



Emerson: Kinderkamack Road Project Summary, October 2, 2017

The Borough of Emerson and County of Bergen are completing the final tasks for the long awaited Kinderkamack Road project. This project, first recommended for realignment and redesign in 1957, has seen improvement to the roadway widths, alignment, drainage, traffic signals upgrades, and street lighting and amenities. This \$4.4 million project is scheduled for final completion within the next 3-4 weeks. It is the culmination of a considerable amount of time and money expended on studies, planning, surveying, design, review, public outreach, business coordination, property acquisition, and construction, as well as a tremendous amount of coordination with the County of Bergen, New Jersey Department of Transportation, NJ Transit Railroad and Bus Services, PSE&G Electric and Gas Divisions, Verizon, and Cablevision.

The project was tasked with fitting the maximum amount of pavement widening and realignment within the footprints of the buildings lining both sides of the roadway to gain the most capacity and improve safety. The County of Bergen went out to bid and hired New Prince Concrete Construction of Hackensack to build the improvements. The project began in August of 2016. The three new traffic signals are equipped with computerized equipment that are programmed to be traffic responsive to motorists, pedestrians and approaching trains, so that the best level of service and safe operation is provided.

The signals are equipped with several state of the art safety features that include:

- Camera detection to alert the signal equipment of the presence of vehicles waiting on the side streets,
- The installation of audible, countdown, pedestrian actuated push buttons to extend the crossing time to cross the roadways when the push buttons are pressed, and
- The railroad crossing circuitry to determine the pending arrival of approaching local and express trains at the crossings.

The traffic signals are timed to permit overlapping phases at Ackerman Avenue to clear traffic through the Linwood Avenue intersection when activated, and for Linwood Avenue traffic to clear the Ackerman Avenue intersection when activated. While this impacts the overall traffic along Kinderkamack Road, it was a necessary design parameter to keep motorists from stopping on the railroad crossing in both directions. If there are no vehicles waiting on the side streets, the signals remain GREEN to Kinderkamack Road.

The traffic signals also contain batteries for times of power failures lasting several hours, generator ports to enable them to run off generators for longer time periods if necessary, and an interconnection with the railroad crossing equipment to permit advance notice of approaching trains to enable the crossings to be cleared of motor vehicles.

Left turn lanes and turning phases were installed in order to increase the capacity and safety of the vehicular traffic and lessen the chances of motorists making turns and impeding the flow of traffic. This enables the turns to be made safely. One issue that results from adding protected left turns phases is the requirement to prohibit right turns on red in the opposing direction. When a left turn arrow is displayed, it indicates there are

no other conflicts. Unless there are two receiving lanes for the right turn on red movement, no turn on red restrictions are required to be posted in the direction opposite of a left turn phase. Our observations have determined that the overlapping clearance phases generally clear the middle of the intersections and result in few delays for vehicles waiting to make right turns.

Two railroad crossing surfaces were improved and realigned to make them smoother to traverse and their alignments coincide with approach alignments. All new railroad crossing protective devices were also installed to bring them into current design conformance. New traffic signs and long-lasting thermoplastic pavement markings were installed to significantly increase the delineation and conspicuity of the roadway conditions for the motorists and pedestrians.

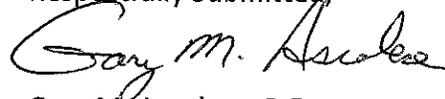
A new drainage system was constructed from Linwood Avenue south along Emerson Plaza East to increase the available drainage pipe size to a 42 inch capacity. The connection point was also set to continue the future installation of a 42 inch pipe up to Lincoln Boulevard. The remaining drainage pipes were upsized and replaced as needed to increase their capacity and minimize the chances of their structural failure in coming years.

New curblines, sidewalks, pavers, street lighting and shade trees were installed to improve the aesthetics along the roadway. In some cases driveways and parking areas were altered and improved to accommodate changes to off street parking. Bus stop locations were reassessed and relocated where necessary to improve pedestrian safety and traffic flow.

The County of Bergen is in the final stages of assessing the changing traffic patterns caused by the installation of the new traffic signals. They are also monitoring the traffic detours presently set up west of the project in Westwood that are affecting the operation of Kinderkamack Road. This will result in changes in the timing parameters to the three signals on Kinderkamack Road to improve the traffic responsiveness of these signals. Emerson also requested for the County to implement variable timing maximums for different times of day and we are awaiting their implementation.

The improvements made to this section of Kinderkamack Road now provide a safe level of capacity and operation for many years to come. This project will receive ongoing attention from Emerson, its professional staff and County of Bergen to ensure that the timing and safety parameters are proper. The citizens of Emerson and surrounding communities are already benefitting from these improvements. These improvements will continue to provide residents of Emerson, our sister municipalities and all who use Kinderkamack Road a safe and effective travel route through downtown Emerson.

Respectfully Submitted,



Gary M. Ascolese, P.E.

Boswell Engineering

Emerson Borough Representative