

PETERS TOWNSHIP – ENGINEERING DEPARTMENT



Peterswood Field #2 - November 2024

ANNUAL REPORT 2024

2024 ENGINEERING DEPARTMENT STAFF

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PREFACE

The Engineering Department is primarily responsible to design and manage certain capital projects involving Township facilities & infrastructure, manage engineering consultants, provide support to other departments (such as Planning & Building Inspection, Public Works, Parks & Recreation and Administration), and represent the Township on various regulatory issues.

In 2024, construction on two major Township projects was initiated, namely, improvements to baseball fields 1 & 2 in Peterswood Park (an Expansion/Upgrade) and Phase 1 of the Rolling Hills Park Aquatics Center (a New Facility). Both of these large projects are scheduled for completion in 2025 and both received significant grant funding from the state of Pennsylvania.

In addition to these Township projects, PennDOT initiated construction of the intersection upgrade at Bebout/East McMurray/Thompsonville by having the necessary utility relocations performed in 2024. Actual roadway work for this project is scheduled to begin in the first quarter of 2025. As is typical, 2024 marked another year filled with contractual replacement and maintenance of existing public infrastructure for which Peters Township is responsible and included resurfacing of sixteen (16) additional roadways, cured-in-place lining of four (4) major storm sewer systems, rehabilitation of two (2) stormwater management ponds, and resurfacing and drainage improvements to the entire municipal complex consisting of Police, Library, and Administration.

Looking ahead at 2025, Private Land Development within the Township continues to thrive, with several major housing plans under construction and several others being proposed. Design is nearly complete for the next Phase of Rolling Hills Park, and, depending on budget, construction may be authorized in 2025. Numerous major utility company projects and PennDOT projects within the Township are also planned for 2025. Based on the magnitude and scope of approved Capital Projects for 2025, the number and size of private development projects under construction and in the pipeline, and the ever-increasing demand for customer service, this coming year (and every year for the foreseeable future) will be a challenging one.

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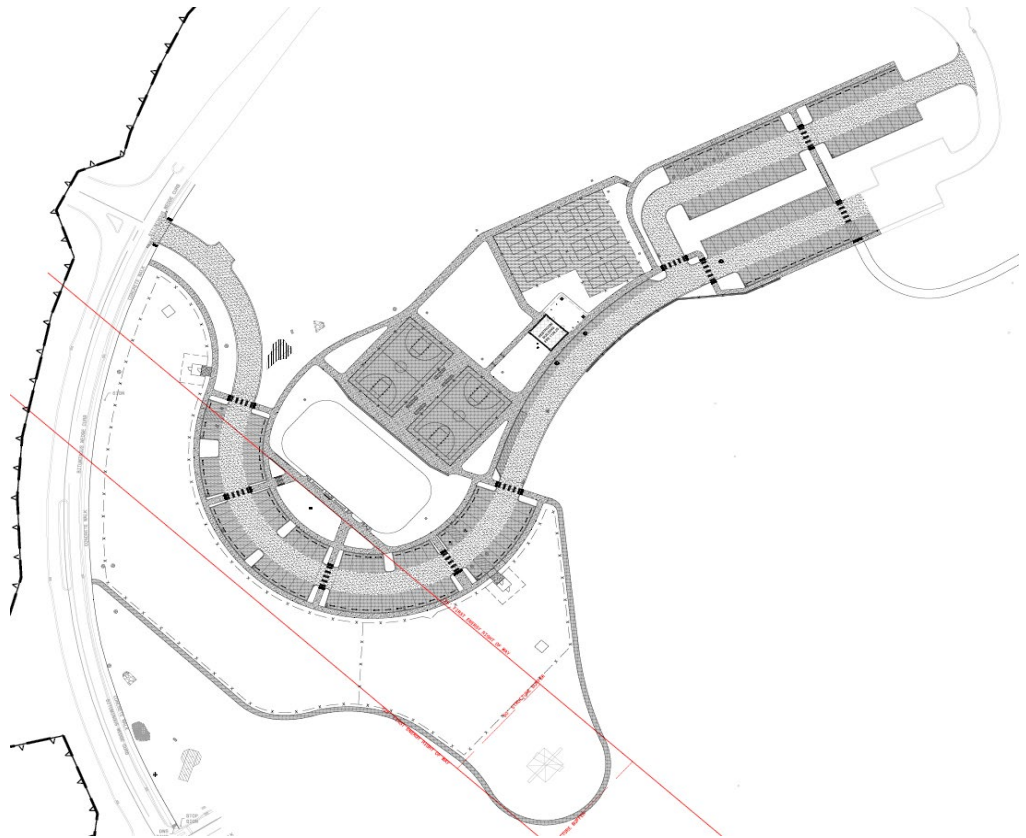
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Design, Permitting, & Construction (new facilities/assets)

Rolling Hills Park – Phase 2

In 2024, The Gateway Engineers nearly completed the design & permitting of Phase 2 of the park, which will consist of a lighted deck hockey court, two (2) lighted basketball courts, five (5) lighted pickleball courts, a dog park, a restroom, and additional parking. In 2025, should budget permit, the project will be publicly bid. Once bid, construction (which would last two seasons), would need to be authorized by Council and could begin in late-2025. Current cost estimates put construction in the neighborhood of \$7.5 million +/-.



Rolling Hills Park - Phase 2 Layout

Rolling Hills Park Aquatics Center Phase 1:

Design of Phase 1 of the Aquatics Center, consisting of two splash pads, support building, parking lot, and associated infrastructure was completed in summer 2024 by Kimmel-Bogrette Architecture and was publicly bid and awarded in the fall. The successful bidder was Massaro Corporation with a bid of \$6 million. Construction began in late-2024, and, weather depending, completion is anticipated in summer 2025.

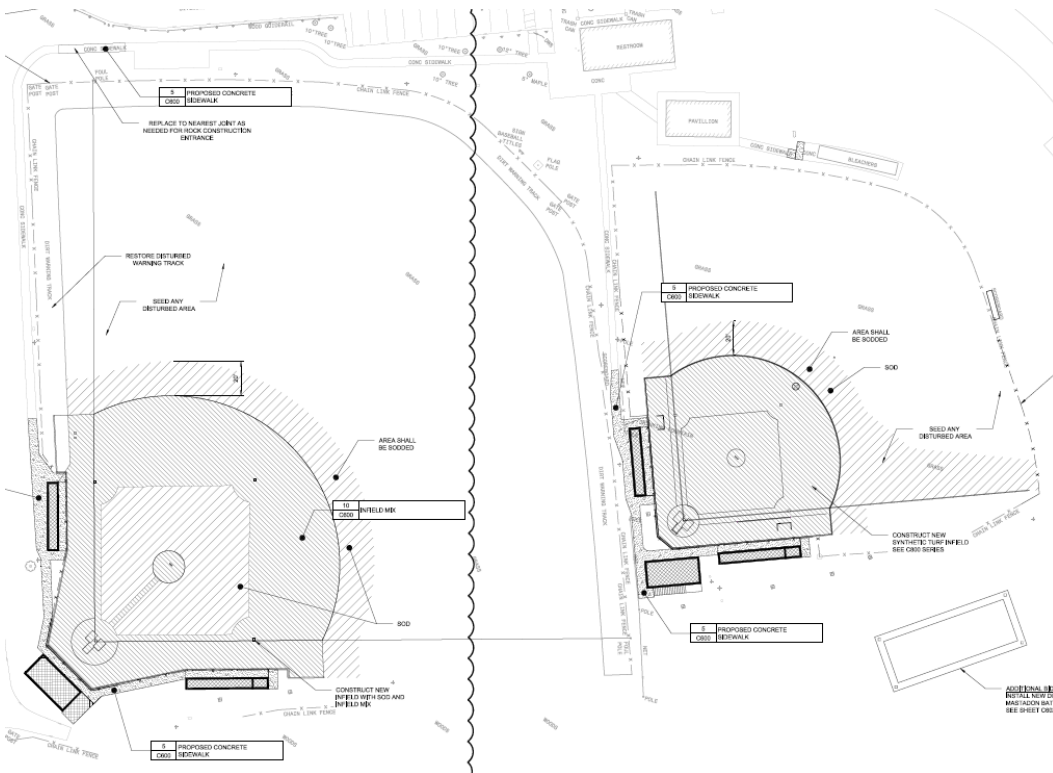
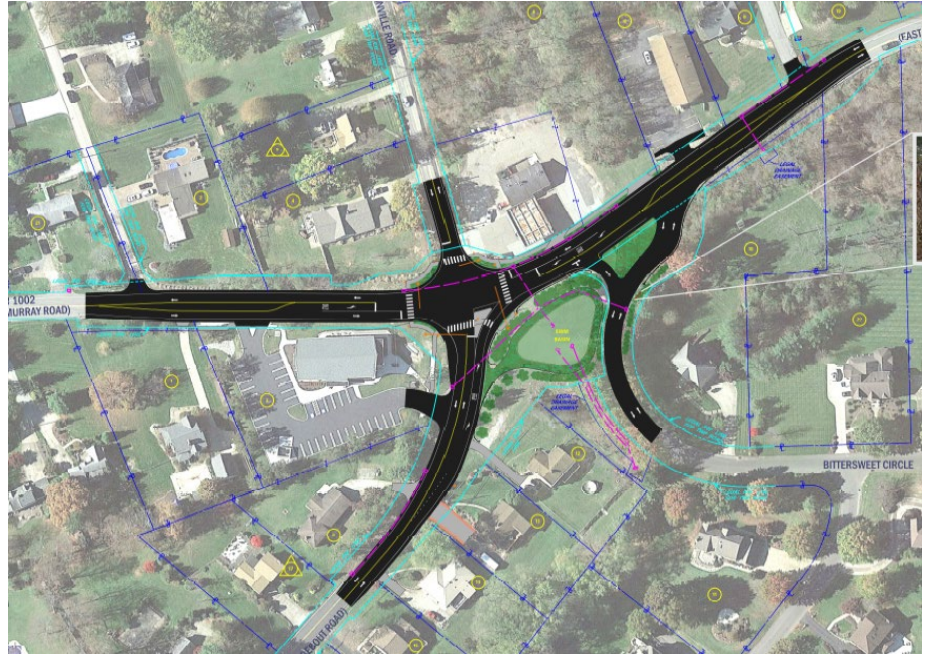


Rolling Hills Park Aquatics Center - Phase 1 (Splash Pad)

Design, Permitting, & Construction (expansions/upgrades)

Intersection Improvements – Bebout/E McMurray/Thompsonville Road:

PennDOT completed design of this project in 2023 and awarded a bid to Plum Contracting late in the year. The project involves the installation of turning lanes at both approaches on East McMurray Road and slip ramps from Bebout onto East McMurray and Bittersweet onto East McMurray. A new traffic light with modern equipment and intersection lighting will also be installed as part of this project. Work began in the fall of 2023 on relocation of two major waterlines impacted by the project and gas line and power/communications lines were re-located in 2024. PennDOT has stated that actual road work is to begin in spring 2025 and is scheduled to be complete by fall.



Baseball Fields #1 & #2 - excerpt from construction plans

Improvements to Peterswood Park Baseball Fields #1 & #2:

In spring 2024, re-lamping of the existing lights was completed by Musco Lighting and bids for the installation of artificial turf, storm drainage, new dugouts, and new press boxes were opened. The successful bidder was Raffle Construction, who successfully completed several other park & rec projects for the Township in the recent past. This project has received significant grant funding from the State to assist with the overall cost of over \$2 million dollars. Construction began in summer 2024 and is expected to be complete in spring 2025.

Design, Permitting, & Construction (replacements)



Finished wearing course - Springdale Road

Street Resurfacing Program: All or portions of sixteen (16) different streets were paved by Mele & Mele & Sons, Inc. in 2024, totaling roughly 5.3 miles. Utility companies (PAWC & Columbia Gas) also resurfaced another roughly 1.1 miles, bringing the total 2024 resurfacing to 6.4 +/- miles of roadway. As part of the resurfacing effort, work to rehabilitate deteriorating catch basins and CMP cross-pipes was performed where necessary. Project design and management was done in-house by the Assistant Township Engineer, who is NECEPT certified in asphalt inspection. Mele began in May and was substantially complete in August. Total project cost was approximately \$1.9 million, which includes the extension of Bruni Drive to Sugar Camp Road.

Street Rejuvenation Program: The rejuvenator program was continued in 2024 at a cost of \$ 165,000. The work performed in August by Pavement Technology Inc. included the application of Reclamite on all or portions of 36 roadways paved in 2021 and 2023 (1-year and 3-year cycle), totaling 10.0 miles of roadway and 140,000 square yards of pavement.

Crack Sealing Program: A crack sealing program, which focuses on roadways paved between 4 and 6 years ago, was continued in 2024 at a cost of \$ 29,500. Overall, 92,493 linear feet of crack sealing was performed on 27 roadways covering 7.76 miles of pavement. The work was performed in the month of September by Russell Standard.

Utility Company projects 2024

Public utility companies in Pennsylvania are regulated by the PA Public Utility Commission (PUC). And although utility projects are funded and managed by the utilities companies themselves, these infrastructure replacements can consume a significant portion of Township staff time on construction coordination, communications to the public, and spot inspection of the street openings and other project components within the public rights-of-way. Recently, a part-time right-of-way inspector was hired to keep up with the demands of the many projects that occurred. The contracted inspector's wages are paid by the utility companies through Street Opening Permit fees.

Gas main replacements 2024: In spring 2024, Columbia Gas completed restoration (both pavement and lawn) on a major replacement project in the McGrann Hills section of the Township that involved nearly a dozen different streets. Columbia had no other significant capital projects in Peters in 2024.

Water main replacements 2024: Pennsylvania American Water Company replaced mains on Robinhood Drive, Saxon Drive, and Mt. Blaine Drive in 2024. For 2025, PAWC intends to replace mains on Pinewood, Robinhood, Canterbury, Squire, Waterdam, Center Church, & Bebout.

Storm sewer projects:

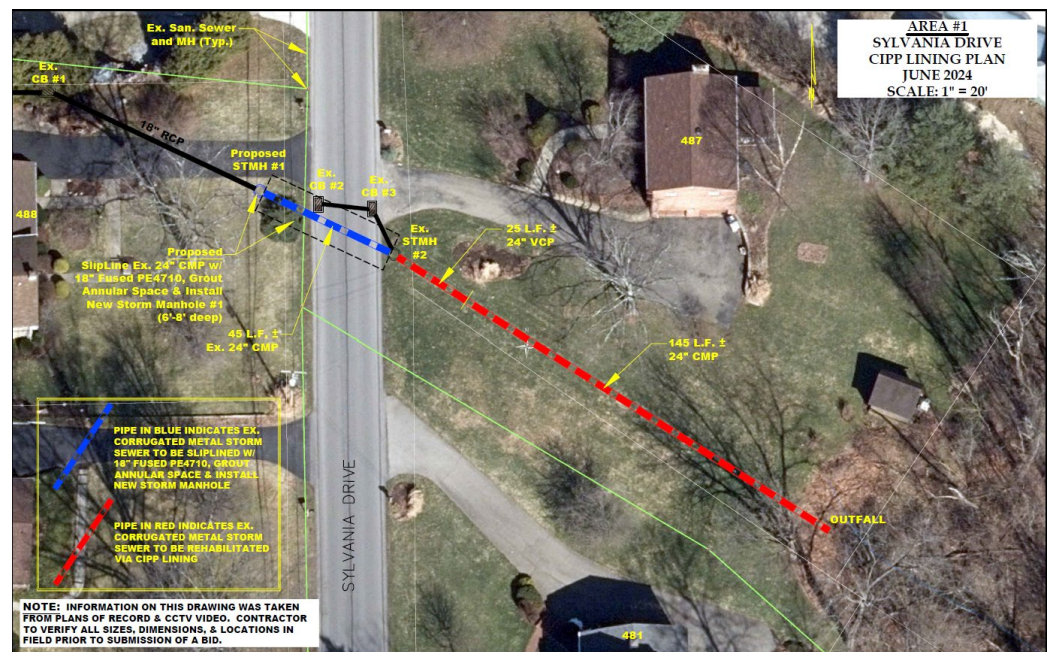
Camp Lane culvert: In late-2023, an open joint was discovered in a large diameter (66-inch) culvert underneath Camp Lane. A solution was engineered involving the installation of a reinforced concrete lining on the affected portion of the pipe, which was about 50-feet in total length. National Gunite, Inc. out of Johnstown was contracted to perform the repair. In February 2024, the work was performed over a three day period at a total cost of \$35,000. This cost effective, non-invasive solution will be utilized on other large-diameter culverts in the upcoming years.



Camp Lane culvert - finished lining - February 2024

Cured-in-Place storm sewer lining:

In summer 2024, the Engineering Department prepared bidding documents for the cured-in-place lining of deteriorated corrugated metal pipe systems on Demmel Drive, Sylvania Drive, and Kuchinic Street. In September & October, Insight Pipe Contracting completed the lining of these systems using Cured-in-Place Pipe trenchless technology. This method of lining drastically reduced the project footprint and amount of disturbance. Approximately 1,270 of lining was completed at a cost of \$ 150,000.



Sylvania Drive lining plan

Detention Pond Rehabilitations 2024:

Typically, we strive to rehabilitate several older Township-owned stormwater detention ponds annually. These facilities tend to accumulate sediment over time and become choked in with vegetation if not maintained. In 2024, the Engineering Department prepared bidding documents for the rehabilitation of two (2) ponds, one on Breezewood Drive and the other on Ross Creek Drive. Slusarczyk Excavating completed the work in October.



Ross Creek SWM Facility - rehab in progress Sept 2024



Finished pavement and markings at the Municipal Complex – August 2024

Municipal Complex & Arrowhead Trail

Resurfacing: Bids for the resurfacing of the Municipal Complex, which was last paved in the 1990s, and resurfacing of the Arrowhead Trail between Sugar Camp and the Haberland Access were opened in May 2024. The successful bidder was Mele & Mele & Sons at a cost of approximately \$330,000. These projects were designed in-house and included drainage and grading improvements at the Municipal Center. The work required a high level of coordination with all users and visitors to the Municipal Center. Mele completed the Municipal Center in August and the Trail in September.

Regulatory Compliance



Peters Lake Embankment - Oct 2024

Peters Lake Dam inspection: Due to its size and hazard potential classification, the Peters Lake dam requires annual inspection by the PaDEP and was inspected by the Engineering Department in October 2024. A report filed with the DEP stated that no significant deficiencies were found.

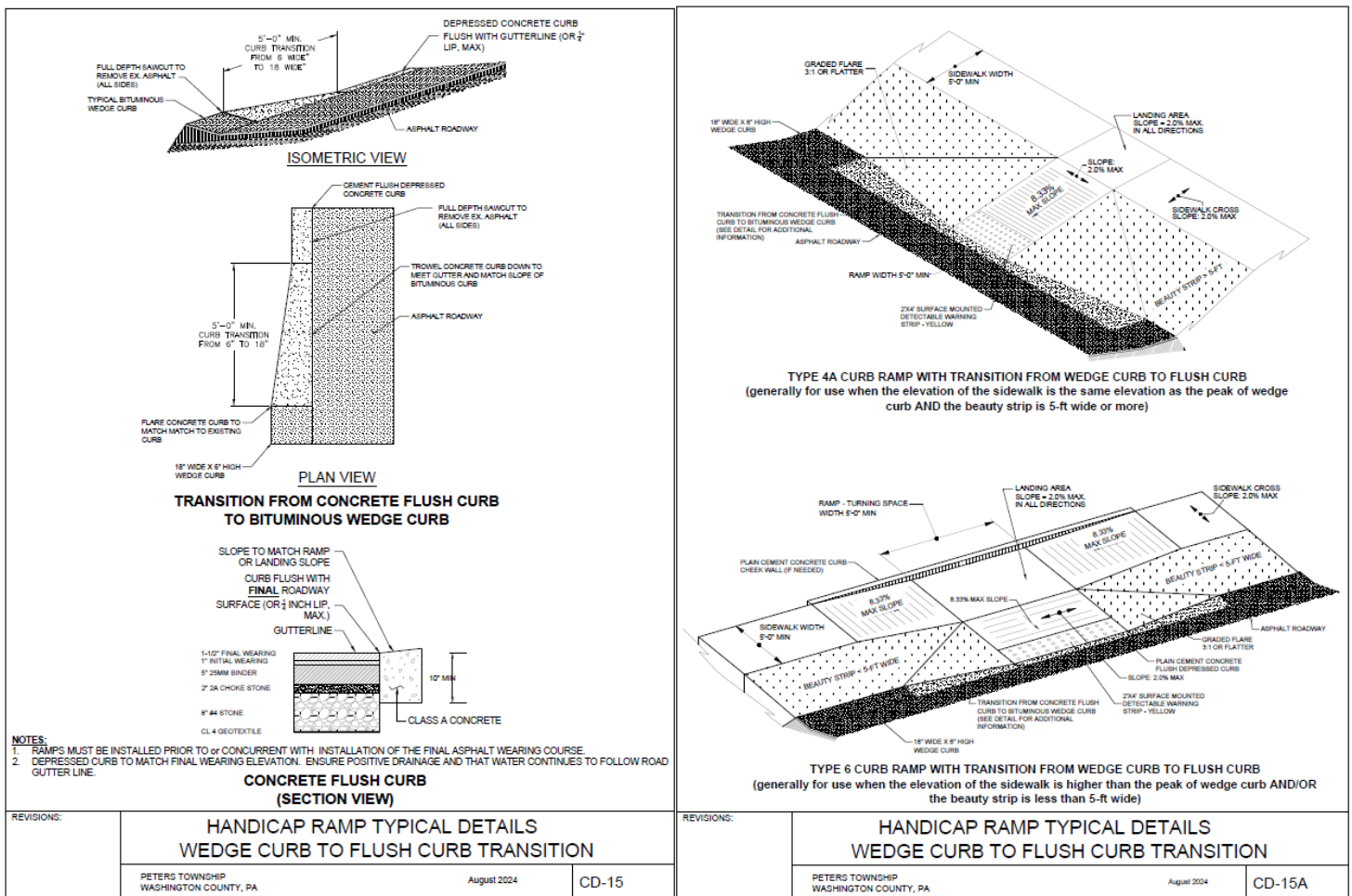
MS4 Permit: The PaDEP came to the Township's offices and conducted an inspection of the Township's MS4 Program in March 2024. The inspection included a review of the Township's documentation of compliance with the six Minimum Control Measures (MCMs) required by the Permit and a discussion of the Township's progress with respect to the TMDL requirements on Brush Run. The PaDEP found no fault with the MCMs, but, did inform the Township that a Notice of Violation would be issued for failing to implement the Brush Run TMDL project (Briarcliff Floodplain Restoration) within the prescribed timeframe. Township Staff made PaDEP aware that grant applications have been made to offset the high cost of the Briarcliff project, but, to date, funding has not been secured.

Also, the required Annual Report summarizing MS4 activities for the previous year was transmitted to PaDEP in September 2024. Routine activities to support the six 'minimum control measures' were completed throughout 2024, including screening of outfalls, inspection of stormwater detention ponds and underground tanks, street sweeping, employee training, ...etc.

Major Initiatives - 2024

Geographic Information System (GIS): The Township’s GIS Coordinator maintained and updated many important geo-databases and tracked and mapped assets in 2024. A major GIS initiative of 2024 was to research alternate software packages for parcel & permit management purposes due to the age and usability of the existing GeoPlan software now in use by the Township. By the end of 2024, a new system developed by Spatial Data Logic (SDL) was identified as the best candidate to replace GeoPlan. The goal is to migrate our data to this platform and go live by fall of 2025.

Construction Details and Ordinance Updates: The Township’s standard details for the construction of public improvements had not been updated in years and certain sections of the Subdivision and Land Development Ordinance, particularly with respect to street design, were outdated and needed to be brought up-to-date with current practice. Throughout the summer, the Engineering Department collaborated with the Planning Department and with our appointed professional consultants to draft new details and ordinance revisions to present to Council. The result was Council adopting the suggested changes in November 2024, which have subsequently been codified into the Township Code.



New handicap ramp details – adopted November 2024

Departmental Support

Street Opening Permits: A substantial amount of utility replacements occurred in 2024. Approximately seventy (70) permits were issued in 2024 with total fees collected of approximately \$ 10,000. Columbia Gas had fourteen (14) permits issued, Pennsylvania American Water had forty-seven (47), Peoples Gas had four (4), PTSA had one (1), while communications companies plus Private Contractors totaled four (4). In addition to the typical utility company projects, the Engineering Department spent a significant amount of time responding to issues regarding restoration of a sanitary sewer replacement project in the Elizabeth Drive area.

Database updates / Asset management: Databases for storm sewer outfalls, SWM facilities, traffic signs, and pavement management were updated and maintained in 2024.

Excerpt from pavement management database

Traffic Calming Committee: The Director of Engineering became the Chairman of the eight person Traffic Calming Committee in 2024. There were approximately one dozen (12) requests from residents for traffic calming made to the Chairman in 2024, with six (6) of these requests gaining the necessary supporting signatures to proceed to further study. Throughout the spring and fall (while school was in session) the Township’s consulting traffic engineer conducted traffic volume and speed counts on Froebe, Springdale, Turkeyfoot, Phillips, Willhaven, and Oakwood Road. A Committee meeting was held on November 5th to discuss the results of the counts and decide on a path forward and a report of the meeting was made to Council.

Land Development Permits & Reviews: Because of personnel retirements and defections within the Planning Department in 2023, the Director of Engineering spent a greater than normal amount of time focused on Planning-related and HOA-related issues in 2024. Residential land developments with significant action in 2024 were Juniper Woods, Fife Farm, Westbury, Lutz Farm, Camden Village, Tuscany II, Brookwood Place, Brookwood Village, Pemberley Manor, Waterdam Apartments, Sherwood Pond, Justabout Farms, and Sugarbrooke. Commercial land developments with significant action in 2024 were Huntington Bank, Always B Smiling, 3836 Washington Road, and Pittsburgh Financial Consultants. In addition to the above, numerous Grading Permits and On-Lot SWM Approvals were reviewed in-house and issued for single-family residential construction and many pre-application conferences for proposed development within the Township were held.

Customer Service: Current and prospective residents and business owners, builders, developers, real estate agents, public utilities, other government bodies and regulatory agencies are some of the ‘customers’ of the Township whose needs consume a significant portion of Staff time and resources. Customers needs can be many and varied but typically involve the Engineering Department when they concern grading, drainage, infrastructure, construction projects, property lines, zoning & land development matters, property maintenance, mining, floodplains...etc. As the Township continues to grow, customer service will continue to become more time-intensive.

As always, the Engineering Department worked in-hand with the Township Public Works, Planning, and Park & Recreation Departments to diagnose and solve drainage-related issues, pavement problems, and other resident’s concerns involving Township infrastructure and park upgrades.

Licensing & Continuing Education

The State requires Professional Engineers to complete 24 Professional Development Hours (PDH) every two years to maintain their license. The Director’s license was renewed in September 2023 and will be up for expiration in 2025. The Director will attend seminars and continuing education events as time permits to meet the necessary PDH requirements for the period from 2023 to 2025.

Outside Consulting

The Gateway Engineers: Appointed as the Primary Consulting Engineer for the Township, the Gateway Engineer’s primary role in 2024 was to review subdivision and land development plans to determine compliance with Township ordinances and inspect the installation of public improvements as those developments are constructed. Gateway was primarily involved with construction at Lutz Farms, Tuscany II, and Westbury Plan of Lots during 2024. In 2024, Gateway was also contracted to perform design & permitting services for Rolling Hills Park Phase 2 and the Peterswood Fields 1 & 2 Rehabilitation project.

Traffic Engineer - Traffic Planning and Design (TPD): Appointed as official Township Traffic Engineer, TPD performed several Township-requested studies of traffic issues, traffic counts, general review of traffic issues involving land developments, assistance with ordinance updates, and completed work to update the traffic impact fee program.

Lennon, Smith, Souleret Engineering (LSSE): Appointed as the Alternate Consulting Engineer for the Township, LSSE provides review of Gateway Engineer’s work if they elect to work for a private entity within the Township or is assigned review of land development plans or given projects at Staff’s discretion. In 2024, LSSE was involved with Pemberley Manor, Froebe Farms, and Valley Brook Country Club expansion.

Kimmel Bogrette Achitecture + Site: K-B was engaged as the design consultant for the Rolling Hills Aquatic Center Phase 1 (Splash Pad) project. They completed the design and bidding of the project in 2024 and will assist with construction administration during the first half of 2025 as the project is being built.

Civic Vanguard: They are the Township’s GIS consultant and mainly assisted with support and licensing for the GeoPlan-Web platform.

Lab 8 Designs: Provided architectural services for several renovation projects at Township-owned facilities.