



April 22, 2025

Mila Carter, Township Manager
Westtown Township
P.O. Box 79
Westtown, PA 19395

Dear Mila:

Subject: 1013 Shiloh Road (Stokes Property)

This office has received plans for the above subject project. This is the third submission to Carroll Engineering Corporation for this project, and upon review, we offer the following comments:

A. SUBMISSION

1. “Preliminary Land Development Plan of 1013 Shiloh Road” prepared by DL Howell & Associates for Fox Clearing, LLC. The current plan submission consists of 56 sheets dated March 24, 2025, with no revision.
2. “Sewage Facilities Planning Module- Revision” prepared by Howell Engineering for Fox Clearing, LLC.

B. GENERAL

1. The plan proposes the construction of 76 new single-family homes on four existing parcels acre parcel (UPI 67-2-23, 67-2-9, 67-2-8, 67-2.7.1) as well as the connection of two existing dwellings. There is a 2-story stone/stucco building (STA 9+00 of Road D) that is to be connected as well as a 2-story frame/stone dwelling (O’Brien Property) being connected. There are also four (4) open space parcels to be created.
2. The project is located at 1013 Shiloh Road in the R1 Residential District.
3. Sanitary sewer service will be provided by new sewer collection system and pump station in the development, located adjacent to Lot No. 16. Wastewater will be pumped from Proposed Road A to Shiloh Road (S.R. 2005), and then South in Shiloh Road to Plumly Road and a gravity sewer extension to the Township’s existing sewer system in Farm Lane. Wastewater will be conveyed by the Bayard Rustin Pump Station to the Chester Creek Wastewater Treatment Plant for treatment. Lots 29 – 35 will be served by a pressure sewer system with individual grinder pumps for each dwelling unit. The pressure sewer discharges into the proposed gravity sewer system to the proposed pump station. The remaining lots will be served by the gravity sewer to the proposed pump station.

Today’s Commitment to Tomorrow’s Challenges

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| Corporate Office: 949 Easton Road Warrington, PA 18976 215.343.5700 | 630 Freedom Business Center Third Floor King of Prussia, PA 19406 610.572.7093 | 433 Lancaster Avenue Suite 200 Malvern, PA 19355 610.489.5100 | 101 Larry Holmes Drive Suite 201 Easton, PA 18042 610.989.4940 | 105 Raider Boulevard Suite 206 Hillsborough, NJ 08844 908.874.7500 |
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4. The Department of Environmental Protection previously approved a planning module for the development plan of 68 units. The revised planning module is for the proposed 78 units (76 proposed units and 2 existing dwellings).
5. A Water Quality Management Permit (WQM) from the Department of Environmental Protection is required for the new pump station and pressure sewers.
6. Permitting will be required for the proposed wetlands crossing. Copies of any permits related to the sanitary sewer system should be submitted to this office for review.
7. The plans should clarify if the internal roadways are to be offered for dedication to the Township, or if they are to remain private. If they are to remain private, easements over the roadways should be recorded to maintain access to the proposed sewer system.
8. The Developer's Agreement should identify who is responsible for maintaining sewer easements outside of paved areas.

C. SEWER

1. There are multiple sanitary manholes that have at least one invert in that is lower than the proposed invert out, including Sanitary Manhole Nos. 2, 3, 7, 16, 17, 18, 19, 22, 23, and 30. The Design Engineer should review the plans and ensure proper sanitary flow throughout the sanitary system.
2. The drop across sanitary manholes should be 1/2 inch per foot, or 0.17 ft between the invert in and invert out on a 4-foot diameter manhole. All manholes with a drop of less than 0.17 ft should be revised, including MH S13 and S14.
3. Sewers with more than 12 feet of cover should be Ductile Iron Pipe. The design engineer should review the plans and update the pipe material for any runs with over 12 feet of cover, including from MH S3 to S6 and from MH S22 to S25.
4. The proposed sanitary sewer from MHS26 to MHS15 should be re-aligned. The current alignment has the proposed sanitary sewer go through the edges of an infiltration basin (SCM 4 POA 002), between EW 500 and OS 501.
5. A lateral is shown for the house at 1007 Shiloh Road (Lot 78). The lateral crosses the open-space parcel behind lots 17 and 18 and through Lot 21. Lateral easements in favor of 1007 Shiloh Road are required.
6. The pump station is located on an unnumbered lot next to lot 16. Consideration should be given to locating the pump station southeast of Infiltration Basin #1 to provide gravity sewer service to all the proposed lots.
7. A new gravity sanitary sewer line is being proposed between Farm Lane & Plumly Road along Shiloh Road. Consideration should be given to providing sanitary sewer to 1000 Plumly Road, 1001, Plumly Road, 1055 Creamery Lane, 1058 Creamery Lane, and 1001 Farm Lane.

8. A plan for the proposed pump station should be submitted for review and approval.
9. The utility profiles should show all proposed utilities, including the proposed water main, sanitary force main, and low-pressure sanitary sewer.
10. There are no proposed sanitary or water facility services shown on the plans. The plans should be updated to show the proposed sanitary and water services from their respective mains to each individual proposed dwelling. The sanitary sewer laterals should also be called out on the Utility Profiles with their proposed stationing for reference. The plans should be revised.
11. The proposed force main along Shiloh Road is shown on the plans with less than five feet of horizontal clearance. The proposed force main should be aligned to have at least five feet of horizontal separation between all other utilities for ease of installation and future maintenance.
12. For better reference, manhole information, including manhole invert ins and outs, should be added to manhole labels on the sanitary plans. The plans should also be updated to include sanitary manhole information on all utility plans and profiles.
13. Leaders should be added to the manhole callouts on the utility plans for better reference.
14. There appears to be a typo in the utility sheet for Unit No. 60. The Final Floor is displayed as 480.60. Final Floor Elevations for Unit Nos. 59 and 61 are shown as 384.30 and 382.05 respectively, indicating that the Final Floor Elevation for Unit No. 60 is likely to be 380.60. The Design Engineer should review the plans and update them, as necessary.
15. A note should be added to the plans stating, "All manholes receiving force main discharge, as well as the subsequent 5 manholes downstream, are to be epoxy-coated." This note is needed for the proposed manhole located at the intersection of Plumly Road & Shiloh Road and proposed Manhole S21.
16. Sanitary Sewer details should be incorporated into the plan set. The details will be sent to the Developer's Engineer directly.
17. The utility profiles for the proposed sanitary force main and gravity sewer along Shiloh Road is missing and should be incorporated into the plan set.
18. The invert in of the proposed low-pressure sanitary sewer is missing from Utility Profiles on Sheet 39. The invert in of the proposed LPSS should be incorporated into Manhole S21's information.
19. Plan and profile sheets should be added to the plan set. If plan and profile sheets cannot be added, the location of all proposed laterals should be indicated on the profile sheets.
20. Manholes with a drop greater than 24 inches require an exterior drop connection. These manholes should be labeled as "DROP MANHOLE." The inverts of both the top and bottom of the drop connection should be included on the label, and the drop connection should be shown in the profile view

D. EASEMENTS

1. The following notes should be added to the plan set:
 - Westtown Township does not own and is not responsible for sewer facilities outside of sewer easements and rights-of-way.
 - Westtown Township is not responsible for restoration of rights-of-way or easements resulting from the Township's operations.
 - Nothing shall be placed, planted, set, or put within the area of a sewer easement.
2. Sewer easements should be shown along all sewers outside of the rights-of-way. The easements should be indicated on the Grading and Utility Plans (Sheets C03.1 to C03.6) and on the Site Plans (Sheets C01.2 to C01.7).
3. Legal descriptions for sewer easements should be submitted to this office for review.

E. SEWAGE FACILITIES PLANNING MODULE

1. The sewer mapping should be revised to show the proposed pump station, force main, and gravity sewer extension to the Township's existing sewer system.
2. A new Will Serve letter from Aqua confirming public water supply to the development will be required, as the one included is several years old.
3. Please provide the original US Fish and Wildlife Service clearance letter in addition to the December 11, 2024, clearance extension currently included.
4. The submission to the Pennsylvania State Historic Preservation Office (SHPO) was for parcels covering 65.1 acres. As the current development plan covers 80.8 acres, the project should be updated or resubmitted to SHPO to include the entire development area.
5. Once these comments have been addressed, we will provide the updated Chapter 94 consistency information, and the package can be sent to the reviewing agencies for updated reviews of Components 4A, 4B, and 4C.

This review encompasses only the conceptual engineering aspects of the sewer system, as shown on the drawings. Carroll Engineering Corporation accepts no liability for the technical design aspects since this is the sole responsibility of the Developer's Engineer. The Developer is responsible for the complete operational capability of the system installed by him.

Westtown Township's standard review procedures on Developer's escrow require that a written bid estimate, printed on the letterhead of a bona fide Contractor, or a certified cost estimate for the sewer system construction, be shown as part of the approved plans submitted to the Township. At a minimum, this estimate should include unit costs for all components of the sewer system, backfill (including type/class), manholes, laterals, and allowances for rock excavation (if any). The written estimate must state the latest Township Standard Sewer Specifications and approved plans were used. Construction will not be permitted to start until the Developer and the Township execute all agreements, and the Developer has funded all escrow accounts.

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Prior to the start of construction, the Developer's Contractor shall submit shop drawings for all materials to be used for the construction of sanitary facilities. Construction will not be permitted to start until all required submittals have been reviewed and approved by this office. The Contractor must also submit Certificates of Insurance in a form showing coverage satisfactory to the Township before construction can start.

A preconstruction meeting with a representative of Carroll Engineering Corporation is mandatory before the start of any construction. Any changes made to the sewer facilities after the date of the approved plans must be resubmitted for review. Construction will not be permitted to start until the Authority approves revised plans.

After construction, it is the responsibility of the Developer to supply record drawings (as-built) for review and approval by this office. Corrections noted on the record drawings shall be incorporated on the original drawings. The Developer shall then supply final record drawings. The following statement is also required on all record drawings:

These record plans have been completed and certified by _____ as reflecting as-built conditions. Responsibility for accuracy of the as-built plans rests with the above surveyor.

Surveyor's Signature and Certification

Failure to comply shall cause the withholding of any required certifications.

Should you have any questions or require additional information, please feel free to contact this office.

Very truly yours,

CARROLL ENGINEERING CORPORATION



Mark T. Yoder

MTY:cam

cc: Bob Flinchbaugh, P.E., Cedarville Engineering Group
Mickey Thompson, Fox Clearing, LLC
Jeremy Madaras, MSc, P.E., DL Howell & Associates
William N. Malin, P.E., Senior Vice President, CEC