WORCESTER TOWNSHIP PLANNING COMMISSION MEETING
WORCESTER TOWNSHIP COMMUNITY HALL
1031 VALLEY FORGE ROAD, WORCESTER, PA 19490
THURSDAY, FEBRUARY 22, 2018, 7:30 PM

CALL TO ORDER by Mr. Todd at 7:30 PM

ATTENDANCE

PRESENT:	GORDON TODD	[X]
	DOUG ROTONDO	[X]
	TONY SHERR	[X]

1. In Memoriam – The Planning Commission recognized a moment of silence in memory of former Planning Commission Member Chris David.

2. January 25, 2018 Meeting Minutes – Mr. Sherr motioned to approve the January 25, 2018 Meeting Minutes as presented, second by Mr. Rotondo. There was no public comment. By unanimous vote the motion was approved.

3. Ordinance 2018-274 – Mr. Ryan provided an overview of a proposed ordinance to rezone the Center Square Golf Course property to the R-AG-200 Residential-Agricultural District. Mr. Ryan noted the Stipulation Agreement with Cutler requires this property to be rezoned to allow the proposed mixed-residential use at this location.

   The consensus of the Members was to take no action on this ordinance.

4. Ordinance 2018-275 – Mr. Ryan provided an overview of a proposed ordinance to amend the R-AG-200 Residential-Agricultural District to allow a mixed-residential use that is now proposed at the Center Square Golf Course property.

   The consensus of the Members was to take no action on this ordinance.

5. PA Small Water & Sewer Grant – Mr. Ryan provided an overview of a grant application to the Pennsylvania Department of Community and Economic Development PA Small Water & Sewer Program, for various improvements to existing facilities at the Valley Green Wastewater Treatment Plant and the Berwick Wastewater Treatment Plant. Mr. Ryan noted the Board of Supervisors had authorized the submission of the grant application, and he stated this program requires a letter from the Planning Commission that confirms the application is not in conflict with the municipality's comprehensive plan. Mr. Ryan noted the application is not in conflict with the Worcester Township Comprehensive Plan.

   Mr. Sherr motioned to authorize the Chair to sign a letter confirming the Township's grant application to the Pennsylvania Department of Community and Economic Development

PA Small Water & Sewer Program does not conflict with the Worcester Township Comprehensive Plan, second by Mr. Rotondo. There was no public comment. By unanimous vote the motion was approved.

6. March 22 Planning Commission Meeting Agenda – At its March 22, 2018 meeting the Planning Commission will discuss the Reserve at Center Square subdivision (LD 2017-12). The Planning Commission may also review the 2044 Berks Road subdivision (LD 2016-05) and the Palmer subdivision (LD 2017-01), if these revised plans are received by the Township, or if a review period extension is not received.

7. Other Business – Mr. Ryan noted the Board of Supervisors, at its March 21 Business Meeting, may consider the appointment of persons to the current Planning Commission vacancies.

PUBLIC COMMENT

- There was no public comment at this evening's meeting.

ADJOURNMENT

There being no further business before the Planning Commission, Mr. Todd adjourned the meeting at 7:52 PM.

Respectfully Submitted:

_____

Tommy Ryan
Township Manager

CKS Engineers, Inc.
88 South Main Street
Doylestown, PA 18901
215-340-0600 • FAX 215-340-1655

Joseph J. Nolan, P.E.
Thomas F. Zarko, P.E.
James F. Weiss
Patrick P. DiGangi, P.E.
Ruth Cunnane
Michele A. Fountain, P.E.

March 12, 2018
Ref: #7484

Township of Worcester
1721 Valley Forge Road
P.O. Box 767
Worcester, PA 19490-0767

Attention: Tommy Ryan, Township Manager

Reference: Center Square Golf Club – Subdivision Plan
Skippack Pike, Whitehall Road & Berks Road
Revised Plan Review

Dear Mr. Ryan:

CKS Engineers, Inc., is in receipt of a subdivision plan submitted by STA Engineering, Inc., for the property on the southern side of Skippack Pike and between Berks Road and Whitehall Road. The subdivision plan submission consists of a plan set containing ninety-six (96) sheets, dated November 1, 2017, last revised January 22, 2018 as well as a Post Construction Stormwater Management Plan Narrative, dated November 1, 2017, last revised January, 22, 2018.

The plan proposes the subdivision of the existing 157.63 acre (approximate) parcel into two hundred fifty (250) building lots, with several Open Space parcels. The subject parcel is the AGR – Agricultural Zoning District. The parcel is subject to the Stipulation Agreement between Worcester Township and the Cutler Group, Inc., dated July 19, 2017. CKS Engineers, Inc., provided comments on the initial submission of this subdivision plan in two (2) letter dated January 16, 2018.

CKS Engineers, Inc., has reviewed the revised plan submission and also the accompanying documents for conformance with the Code of the Township of Worcester. Based on our review of this plan set, we offer the following comments:

Planning and Zoning Comments

1. The site layout is in general conformance with Exhibit "B" from the Stipulation Agreement as well as an amendment regarding buffers, sanitary sewer connections and open space areas. One hundred twenty-five detached single-family dwellings and one hundred twenty-five attached single-family dwellings are proposed. The plan proposes to offer the majority of the roadways (those serving the detached dwellings)

to the Township for dedication. The two access roads that serve the attached dwelling units are to be owned and maintained by a homeowner's association. The Open Space areas are to be owned and maintained by a homeowner's association.

2. The submission includes a list of waivers requested from the Subdivision and Land Development Ordinance. As noted in the January 22, 2017 correspondence from STA Engineering, Inc. they are:

   A. From Section 130-16.B.(4)(d): Which requires a maximum 3% grade within 50 feet of any side of an intersection measured along the curb line. The waiver is requested to allow a maximum grade from 3% to 7% along the curbline at 6 of the 10 intersections. Given the site conditions, the proposed road grades and the slope requirements for curb ramps, the maximum 3% grade is exceeded. We take no exception to this request.

   B. From Section 130-16.C.(1)(a)[4]: Which requires a 32 feet paved width for residential streets. The waiver is requested to allow Roads A through E to be 28 ft. wide and Roads F and G to be 26 ft. wide. (As explained by the applicant's engineer, the reduction in street impervious surface is a stormwater management BMP and the reduced width is acceptable for residential developments and allows for emergency vehicle access.) We take no exception to this request.

   C. From Section 130-16.E.(7): Which requires approach grades to be a maximum of 3% for a distance of 50 feet from intersections. (The waiver is requested to allow the Road C intersection with Road C (at Lots 25 and 97) and the Road C intersection with Road F (at Lots 14 and 15) to both have 5% approach grades within 50 feet of the intersections. The existing site grades require that these roads have greater slopes in order to meet other slope requirements for road design and to effectively balance the site earthwork.) We take no exception to this request.

   D. From Section 130-18.B.(1)(a): Requiring concrete curb. (The waiver is requested to allow the use of Belgian block curb for interior roads only. Concrete curb will be used within State Roads.) We take no exception to this request.

   E. From Section 130-24.B.(3)(e)[2]: To allow use of HDPE storm pipe outside of any Township dedicated right-of-way or within lawn areas. (The waiver is requested to allow HDPE in proposed lawn areas. RCP is proposed within all public and private streets and under the berms for the basin outfall pipes.) We take no exception to this request.

   F. From Section 130-24.B.(3)(a), (c) and (h): Requiring storm pipes and inlets to be designed to handle the 50-year design storm and to provide a maximum headwater depth that is one foot below the inlet top of grate or manhole cover. The waiver is requested to instead require that storm sewer pipes and inlets/manholes be designed for the 100-year design storm with no surcharge. We take no exception to this request.

G. From Section 130-24.B.(3)(j): Requiring a minimum of three feet of cover over all storm pipes. The waiver is requested to allow a minimum of two ft. of cover in roads and one and one half ft. of cover in lawn areas to minimize utility conflicts and the depths to which utilities are installed. We take no exception to this request.

H. From Section 130-24.B.(4)(f)[2]: Requiring the 100-year post-development flow rate to be equal to or less than the 10-year pre-development flow rate. The waiver is requested to instead require that post-development peak flow rate for the 2- and 10-year design storm is 75% of the pre-development peak flow rate and that the post-development peak flow rate for the 25-, 50- and 100-year design storm does not exceed the pre-development rate for the respective design storms. This approach to peak flow management is more in line with current NPDES permit requirements. We take no exception to this request.

I. From Section 130-24.B.(4)(f)[7]: Requiring two feet of freeboard from the design flow in the emergency spillway to the top of berm elevation. This waiver is requested to instead require 1 foot of freeboard from the design flow elevation in the emergency spillway to the top of berm and a minimum of 0.50 feet of freeboard from the 100-year water surface in the basin to the emergency spillway elevation. This approach to freeboard adds another level of protection should an orifice or outlet become clogged or obstructed. We take no exception to this request.

J. From Section 130-28.G.(4): Street tree requirement. The waiver is requested to provide all but 344 of the required street trees. We are not fully in favor of this request. We suggest the applicant discuss options with the Township regarding this request, including a possible fee in lieu of installation of the required trees.

K. From Section 130-28.G.(5)(b): Which requires a softening buffer along the PECO corridor. The waiver is requested to not provide a softening buffer along the PECO corridor. Earth berms are proposed and existing vegetation will be retained. We take no exception with this request.

L. From Section 130-28.G.(4)(c): Requiring street trees to be planted a minimum distance of five feet outside and parallel to the right-of-way line, unless otherwise approved by the Township. The waiver is requested to allow street trees to be planted at various locations throughout the property in addition to planting along the street rights-of-way. The number of required street trees cannot be planted along the streets and still maintain appropriate offsets from utilities, driveways and intersections. We take no exception with this request.

M. From Section 130-28.G.(5)(b): Requiring a softening buffer along all side and rear property lines where existing vegetation is not sufficient to meet the requirements. The waiver is requested to allow existing vegetation that is to remain to count toward softening buffer requirements. We take no exception with this request.

3. The plan proposes some frontage improvements to Skippack Pike and Berks Road which have been discussed with the Township Traffic Engineer. Sidewalks have not been proposed but have been provided from the internal streets to Berks Road and Skippack Pike. A waiver should be requested from the requirement for sidewalks along the existing street frontage. The Township may wish to discuss a fee in lieu of installation of the sidewalks.

   In addition, the plan proposes minimal frontage widening on Skippack Pike and Berks Road and none on Whitehall Road. As discussed with the Township Traffic Engineer, we recommend that in addition to the proposed improvements, the applicant provide a northbound right turn lane between the Berks Road access and Skippack Pike. PennDOT has included this comment in their initial review of the HOP plans as well. (130-16.A.6, 130-16.C, 130-18.A, 130-33.F)

   Easement note 16 on the Record Plan has been revised to clarify ownership and maintenance responsibility for the storm sewer system. As noted, it would appear that any of the off-road storm sewer is to be owned and maintained by the Homeowner's Association. However, the storm sewers in the private roads are to be dedicated to the township. The township should determine if it wishes to maintain the storm sewer system within the private roads. If it does, then appropriate easements would be necessary.

4. The proposed design requires a permit from the Pennsylvania Department of Transportation (PennDOT). Design plans were submitted on February 1, 2018 and initial comments were received on March 3, 2018. The applicant should revise the plans to address all PennDOT review comments. (130-14.J)

5. The Township Traffic Engineer has also provided comments on the HOP plans by letter of March 1, 2018. All comments in this review letter must also be addressed.

6. The proposed water lines should be approved by the North Penn Water Authority. It is our understanding that the applicant's engineer is coordinating the water line design with the Authority. (130-27)

7. The landscaping design includes typical planting layout for the individual lot landscaping requirements of Section 130-28.G.9, and has been revised to remove the previously proposed shrub substitution for the deciduous trees. However, the trees are only shown in the "typical" lot details on Sheet 63. We take no exception to the details; however we note that the trees are not shown on the overall plans (Sheets 56 through 62). We assume that the individual lot trees have not been shown in order to keep the plan from becoming too cluttered and take no exception to that decision. We recommend that Sheet 56 be revised to include a reference to the on-lot planting requirement and detail on Sheet 63 so that it is not forgotten during construction.

8. The plant material distribution for the replacement trees appears to be largely allocated to the various BMP areas throughout the site. We note that the drainage facilities identified as detention basins have the requisite number of plantings per Section 130-28.G.7. However, this section refers to required plantings for "drainage

area and detention basin(s)"; the Township may wish to discuss with the applicant whether the BMP areas should have plantings in accordance with this section rather than to be areas where replacement plantings will be placed.

9. The project proposes a series of detention basins and BMP facilities to control the release rate, volume control and water quality components of the runoff generated by this development. The report includes soil testing results as well as storm sewer calculations. The storm sewer system has been designed to accommodate a 100-year storm.

   The design, including the storm sewer collection and conveyance system will adequately address the stormwater requirements of the Township upon successful completion of the various drafting and engineering items included within this letter. We note that the concerns identified will not adversely affect the design to the degree that additional basins, or significant enlargement of basins would be necessary.

10. We have received a separate submission for the wastewater pumping station and force main design, which has been reviewed and approved. In conjunction with proposed public sewer to service this project, we do offer the following comments:

    A. The project will require sewer service for 272 homes (250 on-site and 22 abutting the site) and will generate 62,850 gallons per day of sewage. This sewage will be treated at the Valley Green Wastewater Treatment Plant. The applicant has submitted the appropriate planning module to DEP. Approval of the module is currently under review by DEP.

    B. A water quality management, Part 2, permit will be required from DEP. A completed application has been submitted to DEP for review. This permit cannot be issued until planning approval has been obtained.

    C. We note that the force main will require off-site easements from other property owners. The applicant should provide these easements and easement agreements to the Township for review.

11. The plan has been revised to include road names. We recommend that the names chosen be reviewed by the Township to ensure that there are no conflicts with existing street names.

Engineering and Drafting Comments

12. Sheet 16 contains conflicting references to the storm sewer pipe between Pond "A" and Pond "B" and should be revised.

13. On sheet 42, Construction Sequence items 23 and 40 should be revised to state that the finish paving shall be installed in Phase "x" (1 or 2) if the next phase has not been completed within one year after the last dwelling is occupied in that phase, or as required by the township. This is to prevent the roads in Phases 1 and 2 from sitting in an unfinished state for an extended period of time.

14. On sheet 67, there is concrete encasement shown on the sanitary sewer pipe between manholes 8 and 9. The concrete encasement should be removed, and the sanitary sewer pipe material between manhole 8 and 9 should be changed to DIP.

15. The following basin/BMP minor drafting discrepancies should be addressed:

    a. The information for Basin A4 in the Basin Outlet Structure Detail tabulation contains a discrepancy that should be revised. However, the other information provided for Basin A4 is consistent with the SWM Report.

    b. The outlet structure information on Sheet 54 for BMP A12 (inlet C2) is not consistent with the SWM Report and should be revised. However, the other information provided for BMP A12 is consistent with the SWM Report.

16. We have the following lot grading items that should be addressed:

    a. The spot elevations in in the driveway of Lot 124 appear to be incorrect.

    b. The "TG" elevations provided for inlet N8 on Sheet 23 is 388.50, but there is what appears to be a proposed 388.0 contour immediately around the inlet. This discrepancy should be addressed

The above represents our comments on this revised subdivision plan submission. The applicant's consultant should address the above items and revise the plans accordingly for a final review. Please contact this office if you have any questions or need any additional assistance on this project.

Very truly yours,
CKS ENGINEERS, INC.
Township Engineers

Joseph J. Nolan, P.E.

JJN/paf

cc: Robert L. Brant, Esq, Township Solicitor
Toll PA XIV, L.P.
Richard P. McBride, Esq.
Susan Rice, STA Engineering, Inc.
File

MONTGOMERY COUNTY
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JODY L. HOLTON, AICP
EXECUTIVE DIRECTOR

January 23, 2018

Mr. Tommy Ryan, Manager
Worcester Township
1721 Valley Forge Road—Box 767
Worcester, Pennsylvania 19490

Re: MCPC #14-0185-002
Plan Name: Center Square Golf Club
Situate: Skippack Pike (S)/Berks Road (E)
Worcester Township

Dear Mr. Ryan:

We have reviewed the above-referenced land development plan in accordance with Section 502 of Act 247, "The Pennsylvania Municipalities Planning Code," as you requested on December 22, 2017. We forward this letter as a report of our review.

BACKGROUND

The applicant, Toll Mid-Atlantic LP Company, Inc., has proposed the development of the Center Square Golf Club property, situated at the corner of Skippack Pike (S) and Berks Road (E) in Worcester Township. The total tract area of the site is 157.64 acres. The plan includes 125 single family detached units and 125 single family attached units. The development process will be phased. The single family detached units surround a central open space area. A 50' perimeter buffer around the entire property is included on the plans. The development of the site and its requirements has been established via a court settlement stipulation. The number of units was determined through negotiations between the developer and the Township's Board of Supervisors. The court stipulation is included as an attachment to this letter and provides additional information regarding the terms of the settlement.

RECOMMENDATION

The Montgomery County Planning Commission (MCPC) generally supports the applicant's proposal, however, in the course of our review we have identified the following issues that the applicant and Township may wish to consider prior to final plan approval. Our comments are as follows:

REVIEW COMMENTS

ZONING AMENDMENT

A. Terms of Settlement — Under item B.11. of the settlement stipulation it states that the "Township agrees to undertake adoption of zoning amendment for the property allowing for the development of same in accordance with the design criteria set forth herein". It is unclear when this zoning amendment must be adopted. The Township should take care in following the correct procedure when adopting this amendment within the guidelines of the settlement stipulation.

TRAIL CONNECTION

B. We recommend that trails be distributed throughout the open space located on the site, particularly in the Open Space Parcel D (central open space area) with a connection to Open Space Parcel F. SFD units 101 and 102 could potentially be shifted to allow for a connection between Open Space Parcel D and Open Space Parcel F. Trail connections to the power line area just south of the site is also recommended as it is included in the Township's Open Space Plan as a future trail connection.

PUBLIC SEWER SERVICE

A. The court stipulation specifies that public sewer service for this development shall be provided by Worcester Township at its Valley Green facility. We recommend that the sewer system installed for the Center Square Golf Club development be correctly sized to allow for only appropriate future development. The designed sewer system should be sized to possibly allow development in future growth areas, but discourage growth outside of those growth areas. There are nearby rural resource areas that should be preserved from developmental pressure, and excess sewer capacity could spur growth into these areas.

LANDSCAPE PLAN

A. The proposed planting plan falls short in providing for the long-term performance and resiliency of a number of landscape improvements. Most importantly, a very limited

number of plant species are proposed for both the street tree planting requirements and planting the site's numerous stormwater management facilities. The limited species diversity is of concern especially for the concentration of large number of plants proposed within a very limited number of species and plant genera. For example, of the 728 street trees proposed approximately 379 trees or 52% of the proposed trees are concentrated into 3 oak species. A recognized best management practice with arboriculture is to follow a '10-20-30%' planting guideline – meaning no single species comprises greater than 10% of the planting, no one plant genera (oaks or *Quercus)* comprises more than 20% of the planting, and one plant family no more than 30% of the total.

B. Diversity should be promoted along the street plantings to minimize the large-scale contiguous loss of the street tree canopy which may occur leaving potentially widespread gaps with the street tree population. Greater species diversity in the plan will ensure that a devastating pest or disease does not wipe out a broad section of the proposed landscape improvements and diminish the investment being made to re-green the site development. We recommend the plan incorporate greater plant diversity for both the street tree planting and the basin planting schemes. We are attaching a list of 'Recommended Landscape Plants - trees, sub-canopy trees and native shrubs' which could be used as a guide in developing a more diverse planting plan for these areas.

RAIN GARDEN PERFORMANCE AND SOILS

A. We recommend the Rain Garden and Bioretention Management and Operations schedule could be improved to ensure greater resiliency and performance of the proposed bioretention practices. We suggest adding additional detail in the schedule of tasks to include monitoring the rain gardens and basins for potential invasive plants. Some invasive plants including callery pear (Pyrus calleryana) and Phragmites have been observed in this area of the county, and can quickly overtake naturalized areas diminishing the performance of the required stormwater BMPs. We recommend that monitoring for invasives be added to the maintenance notes and included as a seasonal task- done four times per year.

B. We recommend that additional detailing of the Plan Notes (Sheet 52/96) is needed for the installation of the rain garden and bioretention planting soil mix (Amended Soil Mix). An installation note that calls for the careful installation and avoidance of heavy equipment within the basin is needed to prevent soil compaction of the amended soil mix over the sub-grade. Preventing compaction can help to ensure effective establishment of the new plants and long term performance of the bioretention/rain gardens.

CONCLUSION

We wish to reiterate that MCPC generally supports the applicant's proposal, but we believe that our suggested revisions will better achieve Worcester Township's objectives for development.

Please note that the review comments and recommendations contained in this report are advisory to the municipality and final disposition for the approval of any proposal will be made by the municipality.

Should the governing body approve a final plat of this proposal, the applicant must present the plan to our office for seal and signature prior to recording with the Recorder of Deeds office. A paper copy bearing the municipal seal and signature of approval must be supplied for our files.

Sincerely,

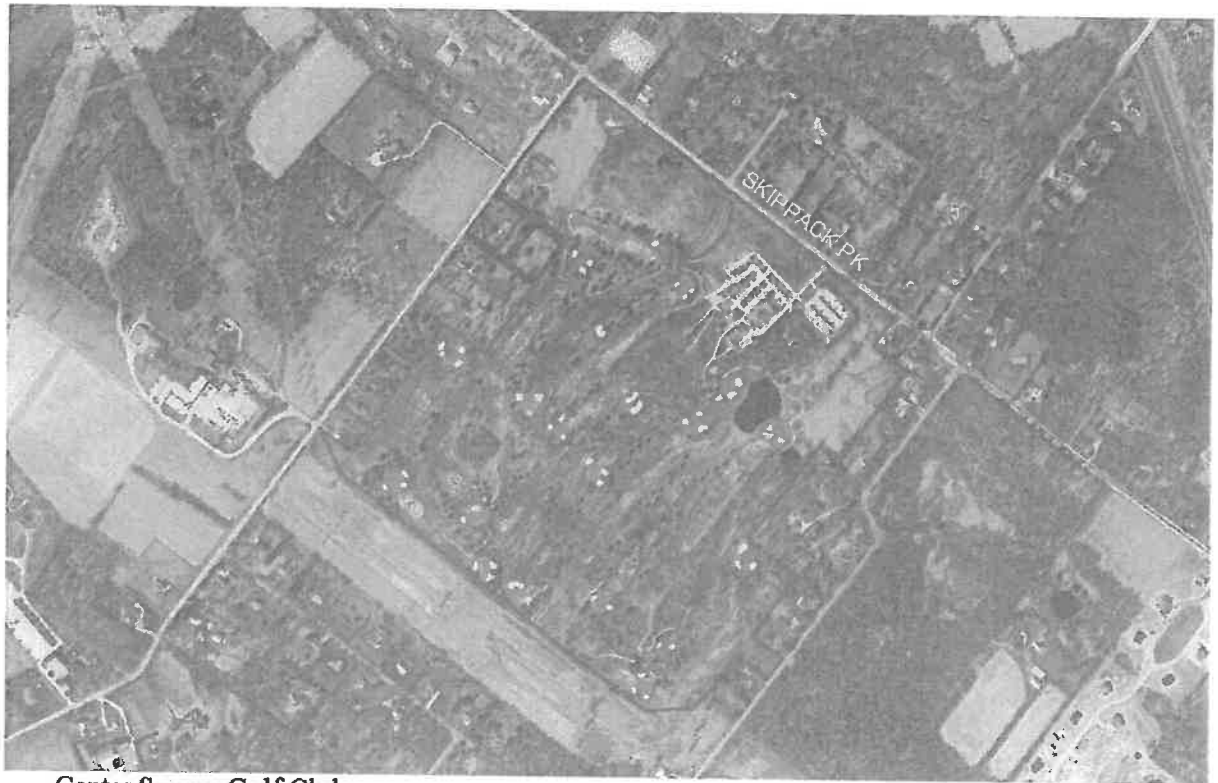
Jamie Magaziner, Planner II
JMagazin@montcopa.org
610-278-3738

c: Toll Mid-Atlantic L.P. Company, Inc., Applicant
Richard P. McBride, Esq., Applicant's Representative
Gordon Todd, Chrm., Township Planning Commission

Attachments: Aerial View of Site
Reduced Copy of Plan (1)
Reduced Copy of Plan (2)
Stipulation of Settlement Document
Plant Recommendations for Greater Diversity in Vegetation

Mr. Tommy Ryan

January 23, 2018



Center Square Golf Club
140185002

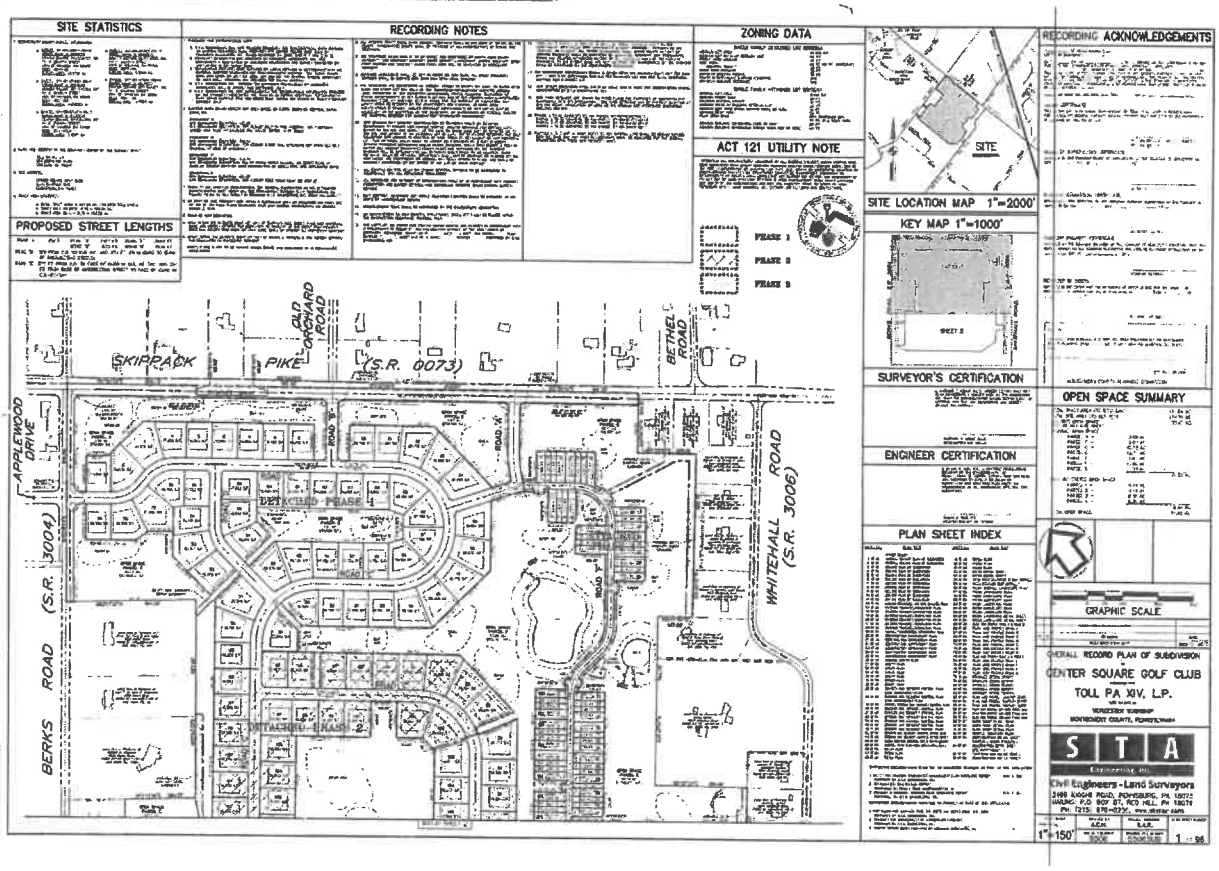
Montgomery County Planning Commission

Montgomery County Courthouse - Planning Commission
PO Box 311 • Norristown PA 19404-0311
(p) 610 278 3722 • (f) 610 278 3941
www.montcopa.org/planning

Year 2015 aerial photography provided by the Delaware Valley Regional Planning Commission

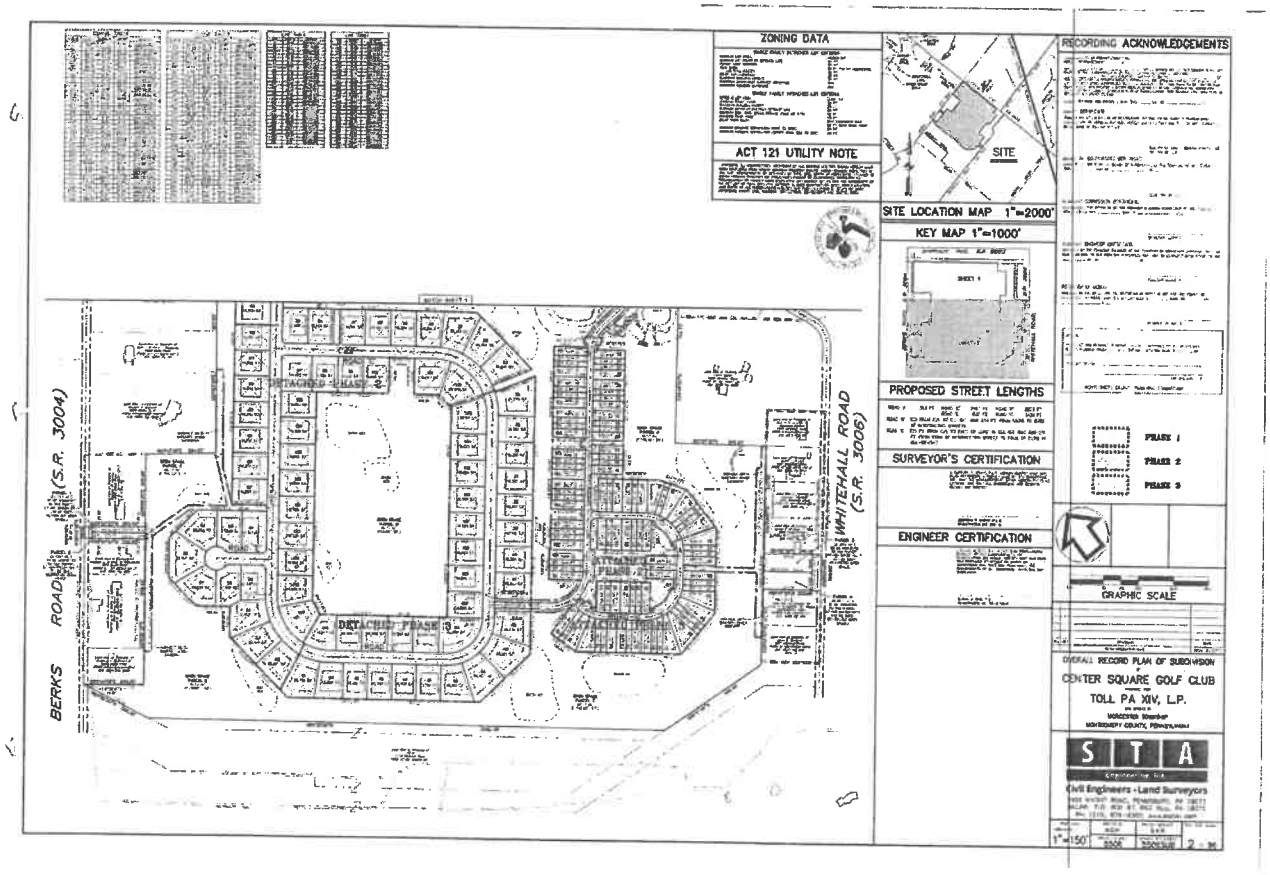
Mr. Tommy Ryan

January 23, 2018



Mr. Tommy Ryan

January 23, 2018



STIPULATION OF SETTLEMENT
CENTER SQUARE GOLF COURSE PROPERTY

It is hereby stipulated, this 19th day of July, 2017, by and between The Cutler Group, Inc., through its counsel, Richard P. McBride, Esquire and the Board of Supervisors of Worcester Township, as follows:

A. BACKGROUND:

1. The Cutler Group, Inc. as Applicant (hereinafter "Applicant") filed a conditional use application on August 20, 2014 with Worcester Township ("Township") regarding lands containing 157.63 acres, more or less, fronting on Skippack Pike, then and currently operated as the Center Square Golf Course ("Property") seeking to develop same as and for a Residential Life Care Facility with a total of 475 total units, comprised of single family detached and attached independent living units totaling 334 units, and a 141 unit senior care center.

2. Following conduct of six evenings of hearings the Board of Supervisors ("Board") denied the conditional use application and Applicant appealed to the Montgomery County Court of Common Pleas.

3. The County Court reversed the denial and granted Applicant's conditional use application in an Opinion dated September 1, 2016 entered at Montgomery County CCP, No. 2015-13769.

4. Following appeal by the Board to the Commonwealth Court, the Decision of the Montgomery County Court was affirmed in Order entered July 3, 2017, thereby confirming Applicant's entitlement to develop the Property for the aforesaid 475 unit project.

5. The Board is desirous of reducing the number of dwelling units in the development of the Property and removing from the development any senior care facility.

6. Applicant is willing to proceed with the development by significantly reducing the total number of dwelling units and removing any senior care facility.

7. Board and Applicant wish to establish provisions for development of the Property for a significantly reduced number of dwelling units than the 475 as have been the subject of its conditional use approval, as well as to avoid any further litigation in regard to Applicant's entitlement to so develop the Property.

8. Applicant and Board are executing this Stipulation for the purpose of terminating entitlement of Applicant to proceed with the Residential Life Care Facility development and, in lieu thereof, Applicant shall have the right to develop the Property with single family detached and single family attached dwelling units in accordance with the provisions as set forth hereinbelow.

B. TERMS OF SETTLEMENT:

1. Upon approval by the Board of a final record plan in accordance with the provisions of this Stipulation, all rights of Applicant to develop the Property pursuant to its conditional use application shall terminate. Pending the preparation and processing of such plan for the alternative development, Applicant shall hold in abeyance any further submission for approval and development in accordance with its conditional use entitlement.

2. Board shall in all good faith process and approve subdivision plans providing for a total of 125 single family detached dwelling units and a total of 125 single family attached dwelling units in accordance with the terms of this Stipulation. The minimum lot sizes and design criteria for both the detached and attached lots shall be as attached hereto as Exhibit "A".

3. The fully engineered preliminary and final plans shall be designed substantially as depicted on the concept plan prepared by Heuser Design, a copy attached hereto as Exhibit "B".

4. There shall be a minimum of a 50 foot wide perimeter buffer area surrounding the entire Property separating any future lots from either bordering roadways or bordering properties. These areas, as well as all other common areas inclusive of stormwater basins and facilities situate within same, shall be either owned and maintained by a Homeowners Association or Worcester Township. The Board shall decide at the time of preliminary subdivision plan approval whether it chooses to have these areas dedicated to the Township or owned and maintained by the future Homeowners Association.

5. The roadways within the single family detached portion of the development shall be dedicated to Worcester Township, while the roadways within the attached dwelling unit portion of the development may be undedicated and maintained by the Homeowners Association. The Board shall determine at the time of preliminary subdivision plan approval which portions of the roadways servicing the single family attached dwelling units are to be owned and maintained by the future Homeowners Association. All roadways shall be constructed in accordance with the requirements of the Worcester Township SALDO.

6. Public sewer service shall be provided by Worcester Township at its Valley Green facility. Township shall cooperate fully in the processing of any necessary 537 amendment or revision and in allowing connection of sanitary sewer lines from the future development of the

Property into the nearest available dedicated sanitary lines belonging to Township or any Township Authority. Applicant shall be responsible for the payment of a tapping fee in the sum of $2,000.00 for each of the 250 units. The tapping fees shall be paid for all dwelling units proposed for development in each phase thereof at the time of signing of Development Agreements for that particular phase.

7. Applicant shall pay to Township the sum of $3,000 per dwelling unit, at the time of execution of the Development Agreement for each phase of development for the number of dwelling units within that phase, same to be in lieu of any traffic impact fee or charge as might otherwise be applicable.

8. There shall be no other impact fees or charges imposed upon the proposed development.

9. Applicant shall be responsible to pay all reasonable costs incurred by Township for the review of Applicant's plans by its consultants, inclusive of the Township Engineer, Traffic Engineer and Solicitor. Applicant shall satisfy any such invoicing within 15 days of receipt. Township may impose an administrative fee of five (5%) percent in addition to and at the time of furnishing each such invoice. There shall be no other application fees or charges in regard to the filing, review and approval of Applicant's plans for development.

10. Applicant and Township agree to the filing of a Motion with the Court of Common Pleas of Montgomery County along with a proposed Order, requesting that the Order of Court approving the Applicant's conditional use be modified and that the terms and provisions of this Stipulation be and become the controlling Order of Court.

11. Further, Township agrees to undertake adoption of a zoning amendment for the Property allowing for development of same in accordance with the design criteria set forth herein.

C. PROPERTY DEVELOPMENT DESIGN CRITERIA AND COMMITMENTS:

1. The perimeter buffer as well as the general configuration of open space as depicted upon Exhibit "B" shall be observed in the final subdivision plans.

2. The layout as depicted upon Exhibit "B" shall be controlling and Applicant shall be required to satisfy any and all permitting requirements of the U.S. Army Corps of Engineers, Pennsylvania DEP, Montgomery County Conservation District as well as PennDOT. Provided, however, that the Board, upon advice of the Township Traffic Engineer, may elect to restrict access to and from Rt. 73 to one ingress and egress road, rather than the two as depicted upon Exhibit "B".

3. The fully engineered development plans designed as depicted upon Exhibit "B" shall be in compliance with the Worcester Township Subdivision and Land Development Ordinance in effect as of the date hereof, with the exception of waivers from provisions thereof which are reasonable and warranted to facilitate development as depicted upon Exhibit "B".

4. Subject to receipt of required permits from federal, state and other local agencies, subdivision plans shall be submitted by Applicant substantially as depicted upon Exhibit "B", and shall not be subject to denial by virtue of Township zoning or SALDO Ordinance requirements as might be in conflict with development as depicted upon Exhibit "B".

5. Upon approval of the final subdivision plans, Applicant may choose to develop in phases, provided such phases are depicted upon the approved final plans. There shall be no more

than three phases for each of the dwelling unit types as depicted on Exhibit "B", those being single family detached and single family attached units.

6. Applicant shall be required to comply with requirements in the Municipalities Planning Code with regard to the posting of required financial security to assure completion of improvements prior to the release of final subdivision plans for any phase for recording.

7. All provisions hereinabove shall be fully binding upon the successors and assigns of the parties hereto.

WHEREFORE, Applicant and Board, through their respective counsel, have executed this Stipulation of Settlement the date and year first above written with full intent to be bound by the terms hereof.

WITNESS:

Tommy Ryan, Township Manager

WORCESTER TOWNSHIP
BOARD OF SUPERVISORS

Susan G. Caughlan, Chair

APPLICANT:
THE CUTLER GROUP, INC.

By: Richard P. McBride, Esquire

Mr. Tommy Ryan

January 23, 2018

SINGLE FAMILY DETACHED LOT CRITERIA

MINIMUM LOT AREA:	15,000 S.F.
MINIMUM LOT WIDTH AT SETBACK LINE:	90 FT.
FRONT YARD – MINIMUM:	35 FT.
SIDE YARD:	10 FT./30 FT. aggregate
ABUTTING STREET	35 FT.
REAR YARD - MINIMUM:	30 FT.
MAXIMUM BUILDING HEIGHT:	35 FT.
MAXIMUM IMPERVIOUS SURFACE COVERAGE:	40%
MAXIMUM BUILDING COVERAGE:	30%

SINGLE FAMILY ATTACHED LOT CRITERIA

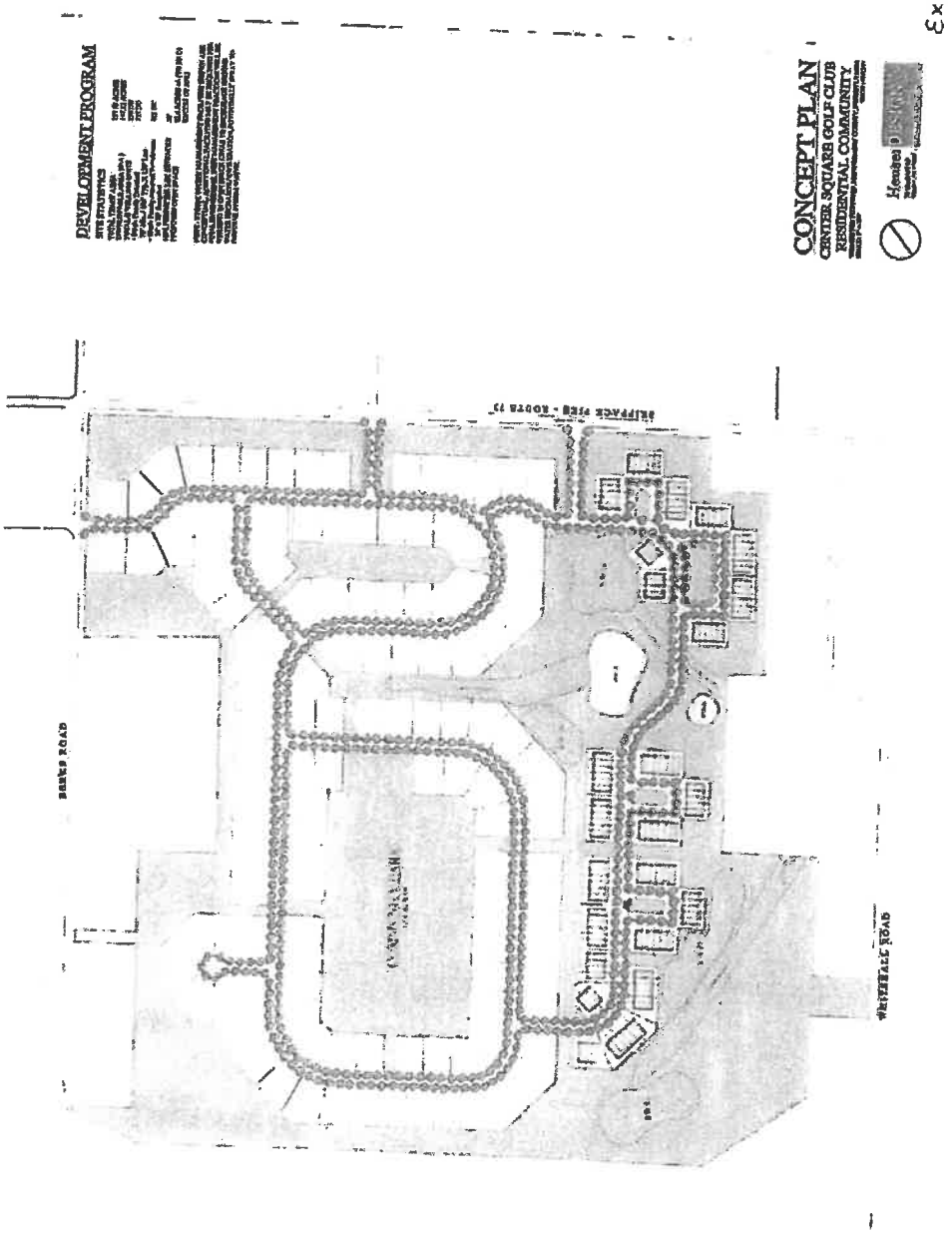
MINIMUM LOT AREA:	2,400 S.F.
MINIMUM FRONT YARD:	30 FT.
MAXIMUM BUILDING HEIGHT:	35 FT.
MINIMUM WIDTH AT BUILDING SETBACK LINE:	24 FT.
MINIMUM SIDE YARD (FROM PRIVATE RD OR R/W):	15 FT.
MINIMUM REAR YARD:	20 FT.
REAR YARD DECK:	MAY ENCROACH MAX. 10 FT. INTO REAR YARD
MINIMUM BUILDING SEPARATION (side to side):	30 FT.
MINIMUM BUILDING SEPARATION (other than side to side):	40 FT.

EXHIBIT "A"

Mr. Tommy Ryan

January 23, 2018

Exhibit "B"



Mr. Tommy Ryan

January 23, 2018

Recommendations for greater diversity in vegetation

19-Jan-18 Montgomey Co. Planning - Barry Jeffries

Canopy Trees	
Species-Scientific Name	**Species-Common Name**
Acer saccharum 'Fall Fiesta'	Fall Fiesta Sugar Maple
Betula nigra 'Heritage'	Heritage River Birch
Carpinus carolinana	American Hornbeam
Carya ovata	Shagbark Hickory
Carya cordiformis	Bitternut Hickory
Nyssa sylvatica'Wildfire'	Wildfire Black gum -
Nyssa sylvatica 'Green Gables'	Green Gables Black gum -
Quercus bicolor	Swamp White oak
Quercus montana	Chestnut oak
Quercus rubra	Red oak
Taxodium distichum	Bald Cypress
Tilia americana	American basswood
Tilia cordata 'Greenspire'	Greenspire' basswood
Ulmus americana 'Princeton'	Princeton American Elm
Zelkova serrata	Japanese zelkova

Small Canopy Trees	
Species-Scientific Name	**Species-Common Name**
Amelanchier X 'Autumn Brillance	Autumn Brillance Serviceberry
Cercis canadensis	Redbud
Chionanthus virginicus	Fringetree
Cornus florida 'Appalachain Spring'	Appalachain Spring Dogwood
Cornus X 'Rutban'- Aurora	Aurora dogwood
Crategus viridis 'Winter King'	Winter King Hawthorne
Hamamelis virginiana 'Harvest Moon'	Harvest Moon Witchazel
Ilex opaca	American Holly

Native Shrubs	
Species-Scientific Name	**Species-Common Name**
Alnus serrulata	Common alder
Aronia arbutifolia	Chokeberry
Calycanthus floridus 'Michael Lindsey'	Michael Lindsey Sweetshrub
Clethra alnifolia 'Hummingbird'	Hummingbird Summersweet
Cornus sericea 'Cardinal'	Cardinal Red-twig dogwood
Ilex verticillata 'Winter Red'	Winterberry- 'Winter Red'
Ilex verticillata 'Southern Gentleman'	Male-pollinator- Winterberry
Viburnum nudum 'Brandywine'	Brandywine Witherod Viburnum
Viburnum nudum 'Winterthur'	Winterthur Viburnum

CKS Engineers, Inc.
88 South Main Street
Doylestown, PA 18901
215-340-0600 • FAX 215-340-1655

Joseph J. Nolan, P.E.
Thomas F. Zarko, P.E.
James F. Weiss
Patrick P. DiGangi, P.E.
Ruth Cunnane
Michele A. Fountain, P.E.

February 23, 2018
Ref:# 7519

Township of Worcester
1721 Valley Forge Road
PO Box 767
Worcester, PA 19490-0767

Attention: Tommy Ryan, Township Manager

Reference: Sewage Facilities Planning Module -1458 Hollow Road Subdivision

Dear Mr. Ryan:

I am in receipt of a proposed "Sewage Facilities Planning Module" as prepared by Edward B. Walsh & Associates, Inc., for Michael Addesso, the owner of the property at 1458 Hollow Road. This Sewage Facilities Planning Module was prepared in conjunction with the minor subdivision of this property. Included with the module submission is the Project Checklist, Component 3, and copies of Components 4A, B and C which all need to be completed before submission to the Pennsylvania Department of Environmental Protection (PADEP).

I have reviewed the Planning Module package for completion, and the module appears to be complete. In conjunction with completion of the package, the Township must provide a signature on the transmittal letter, the completeness checklist, and the applicant checklist on page 9. Further, page 9 of Component 3 must be signed by the applicant. Component 4A must be completed by the Township Planning Commission, and signature of the Planning Commission Chairman should be affixed to this component. Component 4B should be completed by the County Planning Commission and Component 4C should be completed by the County Health Department.

I am returning the planning module and the attached minor subdivision plan with this letter for your files. I would be happy to assist further in this planning module submission if requested. Please contact me if you have any further questions.

Very truly yours,
CKS ENGINEERS, INC.
Township Engineers

Joseph J. Nolan, P.E.

JJN/paf
Enclosures
cc: Scott Andress, Edward W. Walsh and Associates, Inc.
File

7519

SEWAGE FACILITIES PLANNING MODULE

1458 Hollow Road

Code# 1-46962-197-2

WORCESTER TOWNSHIP
MONTGOMERY COUNTY

February 14, 2018

Prepared By:

Edward B. Walsh and Associates, Inc.
125 Dowlin Forge Road, Lionville Professional Center
Exton, PA 19341
610-903-0060

TRANSMITTAL LETTER

3850-FM-BCW0355 Rev. 5/2016

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF CLEAN WATER

TRANSMITTAL LETTER FOR SEWAGE FACILITIES PLANNING MODULE

DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP) USE ONLY				
DEP CODE #	CLIENT ID #	SITE ID #	APS ID #	AUTH. ID #

TO: Approving Agency (DEP or delegated local agency)
Pa DEP Southeast Regional Office
2 East Main Street
Norristown, Pa 19401

Date _____

Dear Sir/Madam:

Attached please find a completed sewage facilities planning module prepared by Edward B. Walsh and Assoc., Inc. (Name)

Sewage Planners (Title) for 1458 Hollow Road (Name)

a subdivision, commercial ,or industrial facility located in Worcester Township

Montgomery (City, Borough, Township) County.

Check one

☒ (i) The planning module, as prepared and submitted by the applicant, is approved by the municipality as a proposed ☒ revision ☐ supplement for new land development to its Official Sewage Facilities Plan (Official Plan), and is ☒ adopted for submission to DEP ☐ transmitted to the delegated LA for approval in accordance with the requirements of 25 *Pa. Code* Chapter 71 and the *Pennsylvania Sewage Facilities Act* (35 P.S. §750),

OR

☐ (ii) The planning module will not be approved by the municipality as a proposed revision or supplement for new land development to its Official Plan because the project described therein is unacceptable for the reason(s) checked below:

Check Boxes

☐ Additional studies are being performed by or on behalf of this municipality which may have an effect on the planning module as prepared and submitted by the applicant. Attached hereto is the scope of services to be performed and the time schedule for completion of said studies.

☐ The planning module as submitted by the applicant fails to meet limitations imposed by other laws or ordinances, officially adopted comprehensive plans and/or environmental plans (e.g., zoning, land use, 25 *Pa. Code* Chapter 71). Specific reference or applicable segments of such laws or plans are attached hereto.

☐ Other (attach additional sheet giving specifics).

Municipal Secretary: Indicate below by checking appropriate boxes which components are being transmitted to the approving agency.

☒ Resolution of Adoption
☒ Module Completeness Checklist
☒ 2 Individual and Community Onlot Disposal of Sewage
☐ 3 Sewage Collection/Treatment Facilities
☐ 3s Small Flow Treatment Facilities
☒ 4A Municipal Planning Agency Review
☒ 4B County Planning Agency Review
☒ 4C County or Joint Health Department Review

Municipal Secretary (print) *Signature* *Date*

RESOLUTION

3850-FM-BCW0356 Rev. 5/2016

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF CLEAN WATER

DEP Code No.
1-46962-197-2

RESOLUTION FOR PLAN REVISION FOR NEW LAND DEVELOPMENT

RESOLUTION OF THE (SUPERVISORS) (COMMISSIONERS) (COUNCILMEN) of Worcester (TOWNSHIP) (BOROUGH) (CITY), Montgomery COUNTY, PENNSYLVANIA (hereinafter "the municipality").

WHEREAS Section 5 of the Act of January 24, 1966, P.L. 1535, No. 537, known as the *Pennsylvania Sewage Facilities Act*, as Amended, and the rules and Regulations of the Pennsylvania Department of Environmental Protection (DEP) adopted thereunder, Chapter 71 of Title 25 of the Pennsylvania Code, require the municipality to adopt an Official Sewage Facilities Plan providing for sewage services adequate to prevent contamination of waters of the Commonwealth and/or environmental health hazards from sewage wastes, and to revise said plan whenever it is necessary to determine whether a proposed method of sewage disposal for a new land development conforms to a comprehensive program of pollution control and water quality management, and

WHEREAS Michael Addesso (land developer) has proposed the development of a parcel of land identified as 1458 Hollow Road (name of subdivision), and described in the attached Sewage Facilities Planning Module, and proposes that such subdivision be served by: (check all that apply), ☐ sewer tap-ins, ☐ sewer extension, ☐ new treatment facility, ☒ individual onlot systems, ☐ community onlot systems, ☐ spray irrigation, ☐ retaining tanks, ☐ other, (please specify). _____

WHEREAS, Worcester (municipality) finds that the subdivision described in the attached Sewage Facilities Planning Module conforms to applicable sewage related zoning and other sewage related municipal ordinances and plans, and to a comprehensive program of pollution control and water quality management.

NOW, THEREFORE, BE IT RESOLVED that the (Supervisors) (Commissioners) (Councilmen) of the (Township) (Borough) (City) of Worcester hereby adopt and submit to DEP for its approval as a revision to the "Official Sewage Facilities Plan" of the municipality the above referenced Sewage Facilities Planning Module which is attached hereto.

I _____ (Signature), Secretary, _____
Township Board of Supervisors (Borough Council) (City Councilmen), hereby certify that the foregoing is a true copy of the Township (Borough) (City) Resolution # _____, adopted, _____, 20_____

Municipal Address:

Worcester Township
1721 Valley Forge Road
Worcester PA 19490
Telephone 6105841410

Seal of Governing Body

COMPLETENESS CHECKLIST

3800-FM-BPNPSM0362 7/2012
Checklist

COMPLETENESS CHECKLIST

The individual completing the component should use the checklist below to assure that all items are included in the planning module package. The municipality should confirm that the required items have been included within 10 days of receipt, and if complete, sign and date the checklist.

ALL ONLOT/RETAINING TANK PROPOSALS

- ☒ Name and address of land development project
- ☒ USGS 7.5 minute topographic map with the development area plotted
- ☒ Project narrative
- ☐ Letter of intent to serve the project from the public water supplier (if applicable)
- ☒ Alternative analysis narrative
- ☐ Proof of public notification (if applicable)
- ☒ Plot plan of project with all required information
- ☒ A Site Investigation and Percolation Test Report forms for each soil profile examination and percolation test performed
- ☐ Preliminary Hydrogeology (if applicable)
- ☐ Permeability Testing (if applicable)
- ☐ Detailed Hydrogeology (if applicable)
- ☒ Sewage Enforcement Officer's signature
- ☒ Soils information preparer's signature
- ☒ Completed Component 4 (Planning Agency Review) for each existing planning agency and health department

Projects proposing holding tanks or privies are required to provide the following additional information.

HOLDING TANKS

- ☐ Copies of all ordinances, regulations, and/or restrictions governing holding tank maintenance
- ☐ Copy of the replacement method implementation schedule
- ☐ Copy of the financial assurances description for the replacement sewage disposal method
- ☐ Name of the tank cleaner/hauler
- ☐ Name and permit number of the disposal site
- ☐ Disposal site approval for holding tank contents disposal

PRIVIES

- ☐ Site Investigation and Percolation Test Report forms for all soil profiles and percolation tests
- ☐ Copies of ordinances, regulations, and/or restrictions for replacement of privies
- ☐ Disposal site approval for retaining tank contents disposal

MUNICIPAL ACTION

- ☒ Component 2, with SEO signature
- ☒ Component 4, planning agency comments and responses to those comments
- ☐ Proof of public notification
- ☐ Comments and responses generated by public notification
- ☒ Transmittal letter

Signature of Municipal Official

Date Submittal Determined Complete

Applicant Checklist (✓ or N/A)	Materials Required to be Included in the Planning Package	DEP Completeness Review
DEP Checklist Letter		
✓	DEP checklist letter is attached with items checked off by the applicant (or applicant's authorized representative) as included	
✓	DEP checklist letter certification statement completed and signed	
Transmittal Letter (Form 3800-FM-BPNPSM0355)		
✓	Transmittal Letter is attached, completed and the appropriate boxes in Section (i) are checked.	
✓	Transmittal Letter is signed by the municipal secretary	
Resolution of Adoption (Form 3800-FM-BPNPSM0356)		
✓	Resolution of Adoption is attached and completed.	
✓	Resolution of Adoption is signed by the municipal secretary	
✓	Resolution of Adoption has a visible municipal seal.	
Component 4A - Municipal Planning Agency Review (Form 3800-FM-BPNPSM0362A)		
✓	Component 4A is attached, completed and signed	
✓	Municipal Responses to Component 4A comments are included	
Component 4B – County Planning Agency Review (Form 3800-FM-BPNPSM0362B)		
✓	Component 4B is attached, completed and signed	
✓	Municipal Responses to Component 4B comments are included	
Component 4C – County or Joint Health Department Review (Form 3800-FM-BPNPSM0362C)		
✓	Component 4C is attached, completed and signed	
✓	Municipal Responses to Component 4C comments are included	
Component 3 Sewage Facilities Planning Module (Form 3800-FM-BPNPSM0353)		
Section A: Project Information		
✓	Section A.1. The Project Name is completed	
✓	Section A.2. The Brief Project Description is completed	
Section B: Client Information		
✓	Client Information is completed	
Section C: Site Information		
✓	Site Information is completed	
✓	A copy of the 7.5 minute USGS Topographic map is attached with the development site outlined, as required by the instructions and the checklist	
Section D: Project Consultant Information		
✓	Project Consultant Information is completed	

Section E: Availability of Drinking Water Supply		
✓	The appropriate box is checked in Section E	
	For existing public water supplies, the name of the company is provided	
	For public water supplies, the certification letter from the public water company is attached	
Section F: Project Narrative		
✓	The Project Narrative is attached	
✓	All information required in the module directions has been addressed	
Section G: Proposed Wastewater Disposal Facilities		
	Section G.1.a. The collection system boxes are checked	
	The Pennsylvania Clean Streams Law (CSL) permit number is provided for existing systems	
	Section G.1.b. The questions on the collection system are completed	
	Section G.2.a. The appropriate treatment facility box is checked	
	For existing treatment facilities, the name is provided	
	For existing treatment facilities, the NPDES permit number is provided	
	For existing treatment facilities, the CSL permit number is provided	
	For new treatment facilities, the discharge location is provided	
	Section G.2.b. The certification statement has been completed and signed by the wastewater treatment facility permittee or their representative	
	Section G.3. The plot plan is attached and contains all items in the module instructions under Section G.3	
	The plot plan will show the proposed sewer facilities, sewer extension and/or point of connection to the existing sewer line or point of discharge	
	Copies of easement(s) or right-of-way(s) are attached	
✓	Section G.4. The boxes are checked regarding Wetland Protection	
✓	Section G.5. The boxes are checked regarding Primary Agricultural Land	
✓	Section G.6. The boxes are checked confirming consistency with the Historic Preservation Act	
NA	The Cultural Resources Notice (CRN) (Form 0120-PM-PY0003) is attached	
NA	A return receipt for its submission to the PHMC is attached.	
NA	The PHMC review letter is attached	

✓	Section G.7. The boxes are checked regarding Pennsylvania Natural Diversity Inventory (PNDI)	
✓	Pennsylvania Natural Diversity Inventory (PNDI) Project Environmental Review Receipt is attached	
✓	PNDI Review Receipt, if no potential impacts identified, is not older than 2 years	
	All supporting resolution documentation from jurisdictional agencies (when necessary) is attached and not older than 2 years	
	A completed PNDI Large Project Form (PNDI Form) (Form 8100-FM-FR0161) is attached with all supplemental materials and DEP is requested to complete the search.	
Section H: Alternative Sewage Facilities Analysis		
✓	The Alternative Sewage Facilities Analysis is attached	
✓	All information required in the module directions has been addressed	
Section I: Compliance with Water Quality Standards and Effluent Limitations		
	The box is checked regarding Waters Designated for Special Protection	
	The Social or Economic Justification is attached	
	The box is checked regarding Pennsylvania Waters Designated as Impaired	
	The box is checked regarding Interstate and International Waters	
	The box is checked regarding Tributaries to the Chesapeake Bay and the required information is provided	
	The Name of Permittee Agency, Authority, Municipality and the Initials of Responsible Agent are provided	
	If discharge to an intermittent stream, dry swale or manmade ditch is proposed, provide evidence that a certified letter has been sent to each owner of property over which the discharge will flow until perennial conditions are met	
Section J: Chapter 94 Consistency Determination		
	A map showing the path of the sewage to the treatment facility and the location of the discharge is provided	
	Section J.1. The Project Flows are provided	
	Section J.2. The permitted, existing, and projected average and peak flows are provided in the table for collection, conveyance and treatment facilities	
	Section J.3.a. The appropriate box is checked indicating capacity in the Collection and Conveyance Facilities	
	Section J.3.b. The Collection System information is completed, signed and dated	

	Section J.3.b. The Conveyance System information is completed, signed and dated	
	Section J.4.a. The appropriate box is checked regarding projected overloads at the Treatment Facility	
	Section J.4.b. The Treatment Facility information is completed, signed and dated	
	The Permittee of the wastewater treatment facility has submitted a Chapter 94 Wasteload Management Report, which includes the information for the collection and conveyance system to serve this project	
	An acceptable Wasteload Management Report Corrective Action Plan (CAP) and schedule has been submitted, as well as a connection management plan	
	A letter from the permittee, which grants allocations to the project consistent with the CAP, and a copy of the connection management plan has been submitted	
	Letter indicating the treatment plant is an interim regional treatment facility is attached	
Section K: Treatment and Disposal Options		
	For proposed treatment facilities, the appropriate box is checked indicating the selected Treatment and Disposal Option	
Section L: Permeability Testing		
	The Permeability Testing information is attached	
Section M: Preliminary Hydrogeologic Study		
	The Preliminary Hydrogeologic Study is attached	
	The Preliminary Hydrogeologic Study is signed and sealed by a Professional Geologist	
Section N: Detailed Hydrogeologic Study		
	The Detailed Hydrogeologic Study is attached	
	The Detailed Hydrogeologic Study is signed and sealed by a Professional Geologist	
Section O: Sewage Management		
	Section O.1. The box is checked indicating municipal or private facilities	
	If municipal, the remainder of Section O is not applicable	
	If private, the required analysis and evaluation of sewage management options is attached	
	Section O.2. The appropriate box is checked regarding the use of nutrient credits or offsets	
	Section O.3. The Project Flows for the private facilities are provided	

	Section O.4.a. The appropriate box is checked indicating capacity in the existing private Collection and Conveyance Facilities	
	Section O.4.b. The private Collection System information is completed, signed and dated	
	Section O.4.c. The private Conveyance System information is completed, signed and dated	
	Section O.5.a. The appropriate box is checked regarding projected overloads at the private Treatment Facility	
	Section O.5.b. The private Treatment Facility information is completed, signed and dated	
	Section O.6. The box is checked indicating the municipality will assure proper operation and maintenance of the proposed private facilities	
	The required documentation of sewage management is attached	
Section P: Public Notification Requirement		
✓	All Public Notification boxes in this section are checked	
	The public notice is attached, if public notification is necessary	
	All comments received as a result of the notice are attached	
	The municipal responses to these comments are attached	
N/A	The box is checked indicating that no comments were received, if valid	
Section Q: False Swearing Statements		
	The planning module preparer's false swearing statement is completed and signed	
Section R: Planning Module Review Fee		
	The correct fee has been calculated	
	The correct fee has been paid	
	The request for fee exemption has been checked	
	The deed reference information is provided to support the fee exemption	
Completeness Checklist		
	The module completeness checklist is included	
	All completeness items have been checked as included by the municipality, as appropriate	
	The Municipal Official has signed and dated the checklist	

CERTIFICATION STATEMENT

I certify that this submittal is complete and includes all requested items. I understand that failure to submit a complete module package may result in a denial of the application.

Signed: Edward O. Welsh and Assoc. Inc. Agent Date: 2/14/18
Applicant (or Applicant's authorized representative)

Signed: _____ Date: _____
Municipal Secretary

COMPONENT 3

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF POINT AND NON-POINT SOURCE MANAGEMENT

Code No.

SEWAGE FACILITIES PLANNING MODULE

Component 2. Individual and Community Onlot Disposal of Sewage

(Return completed module package to appropriate municipality)

DEP USE ONLY				
DEP CODE #	CLIENT ID #	SITE ID #	APS ID #	AUTH ID #

This planning module component is used to fulfill the planning requirements of Act 537 for the following types of projects: (1) proposing the use of individual onlot sewage disposal systems (including individual residential spray irrigation systems (IRSIS)) and except for those projects qualifying for the "exception to the requirement to revise the Official Plan" under Chapter 71, Section 71.55, (2) proposing retaining tanks (including holding tanks, privies, chemical, incinerating, recycling or composting toilets), (3) proposing municipal permitted community onlot sewage disposal systems, and (4) proposing DEP permitted individual or community large volume onlot sewage disposal systems.

This component, along with any other documents specified in the cover letter, must be submitted to the municipality with jurisdiction over the project site for review and approval. All appropriate documentation must be attached for the Sewage Facilities Planning Module package to be complete. Refer to the instructions for help in completing this component.

REVIEW FEES: Amendments to the Sewage Facilities Act established fees to be paid by the applicant for review of planning modules for land development. These fees may vary depending on the approving agency for the project (DEP or delegated local agency). Please see Section R and the instructions for more information on these fees.

NOTE: All projects must complete Sections A through I and Sections N through R. Complete Sections J, K, L and/or M if indicated ☒. The municipality should complete Section Q if marginal conditions are present and/or if a waiver of the planning requirements is requested for the residual tract and/or if assurance of long term O & M option is required.

A. PROJECT INFORMATION (See Section A of instructions)

1. Project Name 1458 Hollow Road

2. Brief Project Description 2 Lot Single family residential subdivision of approximately 5 Acres. One 2 acre lot for the existing dwelling and one 3 acre lot for the proposed building lot. Lots are to be served with on-lot septic and individual wells.

B. CLIENT (MUNICIPALITY) INFORMATION (See Section B of instructions)

Municipality Name	County	City	Boro	Twp
Worcester	Montgomery	☐	☐	☒

Municipality Contact Individual – Last Name	First Name	MI	Suffix	Title
Ryan	Tommy			Twp. Manager
Additional Individual Last Name	First Name	MI	Suffix	Title

Municipality Mailing Address Line 1	Mailing Address Line 2
1721 Valley Forge Road	PO Box 767

Address Last Line – City	State	ZIP+4
Worcester	Pa	19490

Phone + Ext.	FAX (optional)	Email (optional)
6105841410		

C. SITE INFORMATION (See Section C of instructions)

Site (Land Development or Project) Name

Michael Addesso

Site Location Line 1	Site Location Line 2
1458 Hollow Road	

Site Location Last Line – City	State	ZIP+4	Latitude	Longitude
Collegeville	PA	19426	40.185919	-75.370990

Detailed Written Directions to Site From the intersection of Routes 363 and 73 go south on Route 363. Right on Stump Hall Road. Left on Hollow Road. Site is on the left across from Hogarth Lane.

Description of Site The site consists of approximately 5 acres with an existing dwelling served with a well and on-lot septic. Approximately half of the property is open lawn and the remained is wooded.

Site Contact (Developer/Owner)

Last Name	First Name	MI	Suffix	Phone	Ext.
Addesso	Michael			6102723372	

Site Contact Title	Site Contact Firm (if none, leave blank)
Property Owner	
FAX	Email

Mailing Address Line 1	Mailing Address Line 2
1 Teakwood Terrace	

Mailing Address Last Line – City	State	ZIP+4
Norristown	PA	19403

D. PROJECT CONSULTANT INFORMATION (See Section D of instructions)

Last Name	First Name	MI	Suffix
Andress	Scott		

Title	Consulting Firm Name
Environmental Scientist	Edward B. Walsh and Associates, Inc.

Mailing Address Line 1	Mailing Address Line 2
125 Dowlin Forge Road	

Address Last Line – City	State	ZIP+4	Country
Exton	PA	19341	USA

Email	Phone	Ext.	FAX
sandress@ebwalshinc.com	6109030042		

E. AVAILABILITY OF DRINKING WATER SUPPLY

The project will be provided with drinking water from the following source: (Check appropriate box)

☒ Individual wells or cisterns.
☐ A proposed public water supply.
☐ An existing public water supply.

If existing public water supply is to be used, provide the name of the water company and attach documentation from the water company stating that it will serve the project.

Name of water company: _____

F. PROJECT NARRATIVE (See Section F of instructions)

☒ A narrative has been prepared as described in Section F of the instructions and is attached.

The applicant may choose to include additional information beyond that required by Section F of the instructions.

G. GENERAL SITE SUITABILITY (See Section G of attached instructions)

This section must be completed when the proposed method of sewage disposal is the use of onlot sewage disposal systems or privies. The purpose of the information provided in this section is to determine the general suitability of the site for onlot disposal of sewage. Site suitability should not be construed as approval for permit issuance on individual lots. Additional testing may be required for permit issuance.

NOTE: If one or more lots in this subdivision are planned to be served by individual residential spray irrigation systems (IRSIS), please see the specific information on IRSIS in Section G.3 of the attached instructions.

1. **PLOT PLAN**

The following information is to be submitted on a plot plan of the proposed subdivision or development:

a. Location of all soil profiles and percolation tests.
b. Slope at each test area.
c. Soil types and boundaries.
d. Existing and proposed streets, roadways, access roads, etc.
e. Lot lines and lot sizes.
f. Existing and proposed rights-of-way.
g. Existing and proposed drinking water supplies for proposed and contiguous lots.
h. Existing buildings.
i. Surface waters.
j. Wetlands – from National Wetland Inventory Mapping and USDA Hydric Soils Mapping.
k. Floodplain or floodprone area soils, floodways (Federal Flood Insurance Mapping).
l. Designated open space areas.
m. Remaining acreage under the same ownership and contiguous lots.
n. Existing onlot or sewerage systems; pipelines, transmission lines, etc., in-use or abandoned.
o. Prime agricultural land.
p. Orientation to North

2. **RESIDUAL TRACT PLANNING WAIVER REQUEST**

A waiver from sewage facilities planning ☐ is, ☒ is not requested for the residual land tract associated with this project. (See Section H, Section Q, Component 4 and instructions for additional information).

3. **SOILS INFORMATION**

a. Attach copies of "Site Investigation and Percolation Test Report" (3800-FM-WSFR0290A) (formerly known as "Appendix A") form(s) for the proposed subdivision.

b. Marginal conditions for long-term onlot sewage disposal ☐ are, ☒ are not present. See marginal conditions information in Sections H and Q and in attached instructions.

c. If one or more lots in this subdivision are planned to be served by Individual Residential Spray Irrigation Systems (IRSIS), please see the specific information on IRSIS in Section G of the instructions.

4. **WETLAND PROTECTION**

	YES	NO	
a.	☐	☒	Are there wetlands in the project area? If yes, ensure these areas appear on the plot plan as shown in the mapping or through on-site delineation.
b.	☐	☒	Are there any construction activities (encroachments, or obstructions) proposed in, along, or through the wetlands? If yes, identify any proposed encroachments on wetlands and identify whether a General Permit or a full encroachment permit will be required. If a full permit is required, address time and cost impacts on the project. Note that wetland encroachments should be avoided where feasible. Also note that a feasible alternative **MUST BE SELECTED** to an identified encroachment on an exceptional value wetland as defined in Chapter 105. Identify any project impacts on streams classified as HQ or EV and address impacts of the permitting requirements of said encroachments on the project.

5. **PRIMARY AGRICULTURAL LAND PROTECTION**

YES	NO	
☒	☐	Will the project involve the disturbance of prime agricultural lands?

If yes coordinate with local officials to resolve any conflicts with the local prime agricultural land protection program. The project must be consistent with such municipal programs before the sewage facilities planning module package may be submitted to DEP.

If no, prime agricultural land protection is not a factor to this project. Proceed to G.6.

☒	☐	Is this project consistent with the municipal prime agricultural land protection program.

6. **HISTORIC PRESERVATION ACT**

	YES	NO	
a.	☒	☐	Sufficient documentation is attached to confirm that this project is consistent with DEP Technical Guidance 012-0700-001 *Implementation of the PA State History Code* (available online at the DEP Web site at www.depweb.state.pa.us select "subject" then select "technical guidance"). As a minimum this includes copies of the completed Cultural Resources Notice (CRN), a return receipt for its submission to the PHMC and the PHMC review letter.

H. SEWAGE ENFORCEMENT OFFICER ACTION (See Section H of attached instructions)

1. I have confirmed the information relating to the general suitability for onlot sewage disposal contained in this component. Confirmation of this information was based upon on-site verification of soil tests, general site conditions and other generally available soils information. The proposed development site:
   - ☒ Is generally suitable for onlot disposal. This module does not constitute individual permit approval.
   - ☐ Is marginal for long-term onlot disposal. (See instructions for information on marginal conditions).
   - ☐ Is not generally suitable for onlot disposal. (See my attached comments regarding this determination).
   - ☐ Cannot be evaluated for general site suitability because of insufficient soils testing.
2. The proposed development site is considered "marginal for onlot disposal" or for long-term onlot system use because one or more of the following conditions exist. (Check all that apply).
   - ☐ Soils profile examinations which document areas of suitable soil intermixed with areas of unsuitable soils.
   - ☐ Site evaluation which documents soils generally suitable for elevated sand mounds with some potential lots with slopes over 12%.
   - ☐ Site evaluation which documents soils generally suitable for in-ground systems with some potential lots with slopes in excess of 20%.
   - ☐ Lot density of more than 1 Residential Dwelling Unit/acre.
   - ☐ Proposed use of a community onlot disposal system or system serving commercial, industrial or institutional uses.

3. Residual Tract Facilities (For use only when there is an existing onlot disposal system on the residual tract)
   - ☐ I have inspected the lot on which the existing building and existing onlot disposal system is located and have concluded, based on soils mapping or soils evaluation, permit information or site inspection that the long-term sewage disposal needs of this site and the building currently served can be met. (Required)
   - ☐ I further acknowledge that no violations of the Sewage Facilities Act are known to me or have become apparent as a result of my site inspection. No inferences regarding future performance of the existing onlot disposal system should be drawn from this acknowledgement. (Required)
   - ☐ A brief description and sketch of the existing system and site is attached. (Optional)

Signature of Certified Sewage Enforcement Officer having jurisdiction in municipality where development is proposed	Certification #	Date

I. ALTERNATIVE SEWAGE FACILITIES ANALYSIS (See Section I of attached instructions)

This analysis consists of a narrative that will support the chosen sewage disposal method by comparing it to methods already in use in the area or to any other available method. Attach the narrative to the package and title it **Alternative Analysis.** The narrative should describe:

1. the chosen sewage disposal method, and whether the method is interim (to be replaced within 5 years) or ultimate (will serve the development beyond 5 years). Also provide the number of lots or EDU's that will be served.

I. ALTERNATIVE SEWAGE FACILITIES ANALYSIS (Continued) (See Section I of attached instructions)

2. the types of land uses adjacent to the project area (agricultural, residential, commercial etc.) and the type of sewage disposal method serving each of those land uses.
3. if the sewage facilities described in (2) are in need of improvement due to high rates of onlot malfunction or overloaded public sewers.
4. the sewage disposal method indicated for the development area in the municipality's Official Sewage Facilities Plan. (Such as: onlot disposal systems, public sewers, etc.).
5. existing and/or proposed sewage management program(s) in the area and/or any other municipal options necessary to satisfy the requirements of section(s) 71.72 or 71.73 including the provisions of the selected option.
6. potential alternative sewage disposal methods that are available for the project.
7. why the proposed disposal method was chosen over the alternative methods discussed.
8. who will be the owner of the facility, and who will be responsible for operation and maintenance of the facility.
9. any other information that the developer feels will support the chosen disposal method.

Complete the following sections (J, K, L and/or M) if indicated ☒.
If none are indicated, go directly to Section N.

☒ J. PROTECTION OF RARE, ENDANGERED OR THREATENED SPECIES (See Section J of instructions)

Check one:

- ☒ The "Pennsylvania Natural Diversity Inventory (PNDI) Project Environmental Review Receipt" resulting from my search of the PNDI database and all supporting documentation from jurisdictional agencies (when necessary) is/are attached.
- ☐ A completed "Pennsylvania Natural Diversity Inventory (PNDI) Project Planning & Environmental Review Form," (PNDI Form) available at www.naturalheritage.state.pa.us , and all required supporting documentation is attached. I request DEP staff to compete the required PNDI search for my project. I realize that my planning module will be considered incomplete upon submission to the Department and that the DEP review will not begin, and that processing of my planning module will be delayed, until a "PNDI Project Environmental Review Receipt" and all supporting documentation from jurisdictional agencies (when necessary) is/are received by DEP.

"Applicant or Consultant Initials _____"

☐ K. PERMEABILITY TESTING (See Section K of attached instructions)

- ☐ The information required in Section K of the instructions is attached.

☐ L. PRELIMINARY HYDROGEOLOGIC STUDY (See Section L of attached instructions)

- ☐ The information required in Section L of the instructions is attached.

☐ M. DETAILED HYDROGEOLOGIC STUDY (See Section M of attached instructions)

- ☐ The information required in Section M of the instructions is attached.

N. RETAINING TANKS (See Section N of attached instructions)

The term "Retaining Tank" includes holding tanks and privies, as well as, chemical, incinerating, recycling, and composting toilets. Check the appropriate box.

☐ Yes ☐ No Does this new land development project propose either interim or long-term use of retaining tanks?
If yes, complete the remainder of Section N.
If no, completion of the remainder of Section N is not required. Proceed to Section O.

What types of retaining tanks are proposed? Check all that apply.

☐ Holding Tank ☐ Privy ☐ Chemical ☐ Incinerating ☐ Recycling ☐ Composting

1. **Holding Tanks** – are only to be used in new land development as an interim sewage disposal method and only for a period of time determined by DEP. A replacement sewage disposal method is required and an implementation schedule for that replacement method must be developed. Local ordinances must also be ***in place*** to provide for the maintenance of the tanks. Complete a. and b. below. For exceptions to these requirements see Chapter 71, Section 71.63 (Retaining Tanks).
   a. The following questions will help determine if a holding tank can be used.
      1) ☐ Yes ☐ No Does the Official Sewage Facilities plan or revision provide for replacement of the tanks by adequate sewage services?
      2) ☐ Yes ☐ No Does the Official Sewage Facilities Plan or revision include financial assurances for the implementation of the replacement method?

         If yes, what is the replacement sewage disposal method?

         Method _____

         If no, holding tanks may not be used.
   b. Chapter 72 requires that the municipality, sewer authority or other DEP approved entity with responsibility over the holding tanks have ***in place*** ordinances, regulations or restrictions established to maintain the tanks as outlined in Chapter 71, Section 71.63(c)(3). Attach documentation that the responsible agency has developed these ordinances or restrictions. These projects must also complete Part 3 below (Retaining Tank Pumping and Content Disposal).
2. **Privies/Chemical Toilets**
   Projects that propose privies as the method of sewage disposal must complete a, b and c below. For exceptions to these requirements see Chapter 71, Section 71.63 (Retaining Tanks).
   a. Complete Section G of this Component.
   b. The municipality, sewer authority, management agency or other DEP approved entity with responsibility over the site must have ordinances, regulations or restrictions established that assume responsibility for the removal of a privy and installation of an approved onlot sewage disposal system when water under pressure is provided to that lot. Attach a copy of these ordinances, regulations or restrictions.

c. These projects must also complete Part 3 below (Retaining Tank Pumping and Content Disposal).

N. RETAINING TANKS cont'd. (See Section N of attached instructions)

3. Retaining Tank Pumping and Content Disposal

a) Name of Retaining Tank Cleaner _____
(This can be the municipality or a contracted cleaner)

Address _____

Telephone Number _____

b) Name of Disposal Site _____

Type of treatment facility _____

NPDES or Land Disposal permit number _____

County _____ Municipality _____

Attach letter of agreement with the proposed disposal site verifying adequate capacity for disposal needs. Retaining tank wastes must be disposed of at a DEP permitted facilities or sites.

c) A municipality, sewer authority, or sewage management agency may delegate or contract for the collection and disposal of retaining tank contents, except that the ultimate responsibility for the proper collection and disposal of the contents shall remain with the municipality, authority or agency.

O. PUBLIC NOTIFICATION REQUIREMENT (See Section O of attached instructions)

This section must be completed to determine if the applicant will be required to publish certain facts about the project in a newspaper of general circulation in accordance with Chapter 71, Section 71.53(d)(6) to provide a chance for the general public to comment on proposed new land development projects. This notice may be provided by the applicant or the applicant's agent, the municipality or the local agency by publication in a newspaper of general circulation within the municipality affected. Where an applicant or an applicant's agent provides the required notice for publication, the applicant or applicant's agent shall notify the municipality or local agency and the municipality and local agency will be relieved of the obligation to publish. The required content of the publication notice are found in Section O of the instructions.

To complete this section, each of the following questions must be answered with a "yes" or "no". Newspaper publication is required if any of the following are answered "yes". Check all boxes that apply.

	Yes	No	
1.	☐	☒	Does the project propose the construction of a sewage treatment facility?
2.	☐	☒	Will the project change the flow at an existing sewage treatment facility by more than 50,000 gallons per day?
3.	☐	☒	Will the project result in a public expenditure for the sewage facilities portion of the project in excess of $100,000?
4.	☐	☒	Will the project lead to a major modification of the existing municipal administrative organizations within the municipal government?
5.	☐	☒	Will the project require the establishment of *new* municipal administrative organizations within the municipal government?
6.	☐	☒	Will the project result in *a* subdivision of 50 lots or more?
7.	☐	☒	Does the project involve a major change in established growth projections?
8.	☐	☒	Does the project involve a different land use pattern than that established in the municipality's Official Sewage Facilities Plan?
9.	☐	☒	Does the project involve the use of large volume onlot sewage disposal systems (Flow > 10,000 gpd)?
10.	☐	☒	Does the project require resolution of a conflict between the proposed alternative and consistency requirements contained in Chapter 71.21(a)(5)(i), (ii), (iii)?

O. PUBLIC NOTIFICATION REQUIREMENT (Continued)

11. ☐ ☒ Will sewage facilities discharge into high quality or exceptional value waters?

☐ Attached is a copy of:
- ☐ the public notice,
- ☐ all comments received as a result of the notice,
- ☐ the municipal response to these comments.

☐ No comments were received. A copy of the public notice is attached.

P. FALSE SWEARING STATEMENT (See Section P of attached instructions)

The individual performing the tests and field evaluations necessary to complete ***Section G*** must provide the information below and sign the false swearing statement found to the right.

Scott Andress - Edward B. Walsh and Assoc. Inc.
Name (Print)

Environmental Scientist
Title

125 Dowlin Forge Road, Exton, Pa 19341
Address

6109030060 x 122
Telephone Number

I verify that the soils information statements made in this component are true and correct to the best of my knowledge, information and belief. I understand that false statements in this component are made subject to the penalties of 18 PA C.S.A. §4904 relating to unsworn falsification to authorities.

Edward B. Walsh and Assoc. Inc. 2/14/18
Signature Date

Check One:

☐ The individual conducting these tests is a Sewage Enforcement Officer authorized to perform this work under a fee schedule established by the municipality.

☒ The individual conducting these tests is not a Sewage Enforcement Officer employed by the local agency in which this development is located.

The individual completing the rest of the component must provide their name, title, address, telephone number and sign the false swearing statement found to the right.

Scott Andress - Edward B. Walsh and Assoc. Inc.
Name (Print)

Environmental Scientist
Title

125 Dowlin Forge Road, Exton, Pa 19341
Address

6109030060 x 122
Telephone Number

I verify that the statements made in this component are true and correct to the best of my knowledge, information and belief. I understand that false statements in this component are made subject to the penalties of 18 PA C.S.A. §4904 relating to unsworn falsification to authorities.

☐ A waiver of the planning requirements is requested for the residual tract of this subdivision. The requirements of Section G.2 of the instructions have been met.

Edward B. Walsh and Assoc. Inc. 2/14/18
Signature Date

Q. MUNICIPAL ACTIONS (Marginal conditions, Residual Tract Waiver and/or O&M option)

(See Section Q of attached instructions)

This section is to be completed by the municipality if marginal conditions have been identified on the project site and/or if a waiver of the planning requirements has been requested for the residual tract of the subdivision and/or if an assurance of long term operation and maintenance is required by Section 71.72. If none of these conditions are met, do not complete this section.

1. ☐ The proposed development has been identified in Section G and/or Section H as having marginal conditions or other concerns for the long-term use of onlot sewage systems. The municipality has selected the following method of providing long-term sewage disposal to this subdivision: (Check one)
   - ☐ Provision of a sewage management program meeting the minimum requirements of Chapter 71, Section 71.73
   - ☐ Replacement area testing
   - ☐ Scheduled replacement with sewerage facilities
   - ☐ Reduction of the density of onlot systems

   ☐ The justification required in Section Q of the instructions is attached.
2. ☐ A **waiver** of the planning requirements for the residual tract of this subdivision has been requested.

   The municipality acknowledges acceptance of this proposal and requests a waiver of the sewage facilities planning requirements for the residual tract designated on the subdivision plot plan. Our municipal officials accept full responsibility now and in the future to identify any violation of this waiver and to submit to the approving agency any required sewage facilities planning for the designated residual tract should a violation occur or construction of a new sewage-generating structure on the residual tract of the subdivision be proposed. We understand that such planning information may require municipal officials to be responsible for soil testing and other environmental assessments for the residual tract in the future.
3. ☐ The **option** selected to assure long-term proper operation and maintenance, required by Title 25, PA Code, Section 71.72, for the proposed DEP permitted non-municipal sewage facility or local agency permitted community onlot sewage system is clearly identified and attached.

Chairperson or Secretary of Governing Body _____ Signature _____ Date _____

Municipality Name _____

Address _____ Address _____

(Area Code) Telephone No. (___) _____

R. PLANNING MODULE REVIEW FEE (See Section R of attached instructions)

The Sewage Facilities Act establishes a fee for the DEP planning module review. DEP will calculate the review fee for the project and invoice the project sponsor **OR** the project sponsor may attach a self-calculated fee payment to the planning module prior to submission of the planning package to DEP. (Since the fee and fee collection procedures may vary if a "delegated local agency" is conducting the review, the project sponsor should contact the "delegated local agency" to determine these details.) Check the appropriate box.

☐ I request the DEP calculate the review fee for my project and send me an invoice for the correct amount. I understand the Department's review of my project will not begin until the Department receives the correct review fee from me for the project.

3800-FM-BPNPSM0352 7/2012

R. PLANNING MODULE REVIEW FEE cont'd. (See Section R of attached instructions)

☒ I have calculated the review fee for my project using the formula found below and the review fee guidance in the instructions. I have attached a check or money order in the amount of $ 30.00 payable to **"Commonwealth of PA, DEP". Include DEP code number on check.** I understand the Department will not begin review of my project unless it receives the fee and determines the fee is correct. If the fee is incorrect, The Department will return my check or money order, send me an invoice for the correct amount. I understand the Department's review will NOT begin until I have submitted the correct fee.

☐ I request to be exempt from the DEP planning module review fee because this planning module creates **only** one new lot and is the **only** lot subdivided from a parcel of land as that land existed on December 14, 1995. I realize that subdivision of a second lot from this parcel of land shall disqualify me from this review fee exemption. I am furnishing the following deed reference information in support of my fee exemption.

County Recorder of Deeds for _____ County

Deed Volume _____ Book Number _____

Page Number _____ Date Recorded _____

Formula:

1 Lots (or EDUs) X $30.00 = $ 30.00

Note:
(1) To calculate the review fee for any project, use the number of lots created or the whole number of project equivalent dwelling units (EDU), (whichever is greater) in the above formula.

(2) When using the number of lots, include only the number of lots being proposed when calculating the review fee. Do not include any "Residual Land Parcel/Lot".

(3) In all projects, the minimum sewage flow per lot is equal to 400 gallons per day (GPD) and represents a generic three-bedroom house on each lot. Projects that knowingly propose houses larger than the generic three-bedroom unit allow for the increased sewage flows from these larger units by adding 100 gallons per day for each additional bedroom in the house to this initial 400 GPD figure. The resulting project flow is in excess of the minimum 400 GPD for each lot created and must be converted into equivalent dwelling units (EDU) in order to correctly calculate the review fee. See note 4.

(4) To determine the total number of EDUs for a project, first determine the total project flow by adding together the flow from each proposed lot. Divide this total project flow by 400 GPD and, if it is greater than the number of lots being proposed, enter this greater figure in the above formula.

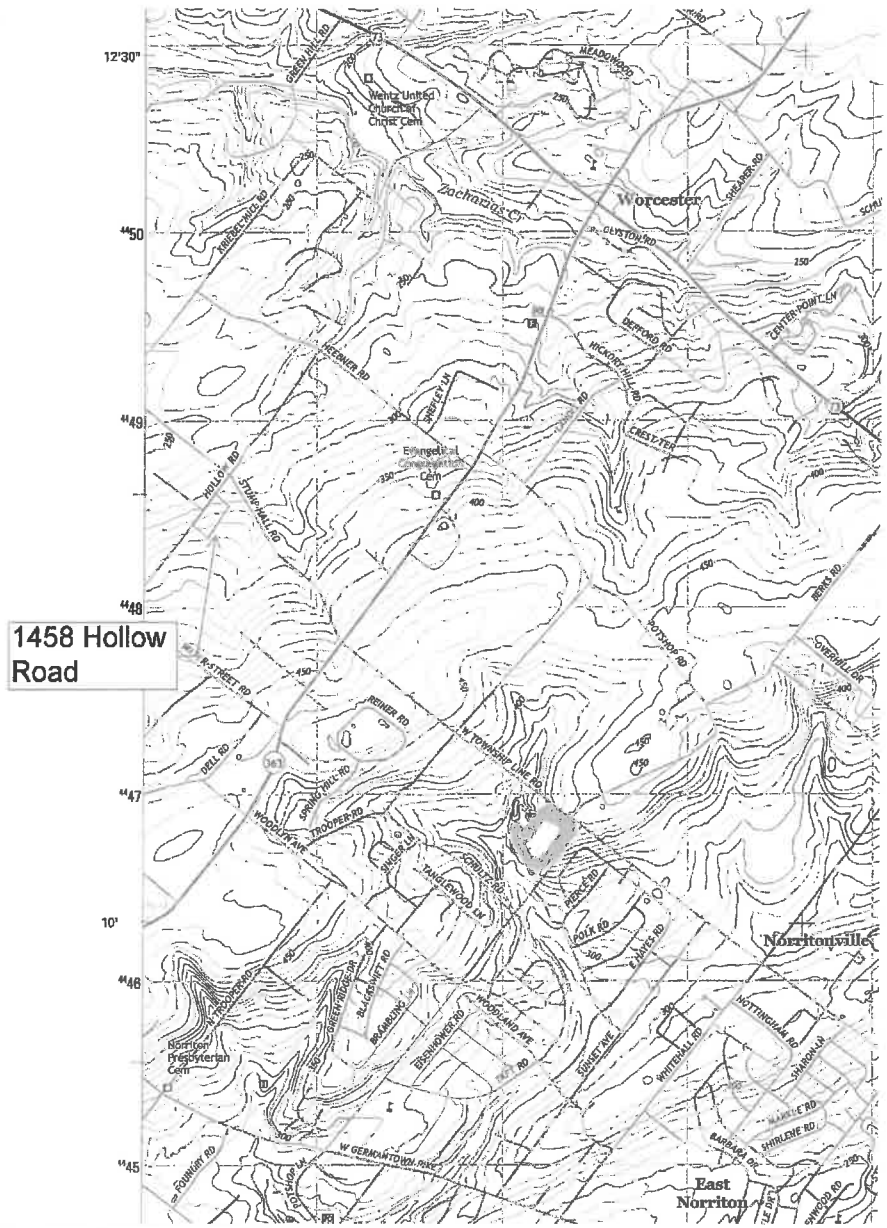
Developer Name (Print) _____

Signature _____ Date _____

STOP - CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES
THREE WORKING DAYS NOTICE
Pennsylvania One Call System, Inc.
1-800-242-1776

COMPONENT 3
ADDITIONAL INFORMATION

U.S.G.S MAP



COMPONENT 3 – SECTION E
AVAILABILITY OF DRINKING WATER SUPPLY

Section E – Availability of Drinking Water Supply

The project will utilize individual drinking water wells to be permitted by the Montgomery County Health Department.

COMPONENT 3 – SECTION F
PROJECT NARRATIVE

Section F. - Project Narrative

1. The applicant is proposing to subdivide tax parcel 67-00-01267-00-7 consisting of approximately 5 acres into two single family dwelling lots. One 2 acre lot for the existing dwelling and one 3 acre lot for the proposed dwelling.

2. The proposed project has an estimated sewage flow of 1,000 gallons per day or 2.5 EDU's. The existing dwelling is 3 bedrooms or 400 gallons per day and the proposed dwelling is 5 bedrooms or 600 gallons per day.

3. The ultimate method of sewage treatment and disposal is by way of individual on-lot sewage disposal systems. The lot for the existing dwelling has been tested for a replacement area septic system and the new dwelling lot has been tested for a primary and replacement area septic system.

4. The proposed project has an estimated sewage flow of 1,000 gallons per day or 2.5 EDU's. The existing dwelling is 3 bedrooms or 400 gallons per day and the proposed dwelling is 5 bedrooms or 600 gallons per day.

5. The total acreage of the proposed subdivision is approximately 5 acres.

6. The project sponsor does not own any adjacent land.

7. Based on a preliminary sketch the exiting well to the proposed tubing within the proposed replacement septic system is a minimum of 102'.

COMPONENT 3 – SECTION G
GENERAL SITE SUITABILITY

ITEM G. 4 – Wetland Protection

There are no known wetlands or waters of the commonwealth located on the property.

ITEM G. 5. – Prime Agricultural Land Protection

The project will not impact Prime Agricultural Soils to the best of my knowledge.

ITEM G. 6. – Historic Preservation Act

It is our opinion that the project qualifies for an exemption from notification because the project is proposing less than 10 acres of disturbance; as listed in the DEP/PHMC Policies and Procedures Implementation of the History Code List of Exemptions.

ITEM G. 7. – Protection of Rare, Endangered or Threatened Species

Enclosed is the PNDI Environmental Review Receipt which indicates there are no known conflicts, see enclosed.

1. PROJECT INFORMATION

Project Name: **1458 Hollow Road Subdivision**
Date of Review: **11/27/2017 12:55:22 PM**
Project Category: **Development, Residential, subdivision which will contain 1-2 lots with 1-2 single family living units**
Project Area: **5.68 acres**
County(s): **Montgomery**
Township/Municipality(s): **WORCESTER**
ZIP Code: **19426**
Quadrangle Name(s): **LANSDALE**
Watersheds HUC 8: **Schuylkill**
Watersheds HUC 12: **Skippack Creek**
Decimal Degrees: **40.185884, -75.370905**
Degrees Minutes Seconds: **40° 11' 9.1840" N, 75° 22' 15.2593" W**

2. SEARCH RESULTS

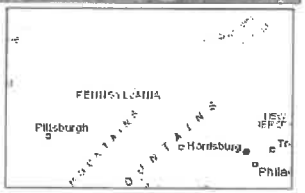
Agency	Results	Response
PA Game Commission	No Known Impact	No Further Review Required
PA Department of Conservation and Natural Resources	No Known Impact	No Further Review Required
PA Fish and Boat Commission	No Known Impact	No Further Review Required
U.S. Fish and Wildlife Service	No Known Impact	No 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 must comply with the bog turtle habitat screening requirements of the PASPGP.

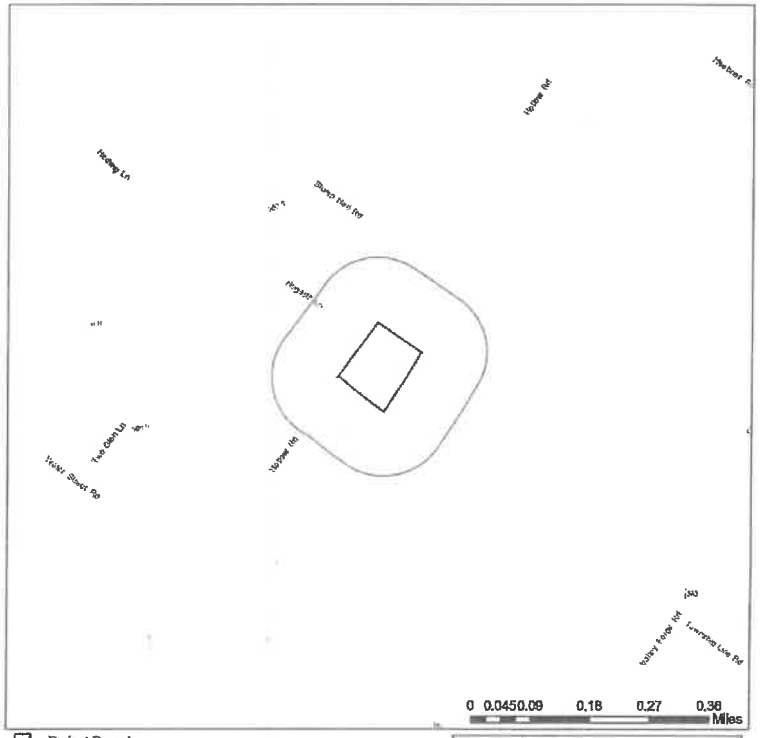
1458 Hollow Road Subdivision

☐ Project Boundary
☐ Buffered Project Boundary

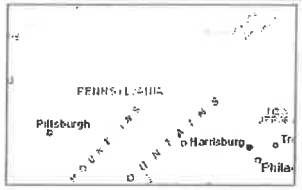


Service Layer Credits: Sources: Esri, HERE, DeLorme, Intermap, Increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community
Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the GIS user

1458 Hollow Road Subdivision



☐ Project Boundary
☐ Buffered Project Boundary



Service Layer Credits: Sources: Esri, HERE, DeLorme, Intermap, Increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

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. Two review options are available to permit applicants for handling PNDI coordination in conjunction with DEP's permit review process involving either T&E Species or species of special concern. Under sequential review, the permit applicant performs a PNDI screening and completes all coordination with the appropriate jurisdictional agencies prior to submitting the permit application. The applicant will include with its application, both a PNDI receipt and/or a clearance letter from the jurisdictional agency if the PNDI Receipt shows a Potential Impact to a species or the applicant chooses to obtain letters directly from the jurisdictional agencies. Under concurrent review, DEP, where feasible, will allow technical review of the permit to occur concurrently with the T&E species consultation with the jurisdictional agency. The applicant must still supply a copy of the PNDI Receipt with its permit application. The PNDI Receipt should also be submitted to the appropriate agency according to directions on the PNDI Receipt. The applicant and the jurisdictional agency will work together to resolve the potential impact(s). See the DEP PNDI policy at https://conservationexplorer.dcnr.pa.gov/content/resources.

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). 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
Email: RA-HeritageReview@pa.gov

U.S. Fish and Wildlife Service
Pennsylvania Field Office
Endangered Species Section
110 Radnor Rd; Suite 101
State College, PA 16801
NO Faxes Please

PA Fish and Boat Commission
Division of Environmental Services
595 E. Rolling Ridge Dr., Bellefonte, PA 16823
Email: RA-FBPACENOTIFY@pa.gov

PA Game Commission
Bureau of Wildlife Habitat Management
Division of Environmental Planning and Habitat Protection
2001 Elmerton Avenue, Harrisburg, PA 17110-9797
Email: RA-PGC_PNDI@pa.gov
NO Faxes Please

7. PROJECT CONTACT INFORMATION

Name: Scott Andress
Company/Business Name: Edward B. Walsh and Assoc., Inc.
Address: 125 Dowlin Forge Rd
City, State, Zip: Exton, PA 19341
Phone: (610) 903 0060 x 122 Fax: (610) 903 0080
Email: Sandress@ebwalsh.com

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

11/27/2017
date

COMPONENT 3 – SECTION H
ALTERNATIVE ANALYSIS

Section H - Alternative Sewage Facilities Analysis

1) The chosen method of sewage disposal is by way of individual on-lot sewage disposal systems. This alternative is considered to be the ultimate method of sewage treatment and reclamation for the two dwellings.

2) The properties to the north, east and SOUTH all zoned AGR. The properties to the west are zoned R-175. The surrounding properties are all served with on-lot sewage disposal systems.

3) There are no known sewage disposal needs in the immediate vicinity of the project.

4) The Townships official sewage facilities plan identifies the project area as being in the public sewer area.

5) The Township has a Sewage Management Program Ordinance No. 145 adopted 4-17-1996. The ordinance requires routine inspections and maintenance of on-lot sewage disposal systems.

6) Alternative sewage disposal methods, which might be employed to serve the project, include stream discharge and public sewer. Public sewer is not a viable option because public sewer is not available in this portion of the Township. Stream discharge is not a viable option because there isn't a stream located on the property.

7) The chosen method of sewage disposal via on-lot sewage disposal systems was selected because it best meets the short and long term sewage disposal needs of the project and it is consistent with the current Act 537 plan.

8) The individual lot owners will be responsible for the operation and maintenance of their respective on-lot sewage disposal systems.

COMPONENT 4A

COMPONENT 4A, 4B AND 4C

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF CLEAN WATER

DEP Code #:
1-46962-197-2

SEWAGE FACILITIES PLANNING MODULE
COMPONENT 4A - MUNICIPAL PLANNING AGENCY REVIEW

Note to Project Sponsor: To expedite the review of your proposal, one copy of your completed planning module package and one copy of this *Planning Agency Review Component* should be sent to the local municipal planning agency for their comments.

SECTION A. PROJECT NAME (See Section A of instructions)

Project Name
1458 Hollow Road

SECTION B. REVIEW SCHEDULE (See Section B of instructions)

1. Date plan received by municipal planning agency _____
2. Date review completed by agency _____

SECTION C. AGENCY REVIEW (See Section C of instructions)

Yes	No		
☐	☐	1.	Is there a municipal comprehensive plan adopted under the Municipalities Planning Code (53 P.S. 10101, *et seq.*)?
☐	☐	2.	Is this proposal consistent with the comprehensive plan for land use? If no, describe the inconsistencies _____
☐	☐	3.	Is this proposal consistent with the use, development, and protection of water resources? If no, describe the inconsistencies _____
☐	☐	4.	Is this proposal consistent with municipal land use planning relative to Prime Agricultural Land Preservation?
☐	☐	5.	Does this project propose encroachments, obstructions, or dams that will affect wetlands? If yes, describe impacts _____
☐	☐	6.	Will any known historical or archaeological resources be impacted by this project? If yes, describe impacts _____
☐	☐	7.	Will any known endangered or threatened species of plant or animal be impacted by this project? If yes, describe impacts _____
☐	☐	8.	Is there a municipal zoning ordinance?
☐	☐	9.	Is this proposal consistent with the ordinance? If no, describe the inconsistencies _____
☐	☐	10.	Does the proposal require a change or variance to an existing comprehensive plan or zoning ordinance?
☐	☐	11.	Have all applicable zoning approvals been obtained?
☐	☐	12.	Is there a municipal subdivision and land development ordinance?

SECTION C. AGENCY REVIEW (continued)

Yes	No		
☐	☐	13.	Is this proposal consistent with the ordinance? If no, describe the inconsistencies _____
☐	☐	14.	Is this plan consistent with the municipal Official Sewage Facilities Plan? If no, describe the inconsistencies _____
☐	☐	15.	Are there any wastewater disposal needs in the area adjacent to this proposal that should be considered by the municipality? If yes, describe _____
☐	☐	16.	Has a waiver of the sewage facilities planning requirements been requested for the residual tract of this subdivision?
☐	☐		If yes, is the proposed waiver consistent with applicable ordinances? If no, describe the inconsistencies _____
		17.	Name, title and signature of planning agency staff member completing this section: Name: _____ Title: _____ Signature: _____ Date: _____ Name of Municipal Planning Agency: _____ Address _____ Telephone Number: _____

SECTION D. ADDITIONAL COMMENTS (See Section D of instructions)

This component does not limit municipal planning agencies from making additional comments concerning the relevancy of the proposed plan to other plans or ordinances. If additional comments are needed, attach additional sheets.

The planning agency must complete this component within 60 days.

This component and any additional comments are to be returned to the applicant.

COMPONENT 4B

3850-FM-BCW0362B 6/2016

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF CLEAN WATER

DEP Code #: 1-46962-197-2

SEWAGE FACILITIES PLANNING MODULE
COMPONENT 4B - COUNTY PLANNING AGENCY REVIEW

(or Planning Agency with Areawide Jurisdiction)

Note to Project Sponsor: To expedite the review of your proposal, one copy of your completed planning package and one copy of this *Planning Agency Review Component* should be sent to the county planning agency or planning agency with areawide jurisdiction for their comments.

SECTION A. PROJECT NAME (See Section A of instructions)

Project Name

1458 Hollow Road

SECTION B. REVIEW SCHEDULE (See Section B of instructions)

1. Date plan received by county planning agency _____
2. Date plan received by planning agency with areawide jurisdiction _____
   Agency name _____
3. Date review completed by agency _____

SECTION C. AGENCY REVIEW (See Section C of instructions)

Yes	No		
☐	☐	1.	Is there a county or areawide comprehensive plan adopted under the Municipalities Planning Code (53 P.S. 10101 *et seq.*)?
☐	☐	2.	Is this proposal consistent with the comprehensive plan for land use?
☐	☐	3.	Does this proposal meet the goals and objectives of the plan?
			If no, describe goals and objectives that are not met _____
☐	☐	4.	Is this proposal consistent with the use, development, and protection of water resources?
			If no, describe inconsistency _____
☐	☐	5.	Is this proposal consistent with the county or areawide comprehensive land use planning relative to Prime Agricultural Land Preservation?
			If no, describe inconsistencies: _____
☐	☐	6.	Does this project propose encroachments, obstructions, or dams that will affect wetlands?
			If yes, describe impact _____
☐	☐	7.	Will any known historical or archeological resources be impacted by this project?
			If yes, describe impacts _____
☐	☐	8.	Will any known endangered or threatened species of plant or animal be impacted by the development project?
			If yes, describe impacts _____
☐	☐	9.	Is there a county or areawide zoning ordinance?
☐	☐	10.	Does this proposal meet the zoning requirements of the ordinance?
			If no, describe inconsistencies _____

SECTION C. AGENCY REVIEW (continued)

Yes	No		
☐	☐	11.	Have all applicable zoning approvals been obtained?
☐	☐	12.	Is there a county or areawide subdivision and land development ordinance?
☐	☐	13.	Does this proposal meet the requirements of the ordinance?
			If no, describe which requirements are not met _____
☐	☐	14.	Is this proposal consistent with the municipal Official Sewage Facilities Plan?
			If no, describe inconsistency _____
☐	☐	15.	Are there any wastewater disposal needs in the area adjacent to this proposal that should be considered by the municipality?
			If yes, describe _____
☐	☐	16.	Has a waiver of the sewage facilities planning requirements been requested for the residual tract of this subdivision?
☐	☐		If yes, is the proposed waiver consistent with applicable ordinances.
			If no, describe the inconsistencies _____
☐	☐	17.	Does the county have a stormwater management plan as required by the Stormwater Management Act?
☐	☐		If yes, will this project plan require the implementation of storm water management measures?
		18.	Name, Title and signature of person completing this section:
			Name: _____
			Title: _____
			Signature: _____
			Date: _____
			Name of County or Areawide Planning Agency: _____
			Address: _____
			Telephone Number: _____

SECTION D. ADDITIONAL COMMENTS (See Section D of instructions)

This component does not limit county planning agencies from making additional comments concerning the relevancy of the proposed plan to other plans or ordinances. If additional comments are needed, attach additional sheets.

The county planning agency must complete this component within 60 days.

This component and any additional comments are to be returned to the applicant.

COMPONENT 4C

3850-FM-BCW0362C 6/2018

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF CLEAN WATER

DEP Code #:
1-46962-197-2

SEWAGE FACILITIES PLANNING MODULE
COMPONENT 4C - COUNTY OR JOINT HEALTH DEPARTMENT REVIEW

Note to Project Sponsor: To expedite the review of your proposal, one copy of your completed planning module package and one copy of this *Planning Agency Review Component* should be sent to the county or joint county health department for their comments.

SECTION A. PROJECT NAME (See Section A of instructions)

Project Name
1458 Hollow Road

SECTION B. REVIEW SCHEDULE (See Section B of instructions)

1. Date plan received by county or joint county health department _____

   Agency name _____

2. Date review completed by agency _____

SECTION C. AGENCY REVIEW (See Section C of instructions)

Yes	No		
☐	☐	1.	Is the proposed plan consistent with the municipality's Official Sewage Facilities Plan? If no, what are the inconsistencies? _____
☐	☐	2.	Are there any wastewater disposal needs in the area adjacent to this proposal that should be considered by the municipality? If yes, describe _____
☐	☐	3.	Is there any known groundwater degradation in the area of this proposal? If yes, describe _____
☐	☐	4.	The county or joint county health department recommendation concerning this proposed plan is as follows: _____
		5.	Name, title and signature of person completing this section: Name: _____ Title: _____ Signature: _____ Date: _____ Name of County Health Department: _____ Address: _____ Telephone Number: _____

SECTION D. ADDITIONAL COMMENTS (See Section D of instructions)

This component does not limit county planning agencies from making additional comments concerning the relevancy of the proposed plan to other plans or ordinances. If additional comments are needed, attach additional sheets.

The county planning agency must complete this component within 60 days.
This component and any additional comments are to be returned to the applicant.

On-lot Sewage Disposal Testing

Lot #1

Lot #1 – Primary Septic System Soil Testing Results

Seth Bacon
Soil & Wetland Consulting
1113 Grandview Circle
Pottstown, PA 19465
(610) 705-9999

October 19, 2017

T.J. Dell'Arciprete
Delaware Valley Septics, LLC
504 Eagle Road, Suite B
Springfield, PA 19064

RE: **Drip Micromound Soil Morphology Report – Southern Test Area**
1458 Hollow Rd., Worcester Twp., Montgomery Co., PA

Dear T.J.:

I completed a soil evaluation at 1458 Hollow Road in Worcester Township, Montgomery County, Pennsylvania. Field work was performed on October 16, 2017 to determine the suitability of the residential property for an onlot septic disposal system in the southern area of the lot. The evaluation followed the requirements of PADEP's *Onlot Alternate Technology Listings* for the *American PERC-RITE Micromound*. In attendance for the evaluation was Dennis Tidwell, Sewage Enforcement Officer with the Montgomery County Health Department.

The test location for the drip micromound is generally south of the existing house within a young forest on nearly level (0-3%) ground that slopes north. I evaluated soils in four pits (10.16.1 through 10.16.4) to observe soil morphological characteristics that influence suitability for wastewater disposal. Soils within the pits were logged according to the USDA-NRCS *Field Book for Describing and Sampling Soils Version 3.0* (2013). The soils were examined for properties that limit the renovation of sewage effluent, termed "limiting zones". Common limiting zones include restricted drainage (indicated by drainage mottles), free water, excessive rock, and bedrock.

The soils I evaluated within the four test pits are suitable for a drip micromound system. The soils consist of friable silt loams and silty clay loams with weak to moderate granular and subangular blocky structures. Soils in the test pits are somewhat poorly drained with limiting zones associated with restricted drainage (indicated by drainage mottling) at depths ranging between 13 and 15 inches below ground surface. Copies of the soil logs are included with this report.

Based on the silt loam soil textures, a basal loading rate that is equal to or less than 0.4 gallons per square foot per day and a horizontal linear load that is equal to or less than 4 gallons per foot per day is required according to Table 1 of the PADEP's *Alternate Classification Listing* (January 2010).

I assign a basal loading rate of 0.4 gal/ft^2/day, a sand bed tubing loading rate of 0.75 gpd/ft^2 and a horizontal linear load of 4.0 gal/lft/day. The minimum overall system length for the three bedroom house is 100 feet. These are minimum design standards which may be modified (if site conditions allow) for an additional system safety factor at the discretion of the owner and designer. Surface runoff must be diverted away from the micromound bed area to prevent overloading.

If any activities are proposed in the vicinity of the proposed drip micromound, protective fencing should be installed surrounding the test site. Since soils at the test site are somewhat poorly drained, the owner should be made aware that soils surrounding the drip micromound system may remain wet longer with the additional water from the disposal system.

The proposed drip micromound system is within an area mapped in the USDA's web soil survey (*soils.usda.gov*) as the deep, moderately well drained Readington Series. The Readington Series consists of residual soils weathered from the local red Triassic-aged shale and siltstone. The Readington soils contain a fragipan horizon, a very dense, slowly permeable soil horizon that severely restricts the downward movement of water. Fragipans can trap or "perch" infiltrating rainwater, leading to shallow soil saturation and increased surface runoff. The soils I reviewed in the vicinity of the micromound are somewhat poorly drained but otherwise characteristic of the Readington Series.

In summary, soil and site conditions within the southern test area at 1458 Hollow Road in Worcester Township, Montgomery County, Pennsylvania meet the criteria for a drip irrigation micromound system, per the requirements of PADEP's *Alternate Classification Listing*. Please have my soil recommendations incorporated into the future design of the system, and call me if you have any questions.

Sincerely,

Seth Bacon, CPSS, SEO.
Soil Scientist

ORCPOICS
SETH BACON
CERTIFIED PROFESSIONAL SOIL SCIENTIST
NO. 00035 SOIL

Enclosures

Cc: File 2646

3850-FM-BCW0290A 4/2016

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF CLEAN WATER

SITE INVESTIGATION AND PERCOLATION TEST REPORT FOR ONLOT DISPOSAL OF SEWAGE

INSTRUCTIONS FOR COMPLETION OF THIS FORM ARE LOCATED ON THE REVERSE SIDE

Application No. _____ Municipality Worcester County Montgomery

Site Location 1458 Hollow Road - Lot #1 Subdivision Name 1458 Hollow Road

☒ SUITABLE Soil Type ReB Slope 3% Depth to Limiting Zone 15 Ave. Perc. Rate _____

☐ UNSUITABLE ☒ Mottling ☐ Seeps or Ponded Water ☐ Bedrock ☐ Fractures ☐ Coarse Fragments

☐ Perc. Rate ☐ Slope ☐ Unstabilized Fill ☐ Floodway ☐ Other _____

SOILS DESCRIPTION:

Soils Description Completed by: Scott Andress, Edward B. Walsh and Associates,Inc. Date: 11-27-2017

Inches		Description of Horizon
0	TO 4	Ap. 7.5YR4/4. Silt Loam. St. Granular. V. Friable
4	TO 15	Bt1 7.5YR5/4. Silt Loam. M. SBK. Friable. 10% Cobbles
15	TO 20	Bt2. 5YR4/4. Silt Loam. W. SBK. Friable. 5% Gravel. Few Dist. Redox.
20	TO 30	Bx. 2.5YR4/3. Silty Clay Loam. Mod ABK/P2. V. Firm. Common Prom. Redox
_____	TO _____	
_____	TO _____	TP#11-27-1

PERCOLATION TEST:

Percolation Test Completed by: _____ Date: _____

Weather Conditions: ☐ Below 40°F ☐ 40°F or above ☐ Dry ☐ Rain, Sleet, Snow (last 24 hours)

Soil Conditions: ☐ Wet ☐ Dry ☐ Frozen

Hole No.	*** Yes	*** No	Reading Interval	Reading No. 1: Inches of drop	Reading No. 2: Inches of drop	Reading No. 3: Inches of drop	Reading No. 4: Inches of drop	Reading No. 5: Inches of drop	Reading No. 6: Inches of drop	Reading No. 7 Inches of drop	Reading No. 8: Inches of drop
			10 / 30								
			10 / 30								
			10 / 30								
			10 / 30								
			10 / 30								
			10 / 30								

***Water remaining in the hole at the end of the final 30-minute presoak? Yes, use 30-minute interval; No, use 10-minute interval.

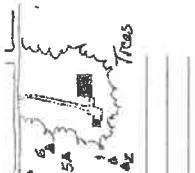
Calculation of Average Percolation Rate:

Hole No.	Drop during final period		Perc. Rate as Minutes/Inch		Depth of Hole		
_____	_____	"	_____		_____	"	
_____	_____	"	_____		_____	"	
_____	_____	"	_____		_____	"	
_____	_____	"	_____		_____	"	
_____	_____	"	_____		_____	"	
_____	_____	"	_____		_____	"	Min / Inch
TOTAL OF MIN / IN →			_____	=	_____		
TOTAL NO. OF HOLES→			_____				

The information provided is the true and correct result of tests conducted by me, performed under my personal supervision, or verified in a manner approved by the Department of Environmental Protection (DEP).

(S) _____
Sewage Enforcement Officer (SEO)

☐ White - Local Agency ☐ Pink - Local DEP Office ☐ Yellow - Applicant



Seth Bacon, CPSS.
Soil & Wetland Consulting
Soil Description

Project Name/Number 1458 Hollow Road Worcester Twp. Pit No. 10/16/1
Date 10/16/17 Time Part. Sun Location
Weather SCS Soil Name

HORIZON	DEPTH	BOUNDARY	TEXTURE	COLOR	COARSE FRAGMENTS (%)	DRAINAGE MOTTLES ABUNDANCE	DRAINAGE MOTTLES CONTRAST	STRUCTURE TYPE	STRUCTURE GRADE	MOIST CONSISTENCE	NOTES
Ap	0-4"	AS	SiL	7.5YR4/4	—	—	—	Gr	St	VFr	
Bt1	4-15"	CI	SiL	7.5YR5/4	Cobbles 10	—	—	SBK	Md	Fr	
Bt2	15-20"	CI	SiL	5YR4/3	Gravel 5	Few	Dist	ABK	Wk	Fr	
Bx	20-30"	—	SiCL	2.5YR4/3	—	Comm	Prom	ABK/P2	Md	VFi	

SOIL DRAINAGE CLASS
Very Poorly Drained
Poorly Drained
Somewhat Poorly Drained
Moderately Well Drained
Well Drained
Excessively Drained

1K/PB
Nearly Level - 0-3%
Gently Sloping - 3-8%
Sloping - 8-15%
Strongly Sloping - 15-25%
Moderately Steep - 25-35%
Steep - 35+

MOTTLING ZONE
Depth 15" Type Drainage Mottling
Perched Water Table
Water Table
High Coarse Fragment Content
Bedrock
No Limiting Zone within Inches of Surface

HYDROLOGY AND GEOLOGY
Depth to: Water Seeps
Saturated Soil
Strike
Dip
Rock Type

3850-FM-BCW0290A 4/2016

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF CLEAN WATER

SITE INVESTIGATION AND PERCOLATION TEST REPORT FOR ONLOT DISPOSAL OF SEWAGE

INSTRUCTIONS FOR COMPLETION OF THIS FORM ARE LOCATED ON THE REVERSE SIDE

Application No. _____ Municipality Worcester County Montgomery

Site Location 1458 Hollow Road - Lot #1 Subdivision Name 1458 Hollow Road

☒ SUITABLE Soil Type ReB Slope 3% Depth to Limiting Zone 15 Ave. Perc. Rate _____

☐ UNSUITABLE ☒ Mottling ☐ Seeps or Ponded Water ☐ Bedrock ☐ Fractures ☐ Coarse Fragments

☐ Perc. Rate ☐ Slope ☐ Unstabilized Fill ☐ Floodway ☐ Other _____

SOILS DESCRIPTION:

Soils Description Completed by: Scott Andress, Edward B. Walsh and Associates Inc. Date: 11-27-2017

Inches			Description of Horizon
0	TO	6	Ap, 7.5YR4/3, Silt Loam, St. Granular, V. Friable
6	TO	15	Bt1, 7.5YR5/4, Silt Loam, M. SBK, Friable
15	TO	36	Bt2, 7.5YR4/4, Silty Clay Loam, Mod. ABK/P2, V. Firm, Many Dist. Redox.
36	TO	48	C, 2.5YR4/4, Silt Loam, Weak SBK, Firm, Few Dist. Redox
	TO		
	TO		TP#11-27-2

PERCOLATION TEST:

Percolation Test Completed by: _____ Date: _____

Weather Conditions: ☐ Below 40°F ☐ 40°F or above ☐ Dry ☐ Rain, Sleet, Snow (last 24 hours)

Soil Conditions: ☐ Wet ☐ Dry ☐ Frozen

Hole No.	*** Yes	*** No	Reading Interval	Reading No. 1: Inches of drop	Reading No. 2: Inches of drop	Reading No. 3: Inches of drop	Reading No. 4: Inches of drop	Reading No. 5: Inches of drop	Reading No. 6: Inches of drop	Reading No. 7 Inches of drop	Reading No. 8: Inches of drop
			10 / 30								
			10 / 30								
			10 / 30								
			10 / 30								
			10 / 30								
			10 / 30								

***Water remaining in the hole at the end of the final 30-minute presoak? Yes, use 30-minute interval; No, use 10-minute interval.

Calculation of Average Percolation Rate:

Hole No.	Drop during final period		Perc. Rate as Minutes/Inch		Depth of Hole		
		"				"	
		"				"	
		"				"	
		"				"	
		"				"	
		"				"	Min / Inch
TOTAL OF MIN / IN →				=			
TOTAL NO. OF HOLES→							

The information provided is the true and correct result of tests conducted by me, performed under my personal supervision, or verified in a manner approved by the Department of Environmental Protection (DEP).

(S) _____
Sewage Enforcement Officer (SEO)

☐ White - Local Agency ☐ Pink - Local DEP Office ☐ Yellow - Applicant

Seth Bacon, CPSS.
Soil & Wetland Consulting

Soil Description

Project Name/Number 1458 Hollow Rd Worcester Twp Pit No. 10.16.Z Total Depth 48"
Date 10.16.17 Time Matt. Co. Location See Plan
Weather _____ SCS Soil Name _____

HORIZON	DEPTH	BOUNDARY	TEXTURE	COLOR	COARSE FRAGMENTS	(%) ABUNDANCE	DRAINAGE MOTTLES CONTRAST	STRUCTURE TYPE	STRUCTURE GRADE	MOIST CONSISTENCE	NOTES
Ap	0-6"	AS	SiL	7.5YR 4/3	—	—	—	Gr	St	VFr	
Bt	6-15"	CI	SiL	7.5YR 5/4	—	—	—	SBK	Mod	Fr	
Bx	15-36"	CI	SiL	7.5YR 4/4	—	Many	Dist	Pl	Mod	VFi	
C	36"-48"		SiL	2.5YR 4/4	—	Few	Dst	SBK	Wk	Fi	

SOIL DRAINAGE CLASS
Very Poorly Drained
Poorly Drained
Somewhat Poorly Drained
Moderately Well Drained
Well Drained
Excessively Drained

SLOPES
Nearly Level - 0-3%
Gently Sloping - 3-8%
Sloping - 8-15%
Moderately Sloping - 15-25%
Moderately Steep - 25-35%
Steep - 35+

LIMITING ZONE
Depth 15"
Type Distinct Mottling
Irregular
Water Table
High Coarse Fragment Content
Bedrock
No Limiting Zone within _____ Inches of Surface

HYDROLOGY AND GEOLOGY
Depth to: Water Seeps
Saturated Soil
Strike
Dip
Rock Type _____

3800-FM-BCW0290A 4/2016

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF CLEAN WATER

SITE INVESTIGATION AND PERCOLATION TEST REPORT FOR ONLOT DISPOSAL OF SEWAGE

INSTRUCTIONS FOR COMPLETION OF THIS FORM ARE LOCATED ON THE REVERSE SIDE

Application No. _____ Municipality Worcester County Montgomery

Site Location 1458 Hollow Road - Lot #1 Subdivision Name 1458 Hollow Road

☒ SUITABLE Soil Type ReB Slope 3% Depth to Limiting Zone 15 Ave. Perc. Rate _____

☐ UNSUITABLE ☒ Mottling ☐ Seeps or Ponded Water ☐ Bedrock ☐ Fractures ☐ Coarse Fragments

☐ Perc. Rate ☐ Slope ☐ Unstabilized Fill ☐ Floodway ☐ Other _____

SOILS DESCRIPTION:

Soils Description Completed by: Scott Andress, Edward B. Walsh and Associates Inc. Date: 11-27-2017

Inches			Description of Horizon
0	TO	10	Ap, 7.5YR4/3, Silt Loam, Mod. Granular, V. Friable
10	TO	15	Bt1, 7.5YR4/4, Silt Loam, M. SBK, Firm
15	TO	30	Bt2, 2.5YR4/4, Silty Clay Loam, Weak ABK, V. Firm, Many Dist. Redox.
_____	TO	_____	
_____	TO	_____	
_____	TO	_____	TP#11-27-3

PERCOLATION TEST:

Percolation Test Completed by: _____ Date: _____

Weather Conditions: ☐ Below 40°F ☐ 40°F or above ☐ Dry ☐ Rain, Sleet, Snow (last 24 hours)

Soil Conditions: ☐ Wet ☐ Dry ☐ Frozen

Hole No.	*** Yes	*** No	Reading Interval	Reading No. 1: Inches of drop	Reading No. 2: Inches of drop	Reading No. 3: Inches of drop	Reading No. 4: Inches of drop	Reading No. 5: Inches of drop	Reading No. 6: Inches of drop	Reading No. 7 Inches of drop	Reading No. 8: Inches of drop
			10/30								
			10/30								
			10/30								
			10/30								
			10/30								
			10/30								

***Water remaining in the hole at the end of the final 30-minute presoak? Yes, use 30-minute interval; No, use 10-minute interval.

Calculation of Average Percolation Rate:

Hole No.	Drop during final period		Perc. Rate as Minutes/Inch		Depth of Hole	
_____	_____	=	_____		_____	=
_____	_____	=	_____		_____	=
_____	_____	=	_____		_____	=
_____	_____	=	_____		_____	=
_____	_____	=	_____		_____	=
_____	_____	=	_____		_____	= Min / Inch
TOTAL OF MIN / IN →			_____	=	_____	
TOTAL NO. OF HOLES→			_____			

The information provided is the true and correct result of tests conducted by me, performed under my personal supervision, or verified in a manner approved by the Department of Environmental Protection (DEP).

(S) _____

Sewage Enforcement Officer (SEO)

☐ White - Local Agency ☐ Pink - Local DEP Office ☐ Yellow - Applicant

Seth Bacon, CPSS.
Soil & Wetland Consulting

Soil Description

Project Name/Number 1458 Hollow Rd, Worcester Twp. Pit No. 10.6.3 Total Depth 30"
Date 10/6/17 Location _____
Weather _____ Time Mod. Fast SCS Soil Name _____

HORIZON	DEPTH	BOUNDARY	TEXTURE	COLOR	COARSE FRAGMENTS (%)	DRAINAGE MOTTLES ABUNDANCE	DRAINAGE MOTTLES CONTRAST	STRUCTURE TYPE	STRUCTURE GRADE	MOIST CONSISTENCE	NOTES
Ap	0-10"	As	SiL	7.5YR 4/3	—	—	—	Gr	Mod	VFr	
Bt	10-15"	Cl	SiL	7.5YR 4/4	—	—	—	SBK	Mod	Fi	
Bx	15-30"	—	SiCL	2.5YR 4/4	—	Many	Dist	ABK	Wk	VFi	

SOIL DRAINAGE CLASS
Very Poorly Drained
Poorly Drained
Somewhat Poorly Drained
Moderately Well Drained
Well Drained
Excessively Drained

SLOPE
Nearly Level - 0-3%
Gently Sloping - 3-8%
Strongly Sloping - 8-15%
Moderately Steep - 15-25%
Steep - 25-35%
Very Steep - 35+

HYDROLOGY AND GEOLOGY
Depth to: Water Seeps, Saturated Soil, Bedrock, Dip

MOTTLING ZONE
Depth 12" Type: Drainage Mottling, Fragipan, Water Table, High Coarse Fragment Content, Bedrock
☐ No Limiting Zone within _____ Inches of Surface

Root Type _____

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SITE INVESTIGATION AND PERCOLATION TEST REPORT FOR ONLOT DISPOSAL OF SEWAGE

INSTRUCTIONS FOR COMPLETION OF THIS FORM ARE LOCATED ON THE REVERSE SIDE

Application No. _____ Municipality Worcester County Montgomery

Site Location 1458 Hollow Road - Lot #1 Subdivision Name 1458 Hollow Road

☒ SUITABLE Soil Type ReB Slope 3% Depth to Limiting Zone 13 Ave. Perc. Rate _____

☐ UNSUITABLE ☒ Mottling ☐ Seeps or Ponded Water ☐ Bedrock ☐ Fractures ☐ Coarse Fragments

☐ Perc. Rate ☐ Slope ☐ Unstabilized Fill ☐ Floodway ☐ Other _____

SOILS DESCRIPTION:

Soils Description Completed by: Scott Andress, Edward B. Walsh and Associates Inc. Date: 11-27-2017

Inches		Description of Horizon
0	TO 8	Ap, 7.5YR4/4, Silt Loam, Mod. Granular, V. Friable
8	TO 13	Bt1, 7.5YR5/4, Silt Loam, M. SBK, Friable
13	TO 27	Bt2, 5YR4/4, Silty Clay Loam, Mod. ABK, Firm, Common Dist. Redox.
27	TO 60	Bx, 2.5YR4/4, Silty Clay Loam, Weak ABK/Col, V. Firm, Few Dist. Redox.
_____	TO _____	
_____	TO _____	TP#11-27-4

PERCOLATION TEST:

Percolation Test Completed by: _____ Date: _____

Weather Conditions: ☐ Below 40°F ☐ 40°F or above ☐ Dry ☐ Rain, Sleet, Snow (last 24 hours)

Soil Conditions: ☐ Wet ☐ Dry ☐ Frozen

Hole No.	*** Yes	*** No	Reading Interval	Reading No. 1: Inches of drop	Reading No. 2: Inches of drop	Reading No. 3: Inches of drop	Reading No. 4: Inches of drop	Reading No. 5: Inches of drop	Reading No. 6: Inches of drop	Reading No. 7 Inches of drop	Reading No. 8: Inches of drop
			10/30								
			10/30								
			10/30								
			10/30								
			10/30								
			10/30								

***Water remaining in the hole at the end of the final 30-minute presoak? Yes, use 30-minute interval; No, use 10-minute interval.

Calculation of Average Percolation Rate:

Hole No.	Drop during final period	Perc. Rate as Minutes/Inch	Depth of Hole
_____	_____ "	_____	_____ "
_____	_____ "	_____	_____ "
_____	_____ "	_____	_____ "
_____	_____ "	_____	_____ "
_____	_____ "	_____	_____ "
_____	_____ "	_____	_____ " Min Inch
TOTAL OF MIN / IN →		_____ =	_____
TOTAL NO. OF HOLES→		_____	

The information provided is the true and correct result of tests conducted by me, performed under my personal supervision, or verified in a manner approved by the Department of Environmental Protection (DEP).

(S) _____

Sewage Enforcement Officer (SEO)

☐ White - Local Agency ☐ Pink - Local DEP Office ☐ Yellow - Applicant

Seth Bacon, CPSS.
Soil & Wetland Consulting

Soil Description

Project Name/Number 458 Hollow Rd Worcester Twp. Pit No. 10.16.4 Total Depth 60"
Date 10.16.17 Time Mid-Oct Location
Weather SCS Soil Name

HORIZON	DEPTH	BOUNDARY	TEXTURE	COLOR	COARSE FRAGMENTS (%)	DRAINAGE MOTTLES ABUNDANCE	DRAINAGE MOTTLES CONTRAST	STRUCTURE TYPE	STRUCTURE GRADE	MOIST CONSISTENCY	NOTES
Ap	0-8"	AS	SiL	7.5YR 4/4	-	-	-	Gr	Mod	VFr	
Bt1	8-13"	CI	SiL	7.5YR 5/4	-	-	-	SBK	Mod	Fr	
Bt2	13-27"	CI	SiCL	5YR 4/4	-	Comm	Dist.	ABK	Mod	Fi	
Bx	27-60"		SiCL	2.5YR 4/4	-	Few	Dist	ABK/Col	WK	VFi	

SOIL DRAINAGE CLASS
Very Poorly Drained
Poorly Drained
Somewhat Poorly Drained
Moderately Well Drained
Well Drained
Excessively Drained

SLOPES
Nearly Level - 0-3%
Gently Sloping - 3-8%
Sloping - 8-15%
Strongly Sloping - 15-25%
Moderately Steep - 25-35%
Steep - 35+

LIMITING ZONE
Depth 13"
Type Drainage Mottling
Water Table
High Coarse Fragment Content
Bedrock
No Limiting Zone within
Inches of Surface

HYDROLOGY AND GEOLOGY
Depth to: Water Stops
Saturated Soil
Strike
Dip
Rock Type

Lot #1 – Replacement Septic System Soil Testing Results

Seth Bacon
Soil & Wetland Consulting
1113 Grandview Circle
Pottstown, PA 19465
(610) 705-9999

October 19, 2017

T.J. Dell'Arciprete
Delaware Valley Septics, LLC
504 Eagle Road, Suite B
Springfield, PA 19064

RE: **Drip Micromound Soil Morphology Report – Northern Test Area**
1458 Hollow Rd., Worcester Twp., Montgomery Co., PA

Dear T.J.:

I completed a soil evaluation at 1458 Hollow Road in Worcester Township, Montgomery County, Pennsylvania. Field work was performed on October 16, 2017 to determine the suitability of the residential property for an onlot septic disposal system in the northern area of the lot. The evaluation followed the requirements of PADEP's *Onlot Alternate Technology Listings* for the *American PERC-RITE Micromound*. In attendance for the evaluation was Dennis Tidwell, Sewage Enforcement Officer with the Montgomery County Health Department.

The test location for the drip micromound is adjacent to Hollow Road and contains a young forest on nearly level (0-3%) ground that slopes north. I evaluated soils in four pits (10.16.5 through 10.16.8) to observe soil morphological characteristics that influence suitability for wastewater disposal. Soils within the pits were logged according to the USDA-NRCS *Field Book for Describing and Sampling Soils, Version 3.0* (2013). The soils were examined for properties that limit the renovation of sewage effluent, termed "limiting zones". Common limiting zones include restricted drainage (indicated by drainage mottles), free water, excessive rock, and bedrock.

The soils I evaluated within the four test pits are suitable for a drip micromound system. The soils consist of friable silt loams and silty clay loams with weak to moderate granular and subangular blocky structures. Soils in the test pits are somewhat poorly drained with limiting zones associated with restricted drainage (indicated by drainage mottling) at depths ranging between 13 and 20 inches below ground surface. Copies of the soil logs are included with this report.

Based on the silt loam soil textures, a basal loading rate that is equal to or less than 0.4 gallons per square foot per day and a horizontal linear load that is equal to or less than 4 gallons per foot per day is required according to Table 1 of the PADEP's *Alternate Classification Listing* (January 2010).

I assign a basal loading rate of 0.4 gal/ft²/day, a sand bed tubing loading rate of 0.75 gpd/ft² and a horizontal linear load of 4.0 gal/lft/day. The minimum overall system length for the three bedroom house is 100 feet. These are minimum design standards which may be modified (if site conditions allow) for an additional system safety factor at the discretion of the owner and designer. Surface runoff must be diverted away from the micromound bed area to prevent overloading.

If any activities are proposed in the vicinity of the proposed drip micromound, protective fencing should be installed surrounding the test site. Since soils at the test site are somewhat poorly drained, the owner should be made aware that soils surrounding the drip micromound system may remain wet longer with the additional water from the disposal system.

The proposed drip micromound system is within an area mapped in the USDA's web soil survey (*soils.usda.gov*) as the deep, moderately well drained Lawrenceville Series (LeB). The Lawrenceville Series consists of wind-blown soil (loess) deposited over residual soils weathered from the red Triassic shale and siltstone common to the area. The Lawrenceville Series contains a fragipan horizon, a very dense, slowly permeable soil horizon that severely restricts the downward movement of water. The soils I reviewed in the vicinity of the micromound are somewhat poorly drained but otherwise are characteristic of the Lawrenceville Series.

In summary, soil and site conditions within the northern test area at 1458 Hollow Road in Worcester Township, Montgomery County, Pennsylvania meet the criteria for a drip irrigation micromound system, per the requirements of PADEP's *Alternate Classification Listing*. Please have my soil recommendations incorporated into the future design of the system, and call me if you have any questions.

Sincerely,

Seth Bacon, CPSS, SEO.
Soil Scientist

Enclosures

Cc: File 2646

3850-FM-BCW0290A 4/2016

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SITE INVESTIGATION AND PERCOLATION TEST REPORT FOR ONLOT DISPOSAL OF SEWAGE

INSTRUCTIONS FOR COMPLETION OF THIS FORM ARE LOCATED ON THE REVERSE SIDE

Application No. _____ Municipality Worcester County Montgomery
Site Location 1458 Hollow Road - Lot #1 Subdivision Name 1458 Hollow Road
☒ SUITABLE Soil Type ReB Slope 3% Depth to Limiting Zone 18 Ave. Perc. Rate _____
☐ UNSUITABLE ☒ Mottling ☐ Seeps or Ponded Water ☐ Bedrock ☐ Fractures ☐ Coarse Fragments
☐ Perc. Rate ☐ Slope ☐ Unstabilized Fill ☐ Floodway ☐ Other _____

SOILS DESCRIPTION:
Soils Description Completed by: Scott Andress, Edward B. Walsh and Associates Inc. Date: 11-27-2017

Inches			Description of Horizon
0	TO	7	Ap, 7.5YR4/3, Silt Loam, Strong Granular, V. Friable
7	TO	18	Bt, 7.5YR4/4, Silt Loam, M. SBK, Firm, 5% Channers
18	TO	30	Bx, 5YR4/3, Silty Clay Loam, Mod. ABK, Very Firm, Few Dist. Redox.
	TO		
	TO		
	TO		TP#11-27-5

PERCOLATION TEST:
Percolation Test Completed by: _____ Date: _____
Weather Conditions: ☐ Below 40°F ☐ 40°F or above ☐ Dry ☐ Rain, Sleet, Snow (last 24 hours)
Soil Conditions: ☐ Wet ☐ Dry ☐ Frozen

Hole No.	*** Yes	*** No	Reading Interval	Reading No. 1: Inches of drop	Reading No. 2: Inches of drop	Reading No. 3: Inches of drop	Reading No. 4: Inches of drop	Reading No. 5: Inches of drop	Reading No. 6: Inches of drop	Reading No. 7 Inches of drop	Reading No. 8: Inches of drop
			10/30								
			10/30								
			10/30								
			10/30								
			10/30								
			10/30								

***Water remaining in the hole at the end of the final 30-minute presoak? Yes, use 30-minute interval; No, use 10-minute interval.

Calculation of Average Percolation Rate:

Hole No.	Drop during final period	Perc. Rate as Minutes/Inch	Depth of Hole
_____	_____ "	_____	_____ "
_____	_____ "	_____	_____ "
_____	_____ "	_____	_____ "
_____	_____ "	_____	_____ "
_____	_____ "	_____	_____ "
_____	_____ "	_____	_____ " Min / Inch
TOTAL OF MIN / IN →		_____ =	_____
TOTAL NO. OF HOLES →		_____	

The information provided is the true and correct result of tests conducted by me, performed under my personal supervision, or verified in a manner approved by the Department of Environmental Protection (DEP).

(S) _____
Sewage Enforcement Officer (SEO)

☐ White - Local Agency ☐ Pink - Local DEP Office ☐ Yellow - Applicant

3800-FM-BCW0290A 4/2015

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SITE INVESTIGATION AND PERCOLATION TEST REPORT FOR ONLOT DISPOSAL OF SEWAGE

INSTRUCTIONS FOR COMPLETION OF THIS FORM ARE LOCATED ON THE REVERSE SIDE

Application No. _____ Municipality Worcester County Montgomery

Site Location 1458 Hollow Road - Lot #1 Subdivision Name 1458 Hollow Road

☒ SUITABLE Soil Type RaB Slope 3% Depth to Limiting Zone 13 Ave. Perc. Rate _____

☐ UNSUITABLE ☒ Mottling ☐ Seeps or Ponded Water ☐ Bedrock ☐ Fractures ☐ Coarse Fragments

☐ Perc. Rate ☐ Slope ☐ Unstabilized Fill ☐ Floodway ☐ Other

SOILS DESCRIPTION:
Soils Description Completed by: Scott Andress, Edward B. Walsh and Associates Inc. Date: 11-27-2017

Inches			Description of Horizon
0	TO	6	Ap. 7.5YR4/3. Silt Loam. Mod. Granular. V. Friable
6	TO	13	Bt. 7.5YR4/4. Silt Loam. M. SBK. Firm. 5% Gravel
13	TO	33	Bx. 2.5YR4/4. Silty Clay Loam. Mod. ABK. Very Firm. Common Dist. Redox.
	TO		
	TO		
	TO		TP#11-27-6

PERCOLATION TEST:
Percolation Test Completed by: _____ Date: _____

Weather Conditions: ☐ Below 40°F ☐ 40°F or above ☐ Dry ☐ Rain, Sleet, Snow (last 24 hours)

Soil Conditions: ☐ Wet ☐ Dry ☐ Frozen

Hole No.	*** Yes	*** No	Reading Interval	Reading No. 1: Inches of drop	Reading No. 2: Inches of drop	Reading No. 3: Inches of drop	Reading No. 4: Inches of drop	Reading No. 5: Inches of drop	Reading No. 6: Inches of drop	Reading No. 7 Inches of drop	Reading No. 8: Inches of drop
			10/30								
			10/30								
			10/30								
			10/30								
			10/30								
			10/30								

***Water remaining in the hole at the end of the final 30-minute presoak? Yes, use 30-minute interval; No, use 10-minute interval.

Calculation of Average Percolation Rate:

Hole No.	Drop during final period		Perc. Rate as Minutes/Inch		Depth of Hole	
_____	_____	4	_____	=	_____	4
_____	_____	4	_____	=	_____	4
_____	_____	4	_____	=	_____	4
_____	_____	4	_____	=	_____	4
_____	_____	4	_____	=	_____	4
_____	_____	4	_____	=	_____	4
TOTAL OF MIN / IN →			_____	=	_____	Min / Inch
TOTAL NO. OF HOLES→			_____			

The information provided is the true and correct result of tests conducted by me, performed under my personal supervision, or verified in a manner approved by the Department of Environmental Protection (DEP).

(S) _____
Sewage Enforcement Officer (SEO)

☐ White - Local Agency ☐ Pink - Local DEP Office ☐ Yellow - Applicant

Seth Bacon, CPSS.
Soil & Wetland Consulting

Soil Description

Project Name/Number 1458 Hollow Rd. Worcester Twp. Total Depth 30"
Date 10.16.17 Time Mist Co. Pit No. 10.16.5
Weather Overcast, Cool ± 48°F Location SEA 10.16.4
SCS Soil Name

HORIZON	DEPTH	BOUNDARY	TEXTURE	COLOR	COARSE FRAGMENTS (%)	DRAINAGE MOTTLES ABUNDANCE	DRAINAGE MOTTLES CONTRAST	STRUCTURE TYPE	STRUCTURE GRADE	MOIST CONSISTENCE	NOTES
Ap	0-7"	AB	S.L	7.5YR 4/3	-	-	-	Gr	St	VFr	
Bt	7-18"	CI	S.L	7.5YR 4/4	5	-	-	ABK	Mod	Fr	
Bx	18-30"	-	S.CL	5YR 4/4	-	Few	Dist	ABK	Mod	VFr	

SLOPE
Nearly Level - 0-3%
Gently Sloping - 3-8%
Sloping - 8-15%
Strongly Sloping - 15-25%
Moderately Steep - 25-35%
Steep - 35+

SOIL DRAINAGE CLASS
Very Poorly Drained
Poorly Drained
Somewhat Poorly Drained
Moderately Well Drained
Well Drained
Excessively Drained

LIMITING ZONE
Depth 11"
Type Seasonal Mottling
Fragipan
Water Table
High Coarse Fragment Content
Bedrock
No Limiting Zone within
Depth of Skeleton

HYDROLOGY AND GEOLOGY
Depth to:
Water Seepage
Saturated Soil
Silt/Clay
Bdy
Rock Type Red Triassic Siltstone or Mudstone

Seth Bacon, CPSS.
Soil & Wetland Consulting

Soil Description

Project Name/Number 1458 Hollow Rd Worcester Twp. Date 10.16.17 Time Mid. Weather

Pit No. 10.16.6 Location SCS Soil Name

Total Depth 33"

HORIZON	DEPTH	BOUNDARY	TEXTURE	COLOR	COARSE FRAGMENTS	(%)	DRAINAGE MOTTLES ABUNDANCE	DRAINAGE MOTTLES CONTRAST	STRUCTURE TYPE	STRUCTURE GRADE	MOIST CONSISTENCE	NOTES
Ap	0-6"	Ab	SiL	7.5YR4/3	-	-	-	-	Gr	Mod	VFr	
Bt	6-13"	Cl	SiL	7.5YR4/4	Grvl	5	-	-	SBK	Mod	Fr	
Bx	13-33	-	SiCL	2.5YR4/4	-	-	Comm	Dst	ABK	Mod	VFi	

SLOPE: ✓ Nearly Level - 0-3% / Gently Sloping - 3-8% / Sloping - 8-15% / Strongly Sloping - 15-25% / Moderately Steep - 25-35% / Steep - 35+

SOIL DRAINAGE CLASS: Very Poorly Drained / Poorly Drained / ✓ Somewhat Poorly Drained / Moderately Well Drained / Well Drained / Excessively Drained

LIMITING ZONE: Depth 13" Type: Drainage Mottling / Fragipan / Water Table / High Coarse Fragment Content / Bedrock / ☐ No Limiting Zone within ___ Inches of Surface

HYDROLOGY AND GEOLOGY: Depth to: Water Seeps ___ Saturated Soil ___ Strike ___ Dip ___ Rock Type ___

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DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF CLEAN WATER

SITE INVESTIGATION AND PERCOLATION TEST REPORT FOR ONLOT DISPOSAL OF SEWAGE

INSTRUCTIONS FOR COMPLETION OF THIS FORM ARE LOCATED ON THE REVERSE SIDE

Application No. ______ Municipality Worcester County Montgomery

Site Location 1458 Hollow Road - Lot #1 Subdivision Name 1458 Hollow Road

☒ SUITABLE Soil Type ReB Slope 3% Depth to Limiting Zone 15 Ave. Perc. Rate ______

☐ UNSUITABLE ☒ Mottling ☐ Seeps or Ponded Water ☐ Bedrock ☐ Fractures ☐ Coarse Fragments ☐ Perc. Rate ☐ Slope ☐ Unstabilized Fill ☐ Floodway ☐ Other ______

SOILS DESCRIPTION:
Soils Description Completed by: Scott Andress, Edward B. Walsh and Associates,Inc. Date: 11-27-2017

Inches			Description of Horizon
0	TO	6	Ap. 7.5YR4/2. Silt Loam. Mod. Granular. V. Friable
6	TO	15	Bt. 7.5YR4/4. Silt Loam. M. SBK. Friable
15	TO	30	Bt2. 7.5YR4/4. Silt Loam. Weak ABK. Firm. Common Dist. Redox.
30	TO	45	Bx. 2.5YR4/4. Silty Clay Loam. Weak ABK/Col. Few Dist. Redox.
	TO		
	TO		TP#11-27-7

PERCOLATION TEST:
Percolation Test Completed by: ______ Date: ______
Weather Conditions: ☐ Below 40°F ☐ 40°F or above ☐ Dry ☐ Rain, Sleet, Snow (last 24 hours)
Soil Conditions: ☐ Wet ☐ Dry ☐ Frozen

Hole No.	*** Yes	*** No	Reading Interval	Reading No. 1: Inches of drop	Reading No. 2: Inches of drop	Reading No. 3: Inches of drop	Reading No. 4: Inches of drop	Reading No. 5: Inches of drop	Reading No. 6: Inches of drop	Reading No. 7 Inches of drop	Reading No. 8: Inches of drop
			10/30								
			10/30								
			10/30								
			10/30								
			10/30								
			10/30								

***Water remaining in the hole at the end of the final 30-minute presoak? Yes, use 30-minute interval; No, use 10-minute interval.

Calculation of Average Percolation Rate:

Hole No.	Drop during final period	Perc. Rate as Minutes/Inch	Depth of Hole
	"		"
	"		"
	"		"
	"		"
	"		"
	"		"
TOTAL OF MIN / IN →		=	Min/Inch
TOTAL NO. OF HOLES→			

The information provided is the true and correct result of tests conducted by me, performed under my personal supervision, or verified in a manner approved by the Department of Environmental Protection (DEP).

(S) ______
Sewage Enforcement Officer (SEO)

☐ White - Local Agency ☐ Pink - Local DEP Office ☐ Yellow - Applicant

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DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF CLEAN WATER

SITE INVESTIGATION AND PERCOLATION TEST REPORT FOR ONLOT DISPOSAL OF SEWAGE

INSTRUCTIONS FOR COMPLETION OF THIS FORM ARE LOCATED ON THE REVERSE SIDE

Application No. _____ Municipality Worcester County Montgomery

Site Location 1458 Hollow Road - Lot #1 Subdivision Name 1458 Hollow Road

☒ SUITABLE Soil Type ReB Slope 3% Depth to Limiting Zone 20 Ave. Perc. Rate _____

☐ UNSUITABLE ☒ Mottling ☐ Seeps or Ponded Water ☐ Bedrock ☐ Fractures ☐ Coarse Fragments

☐ Perc. Rate ☐ Slope ☐ Unstabilized Fill ☐ Floodway ☐ Other

SOILS DESCRIPTION:
Soils Description Completed by: Scott Andress, Edward B. Walsh and Associates,Inc. Date: 11-27-2017

Inches			Description of Horizon
0	TO	6	Ap. 7.5YR4/4. Silt Loam. Mod. Granular. V. Friable
6	TO	15	Bt. 7.5YR5/4. Silt Loam. M. SBK. Friable
15	TO	30	Bt2. 2.5YR4/4. Silty Clay Loam. Mod. ABK. Firm. Common Dist. Redox.
	TO		
	TO		
	TO		TP#11-27-8

PERCOLATION TEST:
Percolation Test Completed by: _____ Date: _____

Weather Conditions: ☐ Below 40°F ☐ 40°F or above ☐ Dry ☐ Rain, Sleet, Snow (last 24 hours)
Soil Conditions: ☐ Wet ☐ Dry ☐ Frozen

Hole No.	*** Yes	*** No	Reading Interval	Reading No. 1: Inches of drop	Reading No. 2: Inches of drop	Reading No. 3: Inches of drop	Reading No. 4: Inches of drop	Reading No. 5: Inches of drop	Reading No. 6: Inches of drop	Reading No. 7 Inches of drop	Reading No. 8: Inches of drop
			10/30								
			10/30								
			10/30								
			10/30								
			10/30								
			10/30								

***Water remaining in the hole at the end of the final 30-minute presoak? Yes, use 30-minute interval; No, use 10-minute interval.

Calculation of Average Percolation Rate:

Hole No.	Drop during final period		Perc. Rate as Minutes/Inch		Depth of Hole	
_____	_____	"	_____		_____	"
_____	_____	"	_____		_____	"
_____	_____	"	_____		_____	"
_____	_____	"	_____		_____	"
_____	_____	"	_____		_____	"
TOTAL OF MIN / IN →			_____	=	_____	Min / Inch
TOTAL NO. OF HOLES→			_____			

The information provided is the true and correct result of tests conducted by me, performed under my personal supervision, or verified in a manner approved by the Department of Environmental Protection (DEP).

(S) _____

Sewage Enforcement Officer (SEO)

☐ White - Local Agency ☐ Pink - Local DEP Office ☐ Yellow - Applicant

Seth Bacon, CPSS.
Soil & Wetland Consulting

Soil Description

Project Name/Number
Date 10/6/17
Weather

Time

Pit No. 10/6.7
Location
SCS Soil Name

Total Depth 45"

HORIZON	DEPTH	BOUNDARY	TEXTURE	COLOR	COARSE FRAGMENTS (%)	MOTTLING ABUNDANCE	MOTTLING CONTRAST	STRUCTURE TYPE	STRUCTURE GRADE	MOIST CONSISTENCY	NOTES
Ap	0-6"	AS	SiL	7.5YR 4/2	—	—	—	Gr	M,d	VFr	
Bt1	6-15"	CI	SiL	7.5YR 4/4	—	—	—	SBK	Mod	Fr	
Bt2	15-30"	CI	SiL	7.5YR 4/4	—	Comm	Dist	ABK	Mk	Fr	
Bx	30-45"	—	SiCL	2.5YR 4/4	—	Few	Dist	Pris/Col	Mk	VFr	

SLOPE
Nearly Level - 0-3%
Gently Sloping - 3-8%
Strongly Sloping - 15-25%
Moderately Steep - 25-35%
Steep - 35+

SOIL DRAINAGE CLASS
Very Poorly Drained
Poorly Drained
Somewhat Poorly Drained
Moderately Well Drained
Well Drained
Excessively Drained

DISTINCTIVE ZONES
Depth 15"
Type Distinctive Mottling
Seepage
Water Table
Bedrock
Rock Type
Bluff
Dip
Water Seeps Saturated Soil
Depth to:
HYDROLOGY AND GEOLOGY

☐ No Limiting Zone within
Below Surface

Seth Bacon, CPSS.
Soil & Wetland Consulting

Soil Description

Project Name/Number 1458 Hollow Rd Worcester Twp, Pit No. 10.16.18 Total Depth 32"
Date 10/16/17 Time Mst. Co. Location
Weather SCS Soil Name

HORIZON	DEPTH	BOUNDARY	TEXTURE	COLOR	COARSE FRAGMENTS	(%)	DRAINAGE MOTTLES ABUNDANCE	CONTRAST	STRUCTURE TYPE	GRADE	MOIST CONSISTENCY	NOTES
Ap	0-8"	AS	SiL	7.5YR4/4	--	--	--	--	GR	MJ	VFR	
Bt1	8-20"	CI	SiL	7.5YR5/4	--	--	--	--	SBK	Md	FR	
Bt2	20-32"	-	SiCL	2.5YR4/4	--	--	Comm	Dist	ABK	Md	FI	

SLOPE
- ✓ Nearly Level – 0-3%
- Gently Sloping – 3-8%
- Sloping – 8-15%
- Strongly Sloping – 15-25%
- Moderately Steep – 25-35%
- Steep – 35+

SOIL DRAINAGE CLASS
- Very Poorly Drained
- Poorly Drained
- Somewhat Poorly Drained
- ✓ Moderately Well Drained
- Well Drained
- Excessively Drained

LIMITING ZONE
Depth 20" Type
- Drainage Mottling
- Fragipan
- Water Table
- High Coarse Fragment Content
- Bedrock
- ☐ No Limiting Zone within
- Inches of Surface

HYDROLOGY AND GEOLOGY
Depth to:
- Water Seeps
- Saturated Soil
- Strike
- Dip

Rock Type

Lot #2

Lot #2 – Replacement Septic System Soil Testing Results

EDWARD B. WALSH & ASSOCIATES, INC.
Complete Civil Engineering Design / Consultation Services
Lionville Professional Center
125 Dowlin Forge Road
Exton, PA 19341

November 30, 2017

T.J. Dell'Arciprete
Delaware Valley Septics, LLC.
504 Eagle Road, Suite B
Springfield, PA 19064

RE: 1458 Hollow Road Lot #2 (Existing Dwelling)
Worcester Township
Montgomery County, PA

Mr. Dell'Arciprete:

I have completed the soils evaluation at 1458 Hollow Road on Lot#2 (the existing Dwelling lot) in Worcester Township, Montgomery County, Pennsylvania. The evaluation was conducted on July 320, 2017 to determine site suitability for drip irrigation sewage disposal system, per the requirements of PA DEP's Alternate Technology Listing, January 4, 2010, and March 1, 2012. The soil probes were also observed by Dennis Tidwell, Montgomery County Sewage Enforcement Officer.

The property is located on the east side of Hollow Road across from Hogarth Lane. The property contains an existing 3 bedroom dwelling, driveway and is served with an on-site well and on site sewage disposal. The property is generally rectangular in shape and consists of approximately 5.5; after the proposed subdivision the lot will contain approximately 2.1 Acres. The purpose for this testing is to find a suitable replacement area septic system for the existing dwelling. Soil testing for the proposed new lot, Lot #1, was previously conducted by another soil scientist. Six (6) soil probes were conducted to the rear of the existing dwelling, see plan for locations.

Soil interpretations were based on actual on-site soil conditions observed in soil probes 11-27-9 through 11-27-14 and on the soil series mapping by Soil Survey Staff, Natural Resource Conservation Service, United States Department of Agriculture Web Soil Survey; available at http://websoilsurvey.nrcs.usda.gov. The area of soil testing is located within an area mapped as containing the Readington soil series. The Readington series consists of deep and very deep, moderately well drained soils formed in medium textured residuum weathered from

noncalcareous shale, siltstone, and fine-grained sandstone. The depth to a seasonally high water table is generally between eighteen (18) and thirty-six (36) inches below the soil surface.

The soils within soil probes (11-27-9 thru 11-27-14) had limiting zones ranging from thirteen (13) inches to twenty (20) inches below the soil surface; which were determined to be suitable for a drip irrigation micro-mound sewage disposal system. Results of these evaluations are summarized as follows:

Drip Irrigation Micromound System
Soil Probe 11-27-9 THRU 11-27-14 had limiting zones ranging from thirteen (13) inches to twenty (20) inches bewlow the soil surface as identified by redoximorphic features. The soil textures consisted of silt loams and silty clay loams with weak to moderate granular and subangular blocky structure. Based on the soils observed at these locations the proposed septic system area meets PA DEP's requirements for a micro-mound drip irrigation sewage disposal system. The maximum infiltration loading rate of 0.4 gallons per square foot per day and a maximum hydraulic linear loading rate of 4.0 gallons per linear foot per day were assigned based on Table 1 in the Pa DEP Alternate Classification Listing.

The septic system designer shall design the system large enough to accommodate the peak daily flow rate. The system shall be designed on contour and within the area tested. All surface water runoff and gutter downspouts shall be diverted around all components of the septic system. If the system cannot be designed within the area tested please contact this office so that a determination can be made as to whether additional hand augers are needed to supplement the previous testing. This report does not constitute permit issuance or approved by the Chester County Health Department and/or Pa DEP. If the designer has any question with the items outlined it this report please contact me for further discussion.

Should you have any questions regarding this report please contact me at 484-880-7069.

Sincerely,
Edward B. Walsh and Associates, Inc.

Scott Andress, SEO
Qualified Soil Scientist

3800-FM-BCW0290A 4/2016
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DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF CLEAN WATER

SITE INVESTIGATION AND PERCOLATION TEST REPORT FOR ONLOT DISPOSAL OF SEWAGE

INSTRUCTIONS FOR COMPLETION OF THIS FORM ARE LOCATED ON THE REVERSE SIDE

Application No. _____ Municipality Worcester County Montgomery
Site Location 1458 Hollow Road - Lot #2 Subdivision Name 1458 Hollow Road
☒ SUITABLE Soil Type ReB Slope 5% Depth to Limiting Zone 14 Ave. Perc. Rate _____
☐ UNSUITABLE ☒ Mottling ☐ Seeps or Ponded Water ☐ Bedrock ☐ Fractures ☐ Coarse Fragments
☐ Perc. Rate ☐ Slope ☐ Unstabilized Fill ☐ Floodway ☐ Other _____

SOILS DESCRIPTION:
Soils Description Completed by: Scott Andress, Edward B. Walsh and Associates Inc. Date: 11-27-2017

Inches			Description of Horizon
0	TO	6	A, 7.5YR3/4, Silt Loam, Mod. Granular, Friable
6	TO	14	Bt1, 7.5YR4/6, Silt Loam, M. SBK, Friable
14	TO	28	Bt2, 7.5YR4/6, Silty Clay Loam, M. SBK, Firm, Common Dist. Redox.
_____	TO	_____	
_____	TO	_____	
_____	TO	_____	TP#11-27-9

PERCOLATION TEST:
Percolation Test Completed by: _____ Date: _____
Weather Conditions: ☐ Below 40°F ☐ 40°F or above ☐ Dry ☐ Rain, Sleet, Snow (last 24 hours)
Soil Conditions: ☐ Wet ☐ Dry ☐ Frozen

Hole No.	*** Yes	*** No	Reading Interval	Reading No. 1: Inches of drop	Reading No. 2: Inches of drop	Reading No. 3: Inches of drop	Reading No. 4: Inches of drop	Reading No. 5: Inches of drop	Reading No. 6: Inches of drop	Reading No. 7 Inches of drop	Reading No. 8: Inches of drop
			10/30								
			10/30								
			10/30								
			10/30								
			10/30								
			10/30								

***Water remaining in the hole at the end of the final 30-minute presoak? Yes, use 30-minute interval; No, use 10-minute interval.

Calculation of Average Percolation Rate:

Hole No.	Drop during final period	Perc. Rate as Minutes/Inch	Depth of Hole
_____	_____ "	_____	_____ "
_____	_____ "	_____	_____ "
_____	_____ "	_____	_____ "
_____	_____ "	_____	_____ "
_____	_____ "	_____	_____ "
_____	_____ "	_____	_____ " Min / Inch
TOTAL OF MIN / IN →		_____ =	_____
TOTAL NO. OF HOLES→		_____	

The information provided is the true and correct result of tests conducted by me, performed under my personal supervision, or verified in a manner approved by the Department of Environmental Protection (DEP).

(S) _____
Sewage Enforcement Officer (SEO)

☐ White - Local Agency ☐ Pink - Local DEP Office ☐ Yellow - Applicant

3800-FM-BCW0290A 4/2016

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DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF CLEAN WATER

SITE INVESTIGATION AND PERCOLATION TEST REPORT FOR ONLOT DISPOSAL OF SEWAGE

INSTRUCTIONS FOR COMPLETION OF THIS FORM ARE LOCATED ON THE REVERSE SIDE

Application No. _____ Municipality Worcester County Montgomery

Site Location 1458 Hollow Road - Lot #2 Subdivision Name 1458 Hollow Road

☒ SUITABLE Soil Type ReB Slope 5% Depth to Limiting Zone 15 Ave. Perc. Rate _____

☐ UNSUITABLE ☒ Mottling ☐ Seeps or Ponded Water ☐ Bedrock ☐ Fractures ☐ Coarse Fragments

☐ Perc. Rate ☐ Slope ☐ Unstabilized Fill ☐ Floodway ☐ Other _____

SOILS DESCRIPTION:

Soils Description Completed by: Scott Andress, Edward B. Walsh and Associates Inc. Date: 11-27-2017

Inches			Description of Horizon
0	TO	7	A, 7.5YR4/4, Silt Loam, Mod. Granular, Friable
7	TO	15	Bt1, 7.5YR3/4, Silt Loam, W. SBK, Friable.
15	TO	22	Bt2, 7.5YR4/6, Silty Clay Loam, M. SBK, Friable, Few Dist. Redox.
22	TO	36	Btx, 5YR4/4, Silty Clay Loam, M. Platy, Very Firm, Common Dist. Redox.
	TO		
	TO		TP#11-27-10

PERCOLATION TEST:

Percolation Test Completed by: _____ Date: _____

Weather Conditions: ☐ Below 40°F ☐ 40°F or above ☐ Dry ☐ Rain, Sleet, Snow (last 24 hours)

Soil Conditions: ☐ Wet ☐ Dry ☐ Frozen

Hole No.	*** Yes	*** No	Reading Interval	Reading No. 1: Inches of drop	Reading No. 2: Inches of drop	Reading No. 3: Inches of drop	Reading No. 4: Inches of drop	Reading No. 5: Inches of drop	Reading No. 6: Inches of drop	Reading No. 7 Inches of drop	Reading No. 8: Inches of drop
			10/30								
			10/30								
			10/30								
			10/30								
			10/30								
			10/30								

***Water remaining in the hole at the end of the final 30-minute presoak? Yes, use 30-minute interval; No, use 10-minute interval.

Calculation of Average Percolation Rate:

Hole No.	Drop during final period	Perc. Rate as Minutes/Inch	Depth of Hole
	"		"
	"		"
	"		"
	"		"
	"		"
	"		" Min Inch
TOTAL OF MIN / IN →		=	
TOTAL NO. OF HOLES→			

The information provided is the true and correct result of tests conducted by me, performed under my personal supervision, or verified in a manner approved by the Department of Environmental Protection (DEP).

(S) _____
Sewage Enforcement Officer (SEO)

☐ White - Local Agency ☐ Pink - Local DEP Office ☐ Yellow - Applicant

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SITE INVESTIGATION AND PERCOLATION TEST REPORT FOR ONLOT DISPOSAL OF SEWAGE

INSTRUCTIONS FOR COMPLETION OF THIS FORM ARE LOCATED ON THE REVERSE SIDE

Application No. _____ Municipality Worcester County Montgomery

Site Location 1458 Hollow Road - Lot #2 Subdivision Name 1458 Hollow Road

☒ SUITABLE Soil Type ReB Slope 5% Depth to Limiting Zone 15 Ave. Perc. Rate _____

☐ UNSUITABLE ☒ Mottling ☐ Seeps or Ponded Water ☐ Bedrock ☐ Fractures ☐ Coarse Fragments

☐ Perc. Rate ☐ Slope ☐ Unstabilized Fill ☐ Floodway ☐ Other _____

SOILS DESCRIPTION:

Soils Description Completed by: Scott Andress, Edward B. Walsh and Associates Inc. Date: 11-27-2017

Inches			Description of Horizon
0	TO	10	A, 7.5YR4/4, Silt Loam, Mod. Granular, Friable
10	TO	15	Bt1, 7.5YR4/3, Silt Loam, W. SBK, Friable.
15	TO	20	Bt2, 7.5YR4/6, Silty Clay Loam, M. SBK, Friable, Few Dist. Redox.
20	TO	36	Btx, 5YR4/4, Silty Clay Loam, M. Platy, Hard, Common Dist. Redox.
	TO		
	TO		TP#11-27-11

PERCOLATION TEST:

Percolation Test Completed by: _____ Date: _____

Weather Conditions: ☐ Below 40°F ☐ 40°F or above ☐ Dry ☐ Rain, Sleet, Snow (last 24 hours)

Soil Conditions: ☐ Wet ☐ Dry ☐ Frozen

Hole No.	*** Yes	*** No	Reading Interval	Reading No. 1: Inches of drop	Reading No. 2: Inches of drop	Reading No. 3: Inches of drop	Reading No. 4: Inches of drop	Reading No. 5: Inches of drop	Reading No. 6: Inches of drop	Reading No. 7 Inches of drop	Reading No. 8: Inches of drop
			10/30								
			10/30								
			10/30								
			10/30								
			10/30								
			10/30								

***Water remaining in the hole at the end of the final 30-minute presoak? Yes, use 30-minute interval; No, use 10-minute interval.

Calculation of Average Percolation Rate:

Hole No.	Drop during final period	Perc. Rate as Minutes/Inch	Depth of Hole
	"		"
	"		"
	"		"
	"		"
	"		"
	"		" Min Inch
TOTAL OF MIN / IN →		=	
TOTAL NO. OF HOLES→			

The information provided is the true and correct result of tests conducted by me, performed under my personal supervision, or verified in a manner approved by the Department of Environmental Protection (DEP).

(S) _____
Sewage Enforcement Officer (SEO)

☐ White - Local Agency ☐ Pink - Local DEP Office ☐ Yellow - Applicant

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SITE INVESTIGATION AND PERCOLATION TEST REPORT FOR ONLOT DISPOSAL OF SEWAGE

INSTRUCTIONS FOR COMPLETION OF THIS FORM ARE LOCATED ON THE REVERSE SIDE

Application No. _____ Municipality Worcester County Montgomery

Site Location 1458 Hollow Road - Lot #2 Subdivision Name 1458 Hollow Road

☒ SUITABLE Soil Type ReB Slope 5% Depth to Limiting Zone 13 Ave. Perc. Rate _____

☐ UNSUITABLE ☒ Mottling ☐ Seeps or Ponded Water ☐ Bedrock ☐ Fractures ☐ Coarse Fragments

☐ Perc. Rate ☐ Slope ☐ Unstabilized Fill ☐ Floodway ☐ Other _____

SOILS DESCRIPTION:

Soils Description Completed by: Scott Andress, Edward B. Walsh and Associates Inc. Date: 11-27-2017

Inches		Description of Horizon
0	TO 8	A, 7.5YR3/4, Silt Loam, Mod. Granular, Friable
8	TO 13	Bt1, 7.5YR4/6, Silty Clay Loam, M. SBK, Friable
13	TO 18	Bt2, 7.5YR4/6, Silty Clay Loam, M. SBK, Friable, Few Dist. Redox.
18	TO 30	Btx, 5YR4/4, Silty Clay Loam, M. Platy, Hard, Common Dist. Redox.
_____	TO _____	
_____	TO _____	TP#11-27-12

PERCOLATION TEST:

Percolation Test Completed by: _____ Date: _____

Weather Conditions: ☐ Below 40°F ☐ 40°F or above ☐ Dry ☐ Rain, Sleet, Snow (last 24 hours)

Soil Conditions: ☐ Wet ☐ Dry ☐ Frozen

Hole No.	*** Yes	*** No	Reading Interval	Reading No. 1: Inches of drop	Reading No. 2: Inches of drop	Reading No. 3: Inches of drop	Reading No. 4: Inches of drop	Reading No. 5: Inches of drop	Reading No. 6: Inches of drop	Reading No. 7 Inches of drop	Reading No. 8: Inches of drop
			10/30								
			10/30								
			10/30								
			10/30								
			10/30								
			10/30								

***Water remaining in the hole at the end of the final 30-minute presoak? Yes, use 30-minute interval; No, use 10-minute interval.

Calculation of Average Percolation Rate:

Hole No.	Drop during final period	Perc. Rate as Minutes/Inch	Depth of Hole	
_____	_____ "	_____	_____ "	
_____	_____ "	_____	_____ "	
_____	_____ "	_____	_____ "	
_____	_____ "	_____	_____ "	
_____	_____ "	_____	_____ "	
_____	_____ "	_____	_____ "	Min / Inch
TOTAL OF MIN / IN →		_____ =	_____	
TOTAL NO. OF HOLES→		_____		

The information provided is the true and correct result of tests conducted by me, performed under my personal supervision, or verified in a manner approved by the Department of Environmental Protection (DEP).

(S) _____
Sewage Enforcement Officer (SEO)

☐ White - Local Agency ☐ Pink - Local DEP Office ☐ Yellow - Applicant

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SITE INVESTIGATION AND PERCOLATION TEST REPORT FOR ONLOT DISPOSAL OF SEWAGE

INSTRUCTIONS FOR COMPLETION OF THIS FORM ARE LOCATED ON THE REVERSE SIDE

Application No. _____ Municipality Worcester County Montgomery

Site Location 1458 Hollow Road - Lot #2 Subdivision Name 1458 Hollow Road

☒ SUITABLE Soil Type ReB Slope 5% Depth to Limiting Zone 16 Ave. Perc. Rate _____

☐ UNSUITABLE ☒ Mottling ☐ Seeps or Ponded Water ☐ Bedrock ☐ Fractures ☐ Coarse Fragments

☐ Perc. Rate ☐ Slope ☐ Unstabilized Fill ☐ Floodway ☐ Other _____

SOILS DESCRIPTION:

Soils Description Completed by: Scott Andress, Edward B. Walsh and Associates Inc. Date: 11-27-2017

Inches		Description of Horizon
0	TO 9	A, 7.5YR3/4, Silt Loam, Mod. Granular, Friable
9	TO 16	Bt1, 7.5YR4/6, Silt Loam, M. SBK, Friable, 30% Channers
16	TO 30	C, Variegated, Silt Loam, W. SBK, Friable, 40% Channers, Few Dist. Redox.
_____	TO _____	
_____	TO _____	
_____	TO _____	TP#11-27-13

PERCOLATION TEST:

Percolation Test Completed by: _____ Date: _____

Weather Conditions: ☐ Below 40°F ☐ 40°F or above ☐ Dry ☐ Rain, Sleet, Snow (last 24 hours)

Soil Conditions: ☐ Wet ☐ Dry ☐ Frozen

Hole No.	*** Yes	*** No	Reading Interval	Reading No. 1: Inches of drop	Reading No. 2: Inches of drop	Reading No. 3: Inches of drop	Reading No. 4: Inches of drop	Reading No. 5: Inches of drop	Reading No. 6: Inches of drop	Reading No. 7 Inches of drop	Reading No. 8: Inches of drop
			10/30								
			10/30								
			10/30								
			10/30								
			10/30								
			10/30								

***Water remaining in the hole at the end of the final 30-minute presoak? Yes, use 30-minute interval; No, use 10-minute interval.

Calculation of Average Percolation Rate:

Hole No.	Drop during final period	Perc. Rate as Minutes/Inch	Depth of Hole	
_____	_____ "	_____	_____ "	
_____	_____ "	_____	_____ "	
_____	_____ "	_____	_____ "	
_____	_____ "	_____	_____ "	
_____	_____ "	_____	_____ "	
_____	_____ "	_____	_____ "	Min / Inch
TOTAL OF MIN / IN →		_____ =	_____	
TOTAL NO. OF HOLES→		_____		

The information provided is the true and correct result of tests conducted by me, performed under my personal supervision, or verified in a manner approved by the Department of Environmental Protection (DEP).

(S) _____
Sewage Enforcement Officer (SEO)

☐ White - Local Agency ☐ Pink - Local DEP Office ☐ Yellow - Applicant

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BUREAU OF CLEAN WATER

SITE INVESTIGATION AND PERCOLATION TEST REPORT FOR ONLOT DISPOSAL OF SEWAGE

INSTRUCTIONS FOR COMPLETION OF THIS FORM ARE LOCATED ON THE REVERSE SIDE

Application No. _____ Municipality Worcester County Montgomery

Site Location 1458 Hollow Road - Lot #2 Subdivision Name 1458 Hollow Road

☒ SUITABLE Soil Type ReB Slope 5% Depth to Limiting Zone 20 Ave. Perc. Rate _____

☐ UNSUITABLE ☒ Mottling ☐ Seeps or Ponded Water ☐ Bedrock ☐ Fractures ☐ Coarse Fragments

☐ Perc. Rate ☐ Slope ☐ Unstabilized Fill ☐ Floodway ☐ Other _____

SOILS DESCRIPTION:

Soils Description Completed by: Scott Andress Edward B. Walsh and Associates Inc. Date: 11-27-2017

Inches			Description of Horizon
0	TO	8	A. 7.5YR4/4 Silt Loam Mod. Granular Friable
8	TO	14	Bt1 7.5YR4/3 Silt Loam M. SBK Friable
14	TO	20	Bt2 7.5YR4/6 Silt Loam W. SBK Friable
20	TO	36	BC. 5YR4/4 Silt Loam W. SBK Firm Few Distinct Redox.
_____	TO	_____	
_____	TO	_____	TP#11-27-14

PERCOLATION TEST:

Percolation Test Completed by: _____ Date: _____

Weather Conditions: ☐ Below 40°F ☐ 40°F or above ☐ Dry ☐ Rain, Sleet, Snow (last 24 hours)

Soil Conditions: ☐ Wet ☐ Dry ☐ Frozen

Hole No.	*** Yes	*** No	Reading Interval	Reading No. 1: Inches of drop	Reading No. 2: Inches of drop	Reading No. 3: Inches of drop	Reading No. 4: Inches of drop	Reading No. 5: Inches of drop	Reading No. 6: Inches of drop	Reading No. 7 Inches of drop	Reading No. 8: Inches of drop
			10/30								
			10/30								
			10/30								
			10/30								
			10/30								
			10/30								

***Water remaining in the hole at the end of the final 30-minute presoak? Yes, use 30-minute interval; No, use 10-minute interval.

Calculation of Average Percolation Rate:

Hole No.	Drop during final period		Perc. Rate as Minutes/Inch		Depth of Hole	
_____	_____	"	_____		_____	"
_____	_____	"	_____		_____	"
_____	_____	"	_____		_____	"
_____	_____	"	_____		_____	"
_____	_____	"	_____		_____	"
_____	_____	"	_____		_____	" Min / Inch
TOTAL OF MIN / IN →			_____	=	_____	
TOTAL NO. OF HOLES→			_____			

The information provided is the true and correct result of tests conducted by me, performed under my personal supervision, or verified in a manner approved by the Department of Environmental Protection (DEP).

(S) _____
Sewage Enforcement Officer (SEO)

☐ White - Local Agency ☐ Pink - Local DEP Office ☐ Yellow - Applicant