Engineering

Past Projects

Jewell and Angell Street Roadway and Drainage Survey and Design

Since new water lines were installed on Jewell Street and Angell Street, and the roads are scheduled for reconstruction and repaving by the DPW, the Engineering Department worked with Toomey & Munson to prepare drainage improvements for these streets. Plans for the drainage improvements of Jewell Street from Balcom Street to Nelson Way, and for Angell Street, were completed in 2002.

Mill and Spring Street Bridge Repairs

The Engineering Department followed up on some bridge repair work that had been identified in 1999 for the concrete repair of the Mill Street Bridge over the Canoe River and the Spring Street Bridge over the Rumford River. The Mill Street Bridge was built in 1939 and the Spring Street Bridge in 1914. The extent of the damages were at the base, walls and underside of the concrete slabs of the bridges, which through the years, suffered cracks and deterioration. Repairs of concrete were designed by a structural Consultant, Lichtenstein Consulting Engineers, and the Engineering Department obtained the necessary permits, prepared the bid documents and solicited bids. A contract was awarded to Debrino Caulking Associates, and both bridges were repaired in approximately two months during the Summer of 2002, at a cost of approximately $60,000.

County Street Bridge Repairs

The Engineering Department also followed up on the design of repairs needed for the County Street Bridge. Lichtenstein Consulting Engineers prepared plans and technical specifications concerning the bridge repair. The Engineering Department obtained the necessary permits and prepared the bid documents for the repairs to occur in 2003/2004.

Fulton Pond Dam

The Fulton Pond Dam, which was substantially constructed in 1998, was completed in 1999; and has already passed some significant testing by Mother Nature. The Engineering Department worked to secure funding for the project, and worked with the design consultant to reduce the size of the spillway to reduce cost and minimize disruption to the area. The Engineering Department bid the project and provided limited inspections during construction. Operation and maintenance procedures have been established for the structure.

Mill Pond Dam Replacement

The Mill Pond Dam, along the Canoe River and just north of Route 106, has been in need of repairs since the late 1980's. A replacement structure was designed in the early 1990's and permitting was completed to support construction bidding in 1996. Unfortunately, construction bids came in significantly higher than expected, and the project was delayed due to lack of funding. The Engineering Department was able to obtain extensions of the earlier federal, state and local permits, which allowed the project to be re-bid in 2001. Fortunately, this time the bids were significantly less than expected and below the bids from 1996. As a result, in 2001 the Mill Pond was dredged, and a new dam was constructed to restore this area. The Engineering Department inspected and administered this construction project, which was completed in 2001. This restores the function of this dam to controlling floodwaters; but more significantly restores a beautiful and peaceful pond within the woods of Mansfield, and provides a canoe launch. In the Spring of 2002, some additional cleanup of the adjacent woods was performed by the DPW, along with improvements of the gravel access drives and signage to facilitate the enjoyment of this area.

Canoe River Sewer and Water Project/Route 106

In 1999, the Engineering Department coordinated the design and specification development for over a mile of much needed new water and sewer lines for work on Route 106. The contract was awarded in June of 1999, and unfortunately proceeded slower than expected, with the majority of the paving not completed until the early part of December. The Engineering Department terminated the contractor in the Spring of 2000 and has been working with the bonding company to repair trenches, complete punch list items, and most importantly get the sewer pump station operational. During the course of the project, unexpected groundwater contamination was discovered and stopped but a treatment system was required to decontaminate groundwater pumped out for the installation of the 20-foot deep pump station structure. Only by the hard work of our DPW personnel, was the Town able to complete this dewatering effort and installation within the needed time and well under budget. The bond company and DPW completed the above-ground work on the pump station in 2001. The Engineering Department has also been working with the state towards upgrading and improving Route 106 from Hope Street to the Eastman Street, which would eventually include curb-to-curb repaving of these areas.

Pratt Street and Chauncy Street Intersection

The Engineering Department surveyed, designed, and assisted in the layout of a new intersection alignment at Pratt Street and Chauncy Street, with construction being performed by the DPW in 2000. By eliminating two traffic islands and "squaring up" the intersection the Engineering Department was able to eliminate confusion and increase the safety of the intersection.

School, West and Willow Street Culverts

The Engineering Department performed survey, hydraulic modeling, design, and resident inspection of three box culverts in order to alleviate flooding. The project involved the installation of 170 feet of 6 foot by 3 foot precast box culverts, the relocation of telephone duct banks, as well as gas, water, and sewer mains. The final aspects of the project were completed in 2000.

Mill Street Sewer Project

The Engineering Department completed the design, prepared the specifications and bidding documents, obtained the necessary permits, solicited bids, administrated the construction contract, and performed the resident inspection services for the 2000-foot sewer extension along Mill Street. The work also involved coordinating detours and road closures with the Police, Fire, and School Departments, as well as with residents to minimize construction impacts. The project and sewer service was successfully completed in 2001.

Memorial Park Parking Lot

The Engineering Department has surveyed, designed, and obtained the necessary permits to add 128 new parking spots that can be used by both the Library/Council on Aging and Memorial Park. The Engineering Department worked closely with town officials and residents to best provide a facility that met the needs of the Park and Library/COA while being sensitive to the environment and residents. The Engineering Department provided all of the construction layout and field services to support the construction of this parking area. Construction of the facility was completed in the spring of 2001.