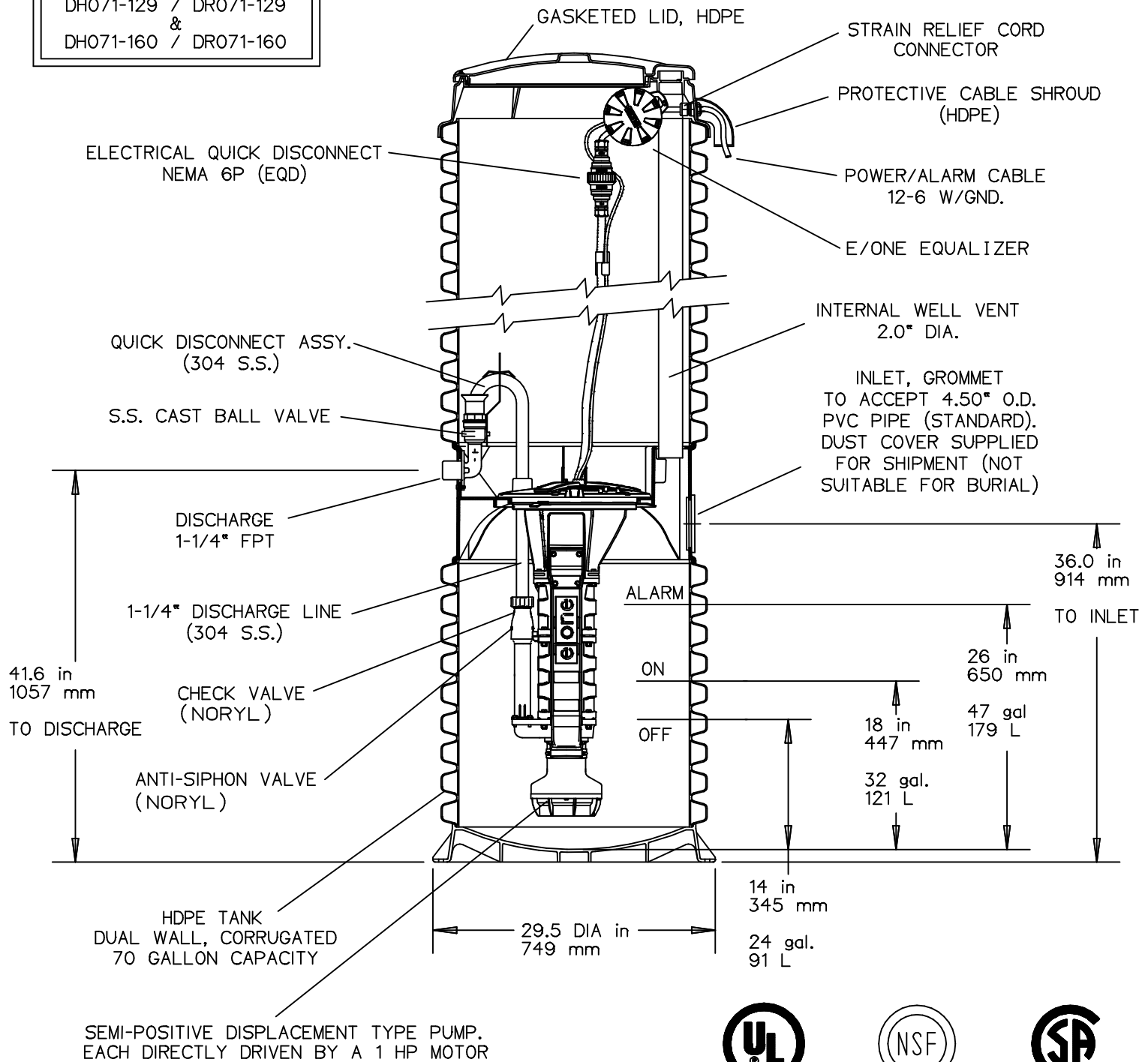
The Remote Sentry is ideal for installations where the alarm panel may be hidden from view.

Patent Numbers: 5,752,315  
5,562,254 5,439,180

NA0050P01 Rev B

- ☐ **DH071** (HARD WIRED  
LEVEL CONTROLS)
- ☐ **DR071** (WIRELESS  
LEVEL CONTROLS)


FIELD JOINT REQUIRED  
FOR MODELS  
DH071-129 / DR071-129  
&  
DH071-160 / DR071-160



CONCRETE BALLAST MAY BE REQUIRED  
SEE INSTALLATION INSTRUCTION  
FOR DETAILS

NOTE: DIMENSIONS ARE FOR REF ONLY



AD	CH	10/20/10	D
DR BY	CHK'D	DATE	ISSUE SCALE
			
MODEL DH071 / DR071 DETAIL SHEET			
NA0050P02			



**ATTACHMENT 2**  
**PRELIMINARY PROJECT COST OPINION**

TABLE 1

## RAINTREE ROAD PROJECT

ITEM	DESCRIPTION	#	UNITS	UNIT/PRICE*	TOTAL	PRORATED CONTINGENCY- ***	PRORATED TOTALS	VALUE OF WHT INKIND SERVICE	SHARES
1	2" Pressure Sewer (Directional Boring)	6,786.00	LF	\$ 21.42	\$ 145,356.12	\$ 21,803.42	\$ 167,159.54	\$ 167,159.54	TOWNSHIP
2	GP Units	45	EA	\$ 6,403.99	\$ 288,179.55	\$ 43,226.93	\$ 331,406.48		LASA
3	Terminal Vaults	1.00	EA	\$ 8,084.18	\$ 8,084.18	\$ 1,212.63	\$ 9,296.81		LASA
4	1-1/2 Service Pipe**	2,700.00	LF	\$ 30.88	\$ 83,376.00	\$ 12,506.40	\$ 95,882.40	\$ 95,882.40	TOWNSHIP
5	Manhole Coating	600.00	VF	\$ 20.00	\$ 12,000.00	\$ 1,800.00	\$ 13,800.00		LASA
6	6-inch casing pipe	30.00	LF	\$ 136.63	\$ 4,098.90	\$ 614.84	\$ 4,713.74	\$ 4,713.74	TOWNSHIP
7	Air release/ Vacuum Break Manhole, Frame and cover and Appart	1	EA	\$ 10,850.19	\$ 10,850.19	\$ 1,627.53	\$ 12,477.72		LASA
8	Valve and cleanout manhole	4.00	EA	\$ 10,130.70	\$ 40,522.80	\$ 6,078.42	\$ 46,601.22		LASA
9	Connect LPS to MH	1.00	EA	\$ 2,239.25	\$ 2,239.25	\$ 335.89	\$ 2,575.14		LASA
10	Workzone Traffic Control	1.00	LS	\$ 2,809.00	\$ 2,809.00	\$ 421.35	\$ 3,230.35	\$ 3,230.35	TOWNSHIP
11	Mobilization and Demobilization	1.00	LS	\$ 1,593.00	\$ 1,593.00	\$ 238.95	\$ 1,831.95		LASA
12	Bonds and Insurance	1.00	LS	\$ 5,786.00	\$ 5,786.00	\$ 867.90	\$ 6,653.90		LASA
13	Lawn and Field Restoration	150.00	SY	\$ 3.81	\$ 571.50	\$ 85.73	\$ 657.23	\$ 657.23	TOWNSHIP
14	Temporary State Road Shoulder Restoration		SY						
15	Permanent State Road Shoulder Restoration	150.00	SY	\$ 26.00	\$ 3,900.00	\$ 585.00	\$ 4,485.00	\$ 4,485.00	TOWNSHIP
16	Temporary Township Road Shoulder Restoration		SY						
17	Permanent Township Road Shoulder Restoration		SY						
Subtotal					\$ 609,366.49			\$276,128	
Contingency					\$ 91,404.97				
Engineering (7%)					\$ 42,655.65				
Construction Management (6%)					\$ 36,561.99				
Legal:					\$ 50,000.00				
Estimated Total Project Cost:					\$ 829,989.11				
cost per unit					\$ 18,444.20				
Subtotal					\$ 609,366.49			\$276,128	
Contingency					\$ 91,404.97				
Engineering (7%)					\$ 42,655.65				
Construction Management (6%)					\$ 36,561.99				
Legal:					\$ 50,000.00				
Estimated Total Project Cost:					\$ 829,989.11				
cost per unit					\$ 18,444.20				

\* USING PRICES FROM WEST EARL SEWER AUTHORITY

OREGON PIKE SEWER EXTENSION PROJECT- Average of three lowest bidders)

\*\* Assume 60 ft per grinder pump location

\*\*\* VALUE OF CONTINGENCY PRORATED OVER LINE ITEM PROJECT COSTS

VALUE OF TOWNSHIP IN KIND  
SERVICE:

PERCENTAGE: 33.3%

**ATTACHMENT 3**  
**ENGINEER'S COST OPINION FOR HOMEOWNER**



**ATTACHMENT 4**  
**PNDI DOCUMENTATION**

## 1. PROJECT INFORMATION

Project Name: **LASA Raintree**

Date of review: **12/29/2015 12:55:41 PM**

Project Category: **Waste Transfer, Treatment, and Disposal, Liquid waste/Effluent, Sewer line (new - construction in new location)**

Project Area: **66.3** acres

County: **Lancaster** Township/Municipality: **West Hempfield**

Quadrangle Name: **COLUMBIA EAST** ~ ZIP Code: **17552, 17512**

Decimal Degrees: **40.061501 N, -76.480523 W**

Degrees Minutes Seconds: **40° 3' 41.4" N, -76° 28' 49.9" W**



## 2. SEARCH RESULTS

Agency	Results	Response
PA Game Commission	No Known Impact	No Further Review Required
PA Department of Conservation and Natural Resources	No Known Impact	No Further Review Required
PA Fish and Boat Commission	No Known Impact	No Further Review Required
U.S. Fish and Wildlife Service	No Known Impact	No Further Review Required

As summarized above, Pennsylvania Natural Diversity Inventory (PNDI) records indicate no known impacts to threatened and endangered species and/or special concern species and resources within the project area. Therefore, based on the information you provided, no further coordination is required with the jurisdictional agencies. This response does not reflect potential agency concerns regarding impacts to other ecological resources, such as wetlands.

Note that regardless of PNDI search results, projects requiring a Chapter 105 DEP individual permit or GP 5, 6, 7, 8, 9 or 11 in certain counties (Adams, Berks, Bucks, Carbon, Chester, Cumberland, Delaware, Lancaster, Lebanon, Lehigh, Monroe, Montgomery, Northampton, Schuylkill and York) must comply with the bog turtle habitat screening requirements of the PASPGP.

### 3. AGENCY COMMENTS

Regardless of whether a DEP permit is necessary for this proposed project, any potential impacts to threatened and endangered species and/or special concern species and resources must be resolved with the appropriate jurisdictional agency. In some cases, a permit or authorization from the jurisdictional agency may be needed if adverse impacts to these species and habitats cannot be avoided.

These agency determinations and responses are **valid for two years** (from the date of the review), and are based on the project information that was provided, including the exact project location; the project type, description, and features; and any responses to questions that were generated during this search. If any of the following change: 1) project location, 2) project size or configuration, 3) project type, or 4) responses to the questions that were asked during the online review, the results of this review are not valid, and the review must be searched again via the PNDI Environmental Review Tool and resubmitted to the jurisdictional agencies. The PNDI tool is a primary screening tool, and a desktop review may reveal more or fewer impacts than what is listed on this PNDI receipt. The jurisdictional agencies **strongly advise against** conducting surveys for the species listed on the receipt prior to consultation with the agencies.

#### PA Game Commission

**RESPONSE:** No Impact is anticipated to threatened and endangered species and/or special concern species and resources.

#### PA Department of Conservation and Natural Resources

**RESPONSE:** No Impact is anticipated to threatened and endangered species and/or special concern species and resources.

#### PA Fish and Boat Commission

**RESPONSE:** No Impact is anticipated to threatened and endangered species and/or special concern species and resources.

#### U.S. Fish and Wildlife Service

**RESPONSE:** No impacts to **federally** listed or proposed species are anticipated. Therefore, no further consultation/coordination under the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*) is required. Because no take of federally listed species is anticipated, none is authorized. This response does not reflect potential Fish and Wildlife Service concerns under the Fish and Wildlife Coordination Act or other authorities.

### 4. DEP INFORMATION

The Pa Department of Environmental Protection (DEP) requires that a signed copy of this receipt, along with any required documentation from jurisdictional agencies concerning resolution of potential impacts, be submitted with applications for permits requiring PNDI review. For cases where a "Potential Impact" to threatened and endangered species has been identified before the application has been submitted to DEP, the application should not be submitted until the impact has been resolved. For cases where "Potential Impact" to special



concern species and resources has been identified before the application has been submitted, the application should be submitted to DEP along with the PNDI receipt. The PNDI Receipt should also be submitted to the appropriate agency according to directions on the PNDI Receipt. DEP and the jurisdictional agency will work together to resolve the potential impact(s). See the DEP PNDI policy at <http://www.naturalheritage.state.pa.us>.





## 5. ADDITIONAL INFORMATION

The PNDI environmental review website is a **preliminary** screening tool. There are often delays in updating species status classifications. Because the proposed status represents the best available information regarding the conservation status of the species, state jurisdictional agency staff give the proposed statuses at least the same consideration as the current legal status. If surveys or further information reveal that a threatened and endangered and/or special concern species and resources exist in your project area, contact the appropriate jurisdictional agency/agencies immediately to identify and resolve any impacts.

For a list of species known to occur in the county where your project is located, please see the species lists by county found on the PA Natural Heritage Program (PNHP) home page ([www.naturalheritage.state.pa.us](http://www.naturalheritage.state.pa.us)). Also note that the PNDI Environmental Review Tool only contains information about species occurrences that have actually been reported to the PNHP.

## 6. AGENCY CONTACT INFORMATION

### PA Department of Conservation and Natural Resources

Bureau of Forestry, Ecological Services Section  
400 Market Street, PO Box 8552, Harrisburg, PA.  
17105-8552  
Fax:(717) 772-0271

### U.S. Fish and Wildlife Service

Pennsylvania Field Office  
110 Radnor Rd; Suite 101, State College, PA 16801  
NO Faxes Please.

### PA Fish and Boat Commission

Division of Environmental Services  
450 Robinson Lane, Bellefonte, PA. 16823-7437  
NO Faxes Please

### PA Game Commission

Bureau of Wildlife Habitat Management  
Division of Environmental Planning and Habitat Protection  
2001 Elmerton Avenue, Harrisburg, PA. 17110-9797  
Fax:(717) 787-6957

## 7. PROJECT CONTACT INFORMATION

Name: \_\_\_\_\_  
Company/Business Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
City, State, Zip: \_\_\_\_\_  
Phone:(\_\_\_\_\_) \_\_\_\_\_ Fax:(\_\_\_\_\_) \_\_\_\_\_  
Email: \_\_\_\_\_

## 8. CERTIFICATION

I certify that ALL of the project information contained in this receipt (including project location, project size/configuration, project type, answers to questions) is true, accurate and complete. In addition, if the project type, location, size or configuration changes, or if the answers to any questions that were asked during this online review change, I agree to re-do the online environmental review.

\_\_\_\_\_  
applicant/project proponent signature

\_\_\_\_\_  
date

**ATTACHMENT 5**  
**PHMC RESPONSE LETTER**



# Pennsylvania State Historic Preservation Office

PENNSYLVANIA HISTORICAL AND MUSEUM COMMISSION

January 21, 2016

Timothy Lester, EIT  
Entech Engineering, Inc.  
315 Clay Road  
Lititz, PA 17543

TO EXPEDITE REVIEW USE  
BHP REFERENCE NUMBER

Re: File No. ER 2016-0506-071-A  
DEP Act 537 Sewage Facilities Plan Amendment: Raintree Road Sewer Extension  
West Hempfield Twp., Lancaster Co.

Dear Mr. Lester:

Thank you for submitting information concerning the above referenced project. The PA State Historic Preservation Office (PA SHPO) reviews projects in accordance with state and federal laws. Section 106 of the National Historic Preservation Act of 1966, and the implementing regulations (36 CFR Part 800) of the Advisory Council on Historic Preservation, is the primary federal legislation. The Environmental Rights amendment, Article 1, Section 27 of the Pennsylvania Constitution and the Pennsylvania History Code, 37 Pa. Cons. Stat. Section 500 et seq. (1988) is the primary state legislation. These laws include consideration of the project's potential effects on both historic and archaeological resources.

There may be historic buildings, structures, and/or archaeological resources located in or near the project area. In our opinion, the activities described in your proposal should have no effect on these resources. Should the scope and/or nature of the project activities change, the Pennsylvania State Historic Preservation Office (PA SHPO) should be contacted immediately.

If you need further information concerning archaeological issues please consult Doug McLearen at (717) 772-0925. If you need further information on above ground resources please consult Cheryl Nagle at (717) 772-4519.

Sincerely,

Douglas C. McLearen, Chief  
Division of Archaeology &  
Protection

cc: Lancaster Area Sewer Authority, 130 Centerville Road, Lancaster, PA 17603  
DEP, Southcentral Regional Office

DCM/tmw

**ATTACHMENT 6**  
**PUBLIC NOTICE AND PUBLIC MEETING**  
**AGENDA**

WEST HEMPFIELD TOWNSHIP SUPERVISORS' MEETING AGENDA  
TUESDAY, MARCH 1, 2016 – 7:30 P.M.

- I. CALL TO ORDER.
- II. APPROVAL OF MINUTES OF JANUARY 4, 2016 MEETING.
- III. COMMUNICATIONS.
  - A. BOARD OF SUPERVISORS.
  - B. RECOGNITION OF FIRST RESPONDERS.
  - C. POLICE DEPARTMENT PROMOTION.
  - D. TOWNSHIP MANAGER.
  - E. RESIDENTS.
- IV. SUBDIVISIONS, LAND DEVELOPMENTS, AND PLANNING MODULES.
  - A. TIM AND MEAGAN NOLT – 4190 NOLT ROAD – FINAL SUBDIVISION PLAN.
  - B. RUTTER'S FARM STORE– 3849 HEMPLAND ROAD - REQUEST FOR TIME EXTENSION.
- V. OLD BUSINESS.
  - A. BUILDING COMMITTEE UPDATE.
    - 1. CONSIDER ACTION ON AGREEMENTS WITH WEST HEMPFIELD FIRE AND RESCUE.
    - 2. CONSIDER CONTRACT FOR ARCHITECTURAL SERVICES WITH BUCHART – HORN.
    - 3. CONSIDER CONTRACT FOR SITE ENGINEERING SERVICES WITH DAVID MILLER ASSOCIATES.
  - B. DISCUSSION AND UPDATE ON MS-4.
  - C. COMPREHENSIVE PLAN UPDATE.
- VI. NEW BUSINESS.
  - A. AMENDMENT TO ACT 537 SEWAGE FACILITIES PLAN.
  - B. PUBLIC HEARING – ZONING ORDINANCE AMENDMENT TO ADOPT FLOODPLAIN REGULATIONS.
  - C. ZONING VIOLATION – 332 INDIAN HEAD ROAD – REQUESTING AUTHORIZATION FOR ENFORCEMENT.
  - D. AUTHORIZE SOLICITOR TO ENTER COMPLAINTS ON OUTSTANDING OLDS COMPLIANCE PROPERTIES.
- VII. ORDINANCES AND RESOLUTIONS.
  - A. ORDINANCE 1-16 ZONING AMENDMENT TO ADOPT NEW FLOODPLAIN REGULATIONS.
  - B. RESOLUTION 3-16 TO ENTER INTO AGREEMENT WITH THE LANCASTER AREA SEWER AUTHORITY FOR AN EXTENSION OF PUBLIC SEWERS.
- VIII. APPROVAL OF PAYABLES.
- IX. ADJOURNMENT TO EXECUTIVE SESSION TO DISCUSS PERSONNEL MATTER.



**PROOF OF PUBLICATION NOTICE IN**

State of Pennsylvania}  
   } ss:  
 County of Lancaster}

Penny L. Stauffer of the County and State aforesaid, being duly sworn, deposes and says that the LNP, a daily newspaper of general circulation published at Lancaster, County and State aforesaid, was established 1794-1877 since which date said daily newspaper has been regularly issued in said county, and that a copy of the printed notice or publication is attached hereto exactly the same as was printed and published in the regular editions and issues of said daily newspaper on the following dates:

9<sup>TH</sup> DAY OF MARCH 2016

Affiant further deposes that she is the Clerk duly authorized by the LNP Media Group, Inc., a corporation, publisher of said LNP, a newspaper of general circulation, to verify the foregoing statement under oath, and also declares that affiant is not interested in the subject matter of the aforesaid notice or advertisement and that all allegations in the foregoing statement as to time, place and character of publication are true.

Notice is hereby given that pursuant to the Pennsylvania Sewage Facilities Act and the regulations adopted by the Pennsylvania Department of Environmental Protection the West Hempfield Township Board of Supervisors has directed the preparation of the Act 537 Sewage Facilities Plan Amendment dated February 1, 2016 (the "Amendment"). The Amendment revises the Township's Act 537 Sewage Facilities Plan approved by the Pennsylvania Department of Environmental Protection on August 27, 2007, relating to the Raintree Road area of the Township. The Amendment continues to designate the Raintree Road area as an area that requires public sewerage. The proposed alternative of choice to provide public sewer service has been revised. The collection system being proposed has changed from a gravity collection system with community pumping station to a low-pressure sanitary sewer system (LPSS) with individual grinder pump units for each customer/parcel which will be installed by the

Township and Lancaster Area Sewer Authority ("LASA") and owned and operated by LASA. Sanitary sewage from this new collection system will be conveyed to LASA's existing Susquehanna Water Pollution Control Facility for treatment. The Raintree Road area includes 44 parcels and 52 EDUs. The Amendment anticipates that the project to provide public sewer service to the Raintree Road area shall be implemented within five years. A public comment period shall begin on March 9, 2016, and shall continue through April 8, 2016. Comments must be made in writing and received on or before April 8, 2016. Comments may be mailed to Ron L. Youtz, Manager, West Hempfield Township, 3401 Marietta Avenue, Lancaster, Pennsylvania 17601. The Board of Supervisors will review comments at its meeting on Tuesday, May 3, 2016, at 7:30 p.m. at the West Hempfield Township Municipal Building, 3401 Marietta Avenue, Lancaster, Pennsylvania 17601.

*Edmund Z. Hoff*  
 (Signature)

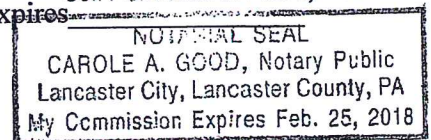
**COPY OF NOTICE OF PUBLICATION**

Sworn and subscribed to before me this

9<sup>TH</sup> DAY OF MARCH 2016

*Carole A. Good*  
 Notary Public

My commission expires \_\_\_\_\_ Commonwealth of Pennsylvania



3401 MARIETTA AVENUE  
LANCASTER, PA 17601  
[www.westhempfield.org](http://www.westhempfield.org)

## NOTICE

Notice is hereby given that pursuant to the Pennsylvania Sewage Facilities Act and the regulations adopted by the Pennsylvania Department of Environmental Protection the West Hempfield Township Board of Supervisors has directed the preparation of the Act 537 Sewage Facilities Plan Amendment dated February 1, 2016 (the "Amendment"). The Amendment revises the Township's Act 537 Sewage Facilities Plan approved by the Pennsylvania Department of Environmental Protection on August 27, 2007, relating to the Raintree Road area of the Township. The Amendment continues to designate the Raintree Road area as an area that requires public sewerage. The proposed alternative of choice to provide public sewer service has been revised. The collection system being proposed has changed from a gravity collection system with community pumping station to a low-pressure sanitary sewer system (LPSS) with individual grinder pump units for each customer/parcel which will be installed by the Township and Lancaster Area Sewer Authority ("LASA") and owned and operated by LASA. Sanitary sewage from this new collection system will be conveyed to LASA's existing Susquehanna Water Pollution Control Facility for treatment. The Raintree Road area includes 44 parcels and 52 EDUs. The Amendment anticipates that the project to provide public sewer service to the Raintree Road area shall be implemented within five years. A public comment period shall begin on March 9, 2016, and shall continue through April 8, 2016. Comments must be made in writing and received on or before April 8, 2016. Comments may be mailed to Ron L. Youtz, Manager, West Hempfield Township, 3401 Marietta Avenue, Lancaster, Pennsylvania 17601. The Board of Supervisors will review comments at its meeting on Tuesday, May 3, 2016, at 7:30 p.m. at the West Hempfield Township Municipal Building, 3401 Marietta Avenue, Lancaster, Pennsylvania 17601.

WEST HEMPFIELD TOWNSHIP SUPERVISORS' MEETING AGENDA  
TUESDAY, MAY 3, 2016 – 7:30 P.M.

- I. CALL TO ORDER.
- II. APPROVAL OF MINUTES OF APRIL 5, 2016 MEETING.
- III. COMMUNICATIONS.
  - A. BOARD OF SUPERVISORS.
  - B. PROCLAMATION RECOGNIZING NATIONAL POLICE WEEK.
  - C. PRESENTATION OF COMMENDATIONS TO POLICE DEPARTMENT.
  - D. TOWNSHIP MANAGER.
  - E. RESIDENTS.
- IV. SUBDIVISIONS, LAND DEVELOPMENTS, AND PLANNING MODULES.
  - A. JOHN FORRY – 1510 SILVER SPRING ROAD – SUBDIVISION PLAN BRIEFING.
  - B. DOLLAR GENERAL – SOUTH SIDE MARIETTA AVENUE – CONSIDER APPROVAL OF AGREEMENTS.
  - C. GREG BECHTOLD – 1058 PROSPECT ROAD – LOT ADD ON PLAN.
  - D. TIM & MEAGAN NOLT – 4190 NOLT ROAD- REQUEST FOR TIME EXTENSION.
  - E. MCCARTHY TIRE EXPANSION – NOTICE OF WITHDRAWAL OF LAND DEVELOPMENT PLAN.
- V. OLD BUSINESS.
  - A. BUILDING COMMITTEE UPDATE.
  - B. COMPREHENSIVE PLAN UPDATE.
- VI. NEW BUSINESS.
  - A. YOUNG MEDALISTS CYCLING TEAM – REQUEST TO USE TOWNSHIP ROADS FOR BIKE RACE.
  - B. HEMPFIELD RECREATION COMMISSION – AUTHORIZE EXECUTION OF COOPERATIVE AGREEMENT.
- VII. ORDINANCES AND RESOLUTIONS.
  - A. RESOLUTION 5-16 AMENDMENT TO 537 SEWAGE FACILITIES PLAN.
  - B. RESOLUTION 6-16 DESIGNATING AGENT FOR SNOW DISASTER ASSISTANCE.
- VIII. APPROVAL OF PAYABLES.
- IX. ADJOURNMENT TO EXECUTIVE SESSION TO DISCUSS PERSONNEL MATTER.



**ATTACHMENT 7**  
**PUBLIC AND LOCAL PLANNING AGENCY**  
**COMMENTS**

March 7, 2016

Jennifer Cochran, Application Coordinator  
Lancaster County Planning Commission  
150 North Queen Street, Suite 320  
Lancaster, PA 17603

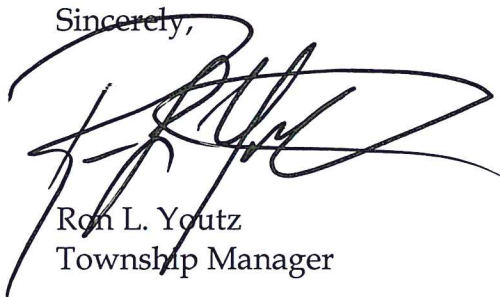
Dear Jennifer:

Per your request please accept this letter as our request for the Lancaster County Planning Commission to perform the required review of our Act 537 Sewage Facilities Plan amendment.

We understand that you were provided a copy of the amendment from Entech Engineering dated March 2, 2016. The 30-day public comment period will commence this Wednesday, March 9, 2016 and we intend for this period to run concurrent with the 60-day Lancaster County Planning Commission review period.

Please feel free to contact me should you have any questions regarding this matter.

Sincerely,

A handwritten signature in black ink, appearing to read 'Ron L. Youtz', is written over the printed name and title.

Ron L. Youtz  
Township Manager

copy: Mike Kyle, Lancaster Area Sewer Authority  
Heath Edelman, Entech Engineering



## Planning Commission

150 North Queen Street

Suite #320

Lancaster, PA 17603

Phone: 717-299-8333

Fax: 717-295-3659

www.lancastercountypanning.org

### County Commissioners

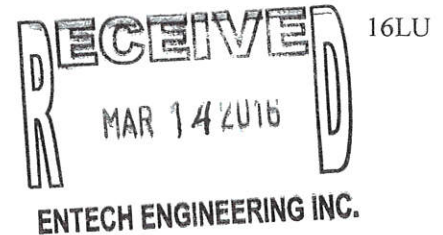
Dennis P. Stuckey, Chairman

Joshua G. Parsons, Vice-Chairman

Craig E. Lehman, Commissioner

### Executive Director

James R. Cowhey, AICP



### MEMORANDUM

**To:** Ron L. Youtz, Manager/Secretary  
West Hempfield Township

**From:** Community Planning Division of Lancaster County Planning Commission

**Date:** March 7, 2016

**Re:** Receipt of a Community Planning Review  
Community Planning File #: 30-135  
**Proposed amendment to the Act 537 Sewage Facilities Plan**

The Lancaster County Planning Commission has received the above-referenced proposal on **March 3, 2016** and scheduled the proposal for review at its meeting on **April 11, 2016 at 3:00 p.m.** in the **1<sup>st</sup> Floor LCPC Meeting Rooms at 150 North Queen Street, Binns Park Annex, Lancaster, Pennsylvania.**

All those interested in the proposal are welcome to attend the meeting and comment on the proposal. However, attendance is not necessary. Copies of the staff's review comments are available to applicants and to the public after 8:30 a.m. on the Thursday prior to the meeting. A copy of the final letter of recommendation from the Planning Commission will be mailed to you following the meeting.

You and any other parties listed below are the only persons receiving this formal scheduling information. Therefore, please feel free to contact others who should be made aware of the review.

Thank you for your cooperation in submitting this proposal. Should you have any questions regarding this submittal, please contact the community planner for the above referenced municipality at (717) 299-8333.

JRC/fe

**Copy:** Alice Yoder, West Hempfield Township Planning Commission Secretary  
Morgan Hallgren Crosswell & Kane, West Hempfield Township Solicitor  
Ron Miller, Columbia Borough Municipal Secretary  
Jeffrey Butler, East Donegal Township Municipal Secretary  
Robert Krimmel, East Hempfield Township Municipal Secretary  
Ryan Strohecker, Manor Township Municipal Secretary  
Pamela Mitchell, Mountville Borough Municipal Secretary  
Duane Martin, Rapho Township Municipal Secretary  
Sara Gibson, Rapho Township Manager  
Heath Edelman, Entech Engineering, Inc.

S:\COMMUNPL\LCPC\2016\4-11-16\SCHEDULING LETTERS\Areawides\AW-30-135.docx







RECEIVED  
APR 18 2016

ENTECH ENGINEERING INC.

**Planning Commission**

150 North Queen Street  
Suite #320

Lancaster, PA 17603

Phone: 717-299-8333

Fax: 717-295-3659

[www.lancastercountypanning.org](http://www.lancastercountypanning.org)

**County Commissioners**

Dennis P. Stuckey, Chairman

Joshua G. Parsons, Vice-Chairman

Craig E. Lehman, Commissioner

**Executive Director**

James R. Cowhey, AICP

**MEMORANDUM**

16LU

**To:** Ron L. Youtz, Manager/Secretary  
West Hempfield Township

**From:** Dean S. Severson, AICP *DSS*  
Principal Agricultural and Rural Planning Analyst

**Date:** April 12, 2016

**Re:** CPF #: 30-135, Act 537 Sewage Facilities Plan Amendment  
West Hempfield Township  
LCPC Meeting of April 11, 2016

The Lancaster County Planning Commission (LCPC) has reviewed the above-referenced Act 537 Plan Amendment and recommends approval. The amendment is consistent with and supportive of the *Lancaster County Comprehensive Plan* and *Growing Together: A Comprehensive Plan for Central Lancaster County*.

**PROPOSAL**

West Hempfield is proposing to amend its Act 537 Sewage Facilities Plan (Plan) which was last amended in 2006. The Plan amendment is to revise the sewage collection, pumping, and conveyance system for the Raintree Road On-Lot Disposal System (OLDS) needs area.

The 2006 Plan identified four OLDS needs areas in the Township which would be served by public sewage disposal. Service to two of these areas, Ironville and Klinesville, has been completed. Installation of public sewer to the third area, Grubb Lake, has been identified as pending.

Public sewer service to the fourth needs area, Raintree Road, located south of Marietta Pike in the western part of the Township, was planned to serve 16 parcels and .23 Equivalent Dwelling Units (EDUs) in the 2006 Plan. The chosen design option was for gravity sewer lines flowing to a community based pumping station. The estimated cost for the selected alternative, approximately \$950,000 was determined to be too expensive for the limited number of customers, and planning for sewer service to this needs area was deferred.





Subsequent to the 2006 Plan adoption, the Township and LASA have explored the use of low pressure sanitary sewer systems (LPSSS) which entail individual grinder pumps on each property and a two-inch sewer main along Marietta Avenue.

LASA has purchased the Columbia Sewer System, including the Township's collection system. As part of this agreement, LASA has proposed to pay approximately one-third of the Raintree Road project costs and the Township will pay the other two-thirds. Each property owner will be responsible for connection costs, tapping fees, and related costs.

The chosen alternative sewage collection system not only will provide cost savings through reduced excavation and site restoration costs, it will also allow the enlargement of the sewer service area to serve units that previously were unserviceable due to cost or technical restrictions. This proposed addition to the original service area includes parcels along Marietta Pike. These parcels have OLDS systems that were previously identified as Confirmed or Potential Malfunctions, or are within 150 feet of the proposed sewer and thus required by Township ordinance to connect. There are an additional 28 parcels and 29 EDUs, with a total service area of 44 parcels and 52 EDUs.

#### **COMMENTARY AND CONSISTENCY WITH COMPREHENSIVE PLANS**

The Lancaster County Planning Commission supports the proposed Act 537 Plan amendment as a cost-effective method to provide public sewer service to an area of West Hempfield Township experiencing on-lot septic system malfunctions. The amendment is also consistent with county and township growth management goals by limiting public sewer service outside of DGAs only to those identified problem areas, and excluding undeveloped lands.

##### ***Lancaster County Comprehensive Plan***

The Raintree Road OLDS needs area is located outside of any Designated Growth Area in West Hempfield Township. In general, *Balance* doesn't support the provision of public sewer service outside of Villages and in certain cases, Rural Business Areas and Rural Neighborhoods. The only exception is in the case of a threat to public health and safety.

*Balance* recommends that in the case of on-lot system failure, municipalities should identify these OLDS areas in their Act 537 Plan and either replace the malfunctioning systems, develop cluster and small community systems, or extend public sewer service. West Hempfield Township has previously identified this area of the Township as an area experiencing confirmed or potential malfunctions and has proposed a service alternative, low pressure sanitary sewer service systems, to address the problem. The Township doesn't plan for any undeveloped lots to be served by this system.

Therefore, the Act 537 Plan amendment is consistent with the growth management goals of *Balance*.

***Municipal Comprehensive Plan***

The Plan amendment is also consistent with the regional plan, *Growing Together*. Specifically, one of the Objectives listed in the Utilities chapter of the plan is to “Discourage extension of public water and sewer service outside the DGA except in special needs areas, as defined by Act 537 Plans.”

\* \* \*

DSS\fe

Copy: Alice Yoder, West Hempfield Township Planning Commission Secretary  
Morgan Hallgren Crosswell & Kane, West Hempfield Township Solicitor  
Ron Miller, Columbia Borough Municipal Secretary  
Jeffrey Butler, East Donegal Township Municipal Secretary  
Robert Krimmel, East Hempfield Township Municipal Secretary  
Ryan Strohecker, Manor Township Municipal Secretary  
Pamela Mitchell, Mountville Borough Municipal Secretary  
Duane Martin, Rapho Township Municipal Secretary  
Sara Gibson, Rapho Township Manager  
Heath Edelman, Entech Engineering, Inc.

**ATTACHMENT 8**  
**RESPONSE TO COMMENTS**

3401 MARIETTA AVENUE  
LANCASTER, PA 17601  
[www.westhempfield.org](http://www.westhempfield.org)

May 2, 2016

Mr. Heath Edelman, P.E.  
Entech Engineering, Inc.  
315 Clay Road  
Lititz, PA 17543

Re: Amendment to 537 Sewage Facilities Plan

Dear Mr. Edelman,

This letter shall confirm that West Hempfield Township did not receive any public comments during the recently authorized and advertised public comment period for the proposed amendment to our 537 plan.

Please feel free to contact me should you have any questions.

Sincerely,



Ron L. Youtz  
Township Manager



**ATTACHMENT 9**  
**PLAN ADOPTION BY RESOLUTION**

## TOWNSHIP OF WEST HEMPFIELD

Lancaster County, Pennsylvania

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### RESOLUTION NO. 5-16

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A RESOLUTION OF THE BOARD OF SUPERVISORS OF WEST HEMPFIELD TOWNSHIP, LANCASTER COUNTY, PENNSYLVANIA, TO ADOPT AN AMENDMENT TO THE OFFICIAL SEWAGE FACILITIES PLAN.

WHEREAS, the Pennsylvania Sewage Facilities Act, Act of January 24, 1966, P.L. 1535, No. 537, and the regulations adopted by the Pennsylvania Department of Environmental Protection ("DEP") pursuant to the Pennsylvania Sewage Facilities Act mandate that a municipality adopt an official sewage facilities plan specifying sewage service areas to be provided in order to prevent contamination of waters or prevent environmental health hazards by sewage waste; and

WHEREAS, the plan mandated by the Pennsylvania Sewage Facilities Act and the DEP regulations must be revised whenever it is necessary to meet the sewage disposal needs of the municipality; and

WHEREAS, the Township adopted the West Hempfield Township Act 537 Official Sewage Facilities Plan dated March 2006 (the "Plan"); and

WHEREAS, DEP approved the Plan on August 27, 2007; and

WHEREAS, the Township has been implementing the Plan since its adoption; and

WHEREAS, the Plan identified the Raintree Road area as an on-lot sewage disposal needs area that should be provided with public sewage disposal; and

WHEREAS, the Plan included four options to provide public sewer service to the Raintree Road area, a gravity sewer extension, a small community pump station with a force main to the Farmdale pump station, a community treatment system with stream discharge, and a community on-lot sewage disposal system; and

WHEREAS, the Township and Lancaster Area Sewer Authority ("LASA") have evaluated the four options in the Plan for the Raintree Road needs area and have determined

that a fifth option, being a low-pressure system with a force main to the LASA Farmdale pump station, is the preferred method to provide sewage disposal to the Raintree Road area; and

WHEREAS, the Township has been presented with the Act 537 Sewage Facilities Plan Amendment dated February 1, 2016, prepared by Entech Engineering, Inc. (the "Amendment"); and

WHEREAS, the Amendment would amend the Plan to add the preferred option to provide sewage disposal to the Raintree Road area to the Plan; and

WHEREAS, the Township advertised a 30-day public comment period on the Amendment to commence on March 9, 2016, and conclude on April 8, 2016; and

WHEREAS, the Township provided copies of the Amendment to the West Hempfield Township Planning Commission and the Lancaster County Planning Commission on March 2, 2016; and

WHEREAS, the Board of Supervisors desires to adopt the Amendment.

NOW, THEREFORE, BE AND IT IS HEREBY RESOLVED by the Board of Supervisors of the Township of West Hempfield, Lancaster County, Pennsylvania, as follows:

Section 1. The Board of Supervisors adopts the amendment to the Plan entitled Act 537 Sewage Facilities Plan Amendment dated February 1, 2016, prepared by Entech Engineering, Inc. in the form and content presented at this public meeting as an amendment to the Official Sewage Facilities Plan for West Hempfield Township in accordance with the Pennsylvania Sewage Facilities Act and the regulations of the DEP.

Section 2. The West Hempfield Official Sewage Facilities Plan, as amended by the Board of Supervisors, shall include the following additional material and all charts, tables, diagrams, appendices, figures and textual matters contained therein and appended thereto:

Preface  
Introduction  
Identified Needs Areas  
Proposed Amendment for Raintree Road Area  
Raintree Road Planning Area  
Description of Project  
User Cost Analysis  
Consistency Review and Permitting Calculations  
Justification for Selected Alternative.

Section 3. The Board of Supervisors adopts the following alternative set forth in the Amendment as the alternative of choice which shall be implemented by the Township upon DEP

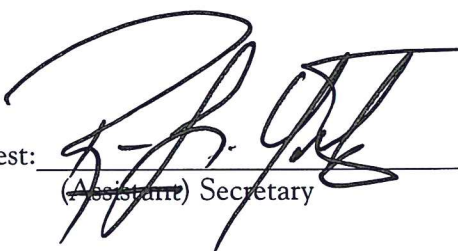
approval of the Amendment and adopts the implementation schedule set forth in said Amendment to the Plan. The Amendment amends the Plan to provide that the preferred option for the Raintree Road area is a low-pressure system with a force main to the LASA Farmdale pump station which will expand the area to be provided with public sewer service to include 44 parcels and 52 EDUs. The Amendment anticipates that the project to provide public sewer service to the Raintree Road area shall be implemented within five years.

Section 4. To the maximum extent feasible, the Township commits to implement the Act 537 Sewage Facilities Plan Amendment dated February 1, 2016, prepared by Entech Engineering, Inc. in accordance with the implementation schedule set forth in said Amendment.

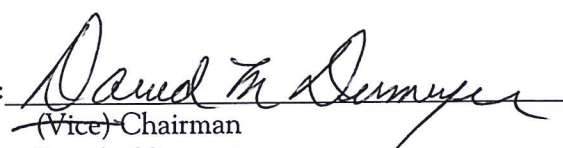
Section 5. In the event any provision, section, sentence, clause or part of this Resolution shall be held to be invalid, illegal or unconstitutional by a court of competent jurisdiction, such invalidity, illegality or unconstitutionality shall not affect or impair the remaining provisions, sections, sentences, clauses or parts of this Resolution, it being the intent of the Board of Supervisors that the remainder of the Resolution shall be and shall remain in full force and effect.

Section 6. This Resolution shall take effect and be in force immediately.

DULY ADOPTED this 3rd day of May, 2016, by the Board of Supervisors of the Township of West Hempfield, Lancaster County, Pennsylvania, in lawful session duly assembled.

Attest:  (Assistant) Secretary

TOWNSHIP OF WEST HEMPFIELD  
Lancaster County, Pennsylvania

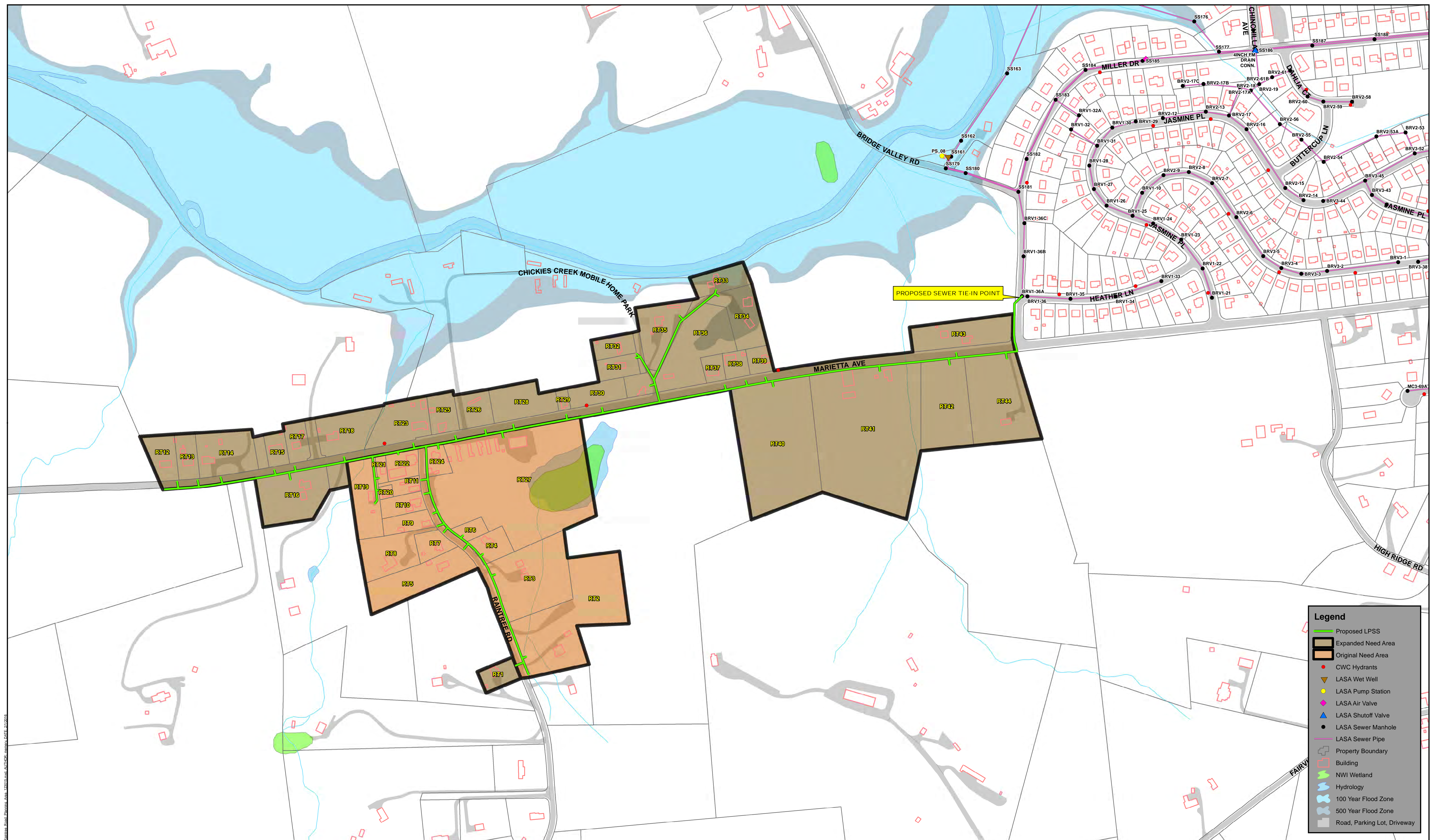
By:  (Vice) Chairman  
Board of Supervisors

[TOWNSHIP SEAL]



**FIGURE 1**  
**PROPOSED SEWER EXTENSION**





LANCASTER AREA SEWER AUTHORITY  
WEST HEMPFIELD TOWNSHIP, LANCASTER COUNTY, PA  
RAINTREE ROAD SEWER EXTENSION

## PLANNING AREA

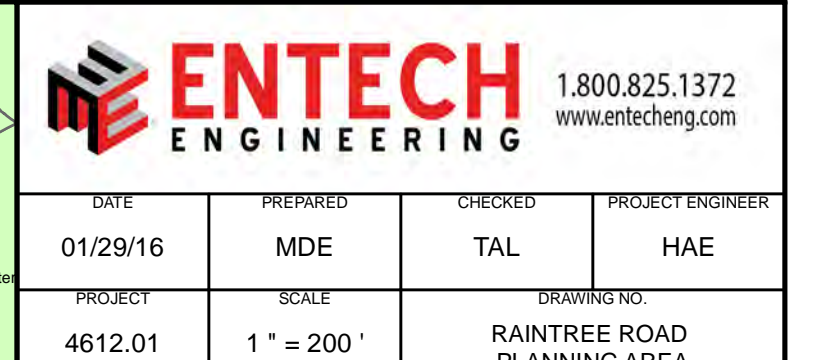
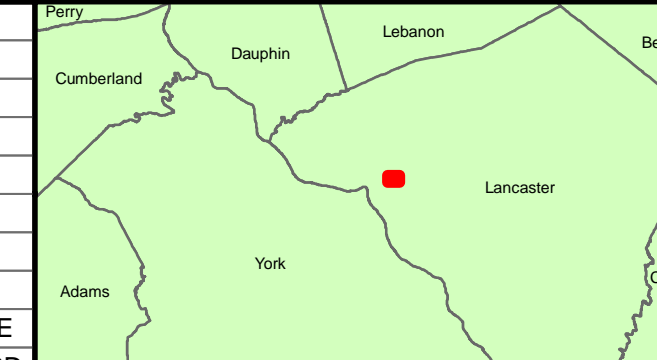
### DATA CREDITS

Hydrants: County of Lancaster 2015  
Hydrology: County of Lancaster 2012  
Local Road: County of Lancaster 2012  
Building: County of Lancaster 2012  
Flood Zone: FEMA 2015  
Wetland: National Wetlands Inventory 2015  
Parcel: County of Lancaster PA 2015  
Municipal Boundary: PennDOT 2015  
Sewer Area Needed LASA 2015  
Sewer System: LASA 2015  
County Boundary: PennDOT 2015  
Proposed Sewer: Entech 2015

**STATEMENT OF ACCURACY**  
Unless otherwise noted, locations of map features should be considered approximate. Data was incorporated as the best available information at the time of mapping, and may not be accurate, complete, or current. The mapped data does not constitute a legal survey, and discretion should be exercised when using the information for engineering design purposes.



01/29/16	0	ENGINEER REVIEW		
DATE	REV	ISSUED FOR / REVISED	MDE TECH	HAE APP





**TABLE 1**  
**RAINTREE ROAD AREA PARCEL INVENTORY**

<b>Raintree # <sup>(1.)</sup></b>	<b>Lot # <sup>(2.)</sup></b>	<b>Tax Parcel ID</b>	<b>Physical Address</b>	<b>Justification</b>	<b>Estimated EDUs <sup>(3.)</sup></b>
1	268	3006311800000	720 RAINTREE RD	Within 150 ft.	1
2	266	3009052300000	723 RAINTREE RD	Possible Failing OLDS, Existing Planning Area	1
3	264	3008314900000	743 RAINTREE RD	Probable Failing OLDS, Existing Planning Area	1
4		3005943700000	745 RAINTREE RD	Existing Planning Area, Within 150 ft.	1
5	265	3002678100000	770 RAINTREE RD	Failing OLDS, Existing Planning Area	1
6		3004931100000	771 RAINTREE RD	Existing Planning Area, Within 150 ft.	1
7	263	3003214600000	774 RAINTREE RD	Failing OLDS, Existing Planning Area	1
8		3001178900000	780 RAINTREE RD	Existing Planning Area	1
9	262	3001924400000	784 RAINTREE RD	Possible Failing OLDS, Existing Planning Area	1
10	261	3001682300000	786 RAINTREE RD	Failing OLDS, Existing Planning Area	1
11		3001772300000	790 RAINTREE RD	Existing Planning Area, Within 150 ft.	1
12	258	3000206600000	4439 MARIETTA AVE	Failing OLDS	1
13	257	3001376400000	4437 MARIETTA AVE	Within 150 ft.	1
14	255	3003238100000	4431 MARIETTA AVE	Within 150 ft.	1
15	256	3005669800000	4425 MARIETTA AVE	Possible Failing OLDS	1
16		3006226800000	4426 MARIETTA AVE	Within 150 ft.	2
17	254	3006633400000	4419 MARIETTA AVE	Within 150 ft.	1
18		3009008600000	4411 MARIETTA AVE	Within 150 ft.	1
19	260	3009936800000	4414 MARIETTA AVE	Probable Failing OLDS, Existing Planning Area	1
20		3000899300000	790A RAINTREE RD	Existing Planning Area	1
21		3000680700000	4410 MARIETTA AVE	Existing Planning Area	1
22		3001682800000	4406 MARIETTA AVE	Existing Planning Area	1
23		3001622400000	4403 MARIETTA AVE	Within 150 ft.	1
24	259	3003324200000	4396 MARIETTA AVE	Failing OLDS, Existing Planning Area	1
25		3003617200000	4395 MARIETTA AVE	Within 150 ft.	1
26		3006442000000	4347 MARIETTA AVE	Within 150 ft.	1
27		3007194000000	4366 MARIETTA AVE	Existing Planning Area, Within 150 ft.	6
28		3007362500000	4365 MARIETTA AVE	Within 150 ft.	1
29	253	3009363600000	4345 MARIETTA AVE	Possible Failing OLDS	1
30		3001006800000	4363 MARIETTA AVE	Within 150 ft.	1



Raintree # <sup>(1.)</sup>	Lot # <sup>(2.)</sup>	Tax Parcel ID	Physical Address	Justification	Estimated EDUs <sup>(3.)</sup>
31		3001979000000	4319 MARIETTA AVE	Within 150 ft.	1
32	251	3001788900000	4321 MARIETTA AVE	Within 150 ft.	1
33		3007061000000	4313 MARIETTA AVE	Possible Failing OLDS, Well bacteria-positive	1
34		3007892400000	4311 MARIETTA AVE	Within 150 ft.	1
35		3003887000000	4317 MARIETTA AVE	Within 150 ft.	2
36		3005267000000	4357 MARIETTA AVE	Within 150 ft.	2
37		3006538100000	4309 MARIETTA AVE	Within 150 ft.	1
38	252	3007560100000	4307 MARIETTA AVE	Within 150 ft.	1
39		3008692100000	4305 MARIETTA AVE	Within 150 ft.	1
40		3009612600000	4324 MARIETTA AVE	Within 150 ft.	1
41		3004017000000	4318 MARIETTA AVE	Within 150 ft.	1
42		3007630800000	4308 MARIETTA AVE	Within 150 ft.	1
43		3009125400000	4303 MARIETTA AVE	Within 150 ft.	1
44		3000223200000	4304 MARIETTA AVE	Well bacteria-positive	1
<b>Total EDUs for Project <sup>(4.)</sup></b>					52

#### Notes

1. See Figure #1
2. Lot # from the surveys as conducted as part of the 2006 Act 537 needs assessment.
3. Estimated Equivalent Dwelling Units (EDUs) based on map interpolation and subject to future review/allocation during LASA sewage connection application/permitting.
4. RT5, RT28, RT30, RT40, and RT42 are vacant lots, the total current EDUs are 47.