



BOROUGH OF RUMSON

80 EAST RIVER ROAD RUMSON, NEW JERSEY 07760
(732)842-3300 • FAX (732)219-0714

David Marks, P.E., C.M.E., CFM
Borough Engineer
Email: dmarks@rumsonnj.gov

Memorandum

Date: January 3, 2018

To: Thomas S. Rogers, R.M.C., Municipal Clerk/ Administrator
Cc: Mayor & Council (via email)
Tamila Bumback, Deputy Clerk (via email)

Re: 2017 Year End Engineering Report

Please find a brief summary of engineering projects addressed during the 2017 calendar year:

Infrastructure Improvements

2017 Curb and Sidewalk Program – East River Road & Ridge Road:

This project consisted of the installation of new curbs and sidewalks on East River Road from Black Point Road to Ridge Road and on Ridge Road from Avenue of Two Rivers to Bingham Avenue. With the completion of this phase of the project, a fully compliant ADA accessible route exists between the Oceanic Library and Rumson Fair Haven Regional High School, Dean Porter, and Forrestdale Schools. The completion of our project allowed Monmouth County's resurfacing of East River Road and Ridge Road to occur within the 2017 construction season. This portion of the project has been completed within anticipated timeframes and budget. Additional concrete improvements are scheduled for Spring 2018 within the existing project budget.

Rumson-Sea Bright Emergency Pipe Lining:

In April 2017, we were notified by Sea Bright of a sinkhole having formed just downstream of the shared force main receiving manhole on Ocean Avenue. Rumson Public Works undertook emergency precautions to stabilize the 24" concrete pipe, however it was so seriously degraded, permanent repairs would need to be planned and executed immediately. After further evaluation, it was determined that 550 linear feet of pipe would need to be repaired with a cured-in-place pipe liner. Under an emergency contract, bypass valves and piping were installed, the pipe was cleaned, televised inspected, and ultimately lined with cast-in-place UV cured fiberglass liner.

Grant Avenue Force Main Repairs:

In May 2017, a leak on the force main exiting the Grant Avenue Sanitary Sewer Pump Station was observed in the lawn area immediately upland of the bulkhead. This is a 12" ductile iron force main which conveys all sanitary sewer flows from Rumson under the Shrewsbury River into the shared receiving manhole on Ocean Avenue in Sea Bright. Under an emergency contract, we had the damaged pipe segment removed and replaced. The Department of Public Works and Contractor worked together to make the repair in less than 6 hours. It was determined, the pipe had been inadvertently struck by a dead-man pile during the bulkhead replacement project in the early 2000s. The cost of the repairs were fully covered by the Borough's property insurance.

Sanitary Sewer Pipe Lining – Rumson Road Investigation:

With wet weather plaguing most of this past Spring, we experienced sanitary sewer flows in excess of double those typically observed under normal conditions. This excess flow from groundwater infiltration and illegal sump pump connections caused pump stations south of Rumson Road to pump nearly continuously for months. While this creates higher operating costs (electric, maintenance, wear/tear/fatigue, etc) it also resulted in manholes surcharging along Rumson Road. To better understand the cause of the surcharging manholes and develop a base line of pipe condition, we cleaned and televised inspected the sanitary sewer pipes on Rumson Road (Fair Haven Road to Conover Lane),

Conover Lane, the easement between Conover Lane and Buena Vista Avenue, the easement at the end of Elm Lane and Laurel Lane, and Buttonwood Lane East. The pipes were overall in good structural condition with leaking joints to varying severities throughout the inspected areas. While the Contractor was available, we had 31 of the most significant leaking pipe joints internally grouted. We will continue to monitor the success of the grout repairs during future wet weather conditions.

Sanitary Sewer Pipe Lining – Phase 1:

In July 2017, Councilman Conklin, Tom Rogers, and I met with New Jersey Environmental Infrastructure Trust (NJEIT) and New Jersey Department of Environmental Protection (NJDEP) to present our concept project for the rehabilitation of nearly 20 miles of gravity sanitary sewer pipe south of Rumson Road. They are a very willing partner due to the problems experienced by the Borough and the significant environmental impact a catastrophic failure would present. We will continue to advance this project and other available funding sources in 2018.

Club Way Force Main Replacement:

Over the course of several months, we experienced 5 leaks on the Club Way Sanitary Sewer Force Main. The ductile iron force main pipe was installed in early 1970s as part of “Westerly Sewers – Contract No 7”. After investigation, it was determined the pipe was failing due to internal corrosion from sewer gas buildup, which was not properly venting. Due to the severe pipe degradation and uncertainty of how far the degradation advanced within the pipe, the Borough opted to replace the entire 2,200 linear feet of force main with C900 PVC pipe, which is impervious to future degradation from sewer gas. This work was completed on an emergency contract basis, within our anticipated timeframe, and within budget.

DPW Fuel Tank Replacement:

This project consisted of installing a new 10,000 gallon above ground fuel storage tank and product dispensers along with removing the existing underground fuel storage tanks. The new system went into operation in February 2017 and the underground tanks were removed in March 2017. The environmental reporting/testing for the soil surrounding the underground tanks came back free of contaminants, therefore no further environmental action by the Borough was required and the permit was closed-out by the NJDEP.

Pump Station Emergency Generators & SCADA System Installation:

The project consisted of the installation of emergency backup generators at Club Way, Thorton Way, Navesink Avenue, and Riverside Drive Sanitary Sewer Pump Stations. In addition, all 11 pump stations received upgraded communication equipment to alert DPW at preset alarm conditions (high water level, low water level, power failure, etc). The improvements are funded through FEMA Hazard Mitigation Grants. The work was substantially completed in the 4th Quarter of 2017.

Victory Park Playground Improvements:

We installed new concrete curb edging around the three play structures and installed seating walls and a set of stairs to level grade from the upper to lower play areas. While the playgrounds were closed, the Department of Public Works made timber repairs to the structures and replaced worn elements.

Grants

The following is a list of grant opportunities we are tracking:

NJDOT Local Aid FY2015 – The Borough was awarded \$235,000 for the installation of new concrete curbs and sidewalks to provide greater accessibility along Ridge Road and East River Road. The project construction was completed this past Fall.

NJDOT Local Aid FY2017 – The Borough has been awarded \$185,000 towards the resurfacing of Hartshorne Lane from Avenue of Two Rivers to Ward Avenue. This work will complete the roadway restoration efforts initiated by the New Jersey Natural Gas Company as part of their NJRISE infrastructure program.

NJDOT Local Aid FY2018 – This grant application continues the success of our Curb and Sidewalk Improvement Program on East River Road. The proposed project limits are from Black Point Road to Bingham Avenue. The grant application is still under review with the NJDOT.

Monmouth County Open Space (MCOS) Grant – The Borough secured two MCOS Grants for Piping Rock Park Improvements (Phase 1 award \$250,000 and Phase 2 award \$137,000. We have ordered boundary and topographic

survey of the park property and will further develop the concept plans for submission to Monmouth County. I anticipate the Monmouth County approval process and final design taking the better part of 2017 with construction starting in Spring 2018.

Monmouth County Open Space (MCOS) Grant – The Borough has submitted a grant application for the possible acquisition of two island properties for the preservation of dedicated open space. The terms of the contract are still being negotiated and therefore this remains an executive session matter.

Post Sandy Planning Assistance Grants (PSPAG):

Community Rating System (CRS) Enrollment – The Borough was awarded \$43,500 from the New Jersey Department of Community Affairs to enroll in FEMA’s CRS program. Immediately prior to our enrollment in the program, FEMA provided the Borough with a list of properties in which the National Flood Insurance Program (NFIP) identify as having a lowest floor below the Base Flood Elevation. We have been working to reconcile the list against Borough records and once completed, we can enroll in the program. I anticipate submitting our enrollment package to FEMA in April 2018. From the NJDCA perspective, the project is complete and the Borough has been reimbursed in full.

Tax Map Digitization – The Borough was awarded \$50,000 from the New Jersey Department of Community Affairs to digitize and update tax maps within the 500-year floodplain (approx. 2/3 of Borough). T&M Associates digitized, updated, and obtained State approval for the maps. The project is complete and NJDCA has reimbursed the Borough in full.

Other Engineering Efforts

NJAW & NJNG Infrastructure Hardening with new Shrewsbury River Crossings:

Both utilities successfully directionally drilled new transmission pipelines under the Shrewsbury River to Sea Bright through Old Rumson Road right-of-way. The new transmission lines have been in service since early 2017. As part of the environmental permit with NJDEP, a diversion of Green Acres encumbered parkland (pocket park at the end of Old Rumson Road) will need to be completed. The process is being undertaken by both utility companies and the Borough in the early part of 2018.

NJNG Main Upgrades:

Throughout the Borough, NJNG has upgraded their natural gas mains to improve service reliability to its customers. As part of their efforts, they resurfaced (either in full or part) 25 Borough streets totaling nearly 8 miles. In 2018, I anticipate an additional 10 streets being resurfaced after the Borough completes necessary concrete improvements.

NJAW Main Upgrades:

After nearly a year of coordination, the Water Company has finally submitted Road Opening Permits for their main renewal program on Highland Avenue, Rosalie Avenue, Riverview Avenue, Island Road, Cedar Avenue, and Holly Street. In coordination with NJNG, both utility owners will complete full width resurfacing of the impacted roadways after the Borough replaces curbs and sidewalks.

NJFRAMES (NJ Fostering Regional Adaptation through Municipal Economic Scenarios):

NOAA awarded a grant to NJDEP for nearly \$900k to develop a regional plan to address the impacts of coastal hazards within the communities comprising the Two River Council of Mayors. The group will be seeking local hazard information and recommendations from municipalities for incorporation into the project.

Deane Porter Pond Dredging:

Through a shared-service initiative with the Rumson Board of Education and Monmouth University, we are advancing professional engineering and environmental permitting efforts associated with the dredging of the drainage pond adjacent to Deane Porter School. Monmouth University has conducted a bathymetric survey to identify dredge material for removal. Najarian Associates has been retained to prepare the site survey, dredge plan, and environmental permits. We are scheduled to meet with NJDEP representatives in early January 2018. I anticipate pond dredging activity occurring in Summer 2018.

Monmouth University Marine and Environmental Field Station:

Monmouth University and the Borough of Rumson have advanced initiatives to construct a Monmouth University Marine and Environmental Field Station within the Borough. It was determined, the Municipal Boat Launch would be

an optimal location providing students, faculty, and staff quick access to the Navesink River, Shrewsbury River, Sandy Hook Bay, and Atlantic Ocean. The program has expanded to include the Rumson Borough Schools and provide the students opportunities to engage with Monmouth University Faculty and students in environmental and ecological sciences. The project team has met with the NJDEP to review the concept plans in an effort to streamline the environmental permitting process. As part of the Field Station construction, public access, storm/flood resiliency, and functional improvements will also be completed to the Boat Launch and surrounding area.

Geographic Information System (GIS):

The Borough GIS is utilized daily by myself and the Building Department. As our familiarity with the program grows, we find new ways to implement the resources for mapping, tracking trends, and sharing information.

Grading Plan Reviews & Final Inspection of Residential Properties:

Since January 2017, I have reviewed 68 grading plans for compliance with the applicable Borough Ordinances. I have also conducted 36 final inspections (and countless progress inspections) along with the recommendations that certificates of occupancy be issued for the completed developments. Based on my records, there are currently 75 active residential construction sites (where grading plan approval was required) within the Borough of Rumson.

Monmouth County Sponsored Projects

2017 Monmouth County Resurfacing Program – The County completed their resurfacing program of Ridge Road, Bingham Avenue, East River Road, Avenue of Two Rivers, and Rumson Road in Fall 2017. Some minor punchlist items (i.e Rumson Road Bike Lane Symbols) remain to be addressed as weather conditions permit.

Sea Bright – Rumson Bridge Replacement (S-32) – The project is currently in the Local Preliminary Engineering phase of the Federal process and the County is advancing community involvement discussions, agency consultations, environmental documentation, design level mapping, and design services concurrently. An updated project schedule is not currently available, however during our last meeting, the County anticipated construction could start by Winter 2020 and continue until Spring 2023.

Oceanic Bridge Replacement (S-31) – The County has begun the Local Concept Development Study stage of the Federal process. An updated project schedule is currently not available, however the County has committed to not starting construction on the Oceanic Bridge until the Sea Bright - Rumson Bridge construction is complete.

Oceanic Bridge Concrete Pier Repairs – Concrete bridge pier repairs began mid-May 2016. The County substantially completed the work in advance of Memorial Day Weekend 2017.

Traffic Safety Improvements at Various Intersections – Monmouth County completed various short and long-term traffic and pedestrian safety improvements at the following intersections in 2017:

- Ridge Road and Fair Haven Road
- West River Road and Third Street
- West River Road and Second Street
- West River Road and First Street
- West River Road and Allen Street
- West River Road and Lafayette Street
- West River Road and Washington Street
- West/East River Road and Bingham Avenue
- Bingham Avenue and Hunt Street
- Rumson Road and Hance Avenue

Wilson Circle Culvert Repairs – Monmouth County completed the structural repairs to the culvert and curbing and sidewalk replacement in late 2016. The guiderail was completed in early 2017.