

# Mario Fiorillo, SI

Senior Traffic Engineer

## SUMMARY OF QUALIFICATIONS

Mario Fiorillo has over 30 years of diverse experience in the areas of Signal Design and Traffic Operations, with particular skills in the detailed analysis of traffic operations. He has been involved in the design of both isolated and network signal projects, and has directed a number of Traffic Impact and Parking Studies, Signal Warrant, developed conceptual, preliminary and final Traffic Signal Plans, Signing, Striping and Maintenance of Protection of Traffic "Work Zone" for a wide variety of private developers and public agencies. His experience includes the use of numerous Transportation software such as PASSER, TRANSYT7F, TRAF-NETSIM, SYNCHRO plus SimTRAFFIC, CORSIM, SOAP, CINEMA, HCS, and others.

Mr. Fiorillo has developed numerous Civil and Transportation Engineering software, for use in-house and in the field. He has also developed numerous project and companies web site.

## PROJECT EXPERIENCE

### **Midway Road Study, from 25<sup>th</sup> Street to Turnpike St. Lucie, Florida.**

Prepared Traffic Signal Plans for three intersections (Jenkins Rd., Selvitz Rd., and 25<sup>TH</sup> Street) along Midway Road (CR 712). Duties included existing signal inventory and Synchro analysis of this corridor between FTPK overpass and 25<sup>TH</sup> Street. During this analysis storage length from the main road into unsignalized intersections were estimated and design, duties included the inventory of existing conditions, developing phasing, timing, electrical wiring diagram signalization layouts, details etc using Microstation. The signalization Plans included: Key Sheet, Tabulation of Quantities, General notes, Signalization Plan for the above three intersections, Guide Sign Sheet, and Mast Tabulation.

### **City of Homestead Traffic Consultant, Homestead, Florida.**

Developed computer software (Excel) to manage the City Concurrency Management System within the City limits. Serve as part of the technical team reviewing traffic studies, and the City concurrency management system roadway network; provide committed development traffic to consultants preparing Traffic Impact Studies within the City limit.

### **Walton Road - 4 Lanes Improvements City of Port St. Lucie, Florida.**

Prepared Signal and Electrical Design for two intersections along Walton Rod. Duties included the inventory and Synchro analysis of this corridor between Village Green Drive and Lennard Road. During this analysis storage length from the main road into unsignalized intersections were estimated and design, duties included the inventory of existing conditions, developing phasing, timing, electrical wiring diagram signalization layouts, details etc using AutoCAD.

### **Old Hammock Road/Isla Verde of Wellington, Wellington, Florida.**

Prepared Signalization Plan for main access driveway to this proposed development with State Road 7 (U.S. 441), meet with FDOT and Palm Beach County, duties included the inventory of existing conditions, developed traffic signal phasing, signal timing, electrical wiring diagram layouts, field survey with FPL to obtain future power source, etc.

### **Blessed John XXIII, Miramar, Florida.**

Prepared Traffic Impact Study for a Church, School, Office and 75 DU of Senior Residential. Currently modeling and analyzing the existing and projected traffic operations for Level of Services along Miramar Parkway using Synchro and SimTraffic.

## EDUCATION

Bachelor of Architecture,  
Atlantic University, 1972

Northwestern University,  
Evanston, Illinois

Computer Processing  
Institute, Bridgeport,  
Connecticut, 1982

Polytechnic Institute of New  
York

Georgia Institute of  
Technology

International Municipal  
Signal Association

## PROFESSIONAL ASSOCIATIONS

International Municipal  
Signal Association

ITE Institute of  
Transportation Engineer

## CERTIFICATIONS

Work zone certification

Traffic signal certification  
program

Traffic signal inspection  
certification

**City of Fort Pierce, Florida.**

Developed computer software (Excel) to manage the City Concurrency Management System within the City limits. The proposed new turning movement site traffic for a proposed development is enter on individual spread sheet, this site traffic is added to the existing traffic plus background growth. Capacity of the links or the sum of NB(EB) and SB(WB) are analyzed during the P.M. Peak Hour. Bi-directional link capacity analysis of the existing Traffic Volumes is perform thru-ought the network. The contributing percentage of each individual approved project to each of the links is also calculated and it will be use for future mitigation. The existing traffic volume can also be updated via spread sheet. A total of 13 major corridors were developed with 42 nodes and approximately 62 links for this network.

**City of Pahokee Florida.**

Developed computer software (Excel) to manage the City Concurrency Management System within the City limits. The proposed new turning movement site traffic for a proposed development is enter on individual spread sheet, this site traffic is added to the existing traffic plus background growth. Capacity of the links or the sum of NB(EB) and SB(WB) are analyzed during the P.M. Peak Hour. Bi-directional link capacity analysis of the existing Traffic Volumes is perform thru-ought the network. The contributing percentage of each individual approved project to each of the links is also calculated and it will be use for future mitigation. The existing traffic volume can also be updated via spread sheet.

**Weston General Planning & Platting Services, Weston, Florida.**

Currently modeling and analyzing the existing and projected traffic operations of the Weston Road arterial from South post Road to Griffin Road using Synchro and SimTraffic software. Includes analysis of gap study data, speed study data and traffic classification data.

**Midway Road PD&E Study, from 25<sup>th</sup> Street to US-1 St. Lucie, Florida.**

Modeling and analyzing the existing and future traffic operations of the Midway Road arterial from South 25th Street to US-1 using Synchro and SimTraffic software. Includes analysis of traffic operations of various proposed Midway Road cross-sections.

**Transportation Planner Consultant to the City of West Palm Beach, Florida.**

Transportation Planner to the City of West Palm Beach, works at City Hall helping the Planning Department on Traffic and Transportation issues. From preparing and reviewing Traffic Impact Studies, parking layout, internal circulation, provide recommendation to the City Planning Department before current applications are approve.

**Tri-Rail Double Track Corridor Improvement Program, South Florida.**

Tri-Rail Double Track Corridor Improvement Program, Segment 5 Project that will allow the South Florida Regional Transportation Authority/ Tri-Rail to expand commuter rail service to relieve South Florida's congested highways while providing improved connectivity. Once completed, the Segment 5 Project will allow SFRTA/Tri-Rail to run trains every 20 minutes during peak hours. This work includes the review of existing safety conditions at 32 major crossing between Palm Beach, Broward and Dade County and the modification and expansion of signal. For this study, existing traffic data and observation of exiting queues at these locations were observed and a simulation of the existing condition was developed using SimTraffic to duplicate the field observation. This file was then modified on the basis of future traffic projections and new train schedules to simulate future condition and analyses possible queues between major intersections and railroad crossings.

**Toney Penna Drive Improvements, Town of Jupiter, Florida.**

Revised exiting signal, electrical and striping plan to the intersection of Toney Penna and Maplewood Drive, based on new roadway geometrics.

**Truck Route Management and Community Impact Reduction, New York (NYCDOT).**

Sub consultant to Edwards and Kelcey. The goal and objectives of this project include coordinating engineering, educational, informational and enforcement efforts so that trucks remain on designated truck routes until reaching the intersection nearest their destinations, and do not inappropriately utilize residential streets. Performed the following tasks on this project. Review existing traffic volume data: 1) At major street and arterials, 2) Truck route sign inventory, 3) Street geometrics at problem locations within the study area, 4) Examine existing truck routes throughout of the five

Boroughs in New York and make recommendations to improve safety, efficiency, and promote time savings in truck operation while reducing pollution levels, 5) Identify and examine concerns of truck operators and make recommendations, 6) Examine feasibility, of removing trucks from inappropriate streets and routing to arterial streets and highways suitable for truck traffic, 7) Attend public meetings in all Five Boroughs throughout the life of the project. These meetings provide community members, business groups an additional forum by which they can participate in the project. These meetings served to introduce the project, present the results of our initial community survey, and begin to work with communities on highlighting the issues and concerns affecting their neighborhoods. Developed power point presentations to outline existing problems and provide recommendation to the problems. This presentation included still pictures, links to stream video of the area in question, and graphic representation of possible solutions, this was achieved by superimposing the improvements to still picture of the problem location.

**New Paltz Buildings, New Paltz, NY (DEC).**

Redesign existing parking lot layout base on a new site configuration and propose grade. Responsible for storm-water management design in conformance with the new guidelines by the DEC Design Manual. Evaluated all the acceptable storm water management practices such as ponds, wetlands, infiltration, filtering systems & channel systems. The following software were used HydroCAD and TR-55, to perform the Hydrologic Analysis and develop the bio-retention basins for this project.

**American Airline Terminal, JFK, Queens County, NY.**

Review all proposed traffic signals phasing, and timing. Inspected and approved traffic signal operation at the two new access points to the terminal, prior to activation. Revised parking layout to comply with new security regulations after 9/11. Increase set back and redesign some areas of the parking layout. Developed Bid a Construction documents using the PANYNJ standards.

**Henry Hudson Bridge. MTA.**

Review future drainage conditions for the Henry Hudson Bridge after some roadway improvements, and the addition of a Bicycle Path.

**Commodore Business Park., US Route 322, Logan Township, NJ.**

Prepared plans for ¾ miles of state highway to support development of more than 200 acres consisting of light industrial/planned unit development. The infrastructure design consisted of construction plans, roadway profile, cross sections, grading, drainage, signalization design and electrical plans for two new intersections and the redesign of an existing one.

**Aveccina Academy School, Yonkers, Westchester County, NY.**

Prepared Traffic Impact Study for a proposed private Aveccina Academy School. The school is to be located in an existing unoccupied building. The study was requested by the City Planning Board to address existing and proposed traffic impacts and to identify any mitigative measures that would minimize traffic flow congestion through the adjacent streets.

**Rehabilitation of Willow Avenue Bridge, Hudson County, NJ.**

Provide Total Design and Construction Support Services for reconstructing the Willow Avenue Viaduct. Prepared traffic control plans describing control measures to be used for facilitating road use through the work zone. For this project, three sets of Maintenance and Protection of Traffic were developed from a single lane closure to a full closure of the bridge. During the full closure of the bridge, a temporary traffic signal plan was designed for the intersection at Park Avenue and 9th Street.

**Second Avenue Subway Project, New York, NY (MTA).**

Developed Preliminary MPT's alternatives for Cut-Cover, Mined, and TBM operations. Modeled existing and proposed traffic along Second Avenue to simulate (SimTRAFFIC) different lane closures during construction. Analyzed intersections under the proposed construction zone. Developed a Power Point file to link special MPT areas to stream videos and still pictures. This file can be used by the Team to review a specific location for land use, lane geometric, etc. Developed preliminary cost estimates for all stations under the cut-cover, mined and TBM operation.

**Bus Ramp Signs and Signals Upgrade, New York, PANYNJ.**

Identified and recommended the signs and signals that required replacement for the Port Authority Bus Terminal Facility in mid-town Manhattan. The project has 32 Static, 10 Drum and 4 black-out signs. Replaced all Drum signs with VMS. Developed a web site to share real-time information between all consultants and the PANYNJ. This web site provided the following information: major updates, team directory, meeting schedule, pictures of each individual sign, stream video of the major structures under study and design information for the proposed 10 VMS's location.

**Cumberland Mall, Cumberland, New Jersey.**

This project consisted on the design, preparation and implementation of multiple traffic signal timing plans, including re-timing and modification of cycle, offset and splits. The goal of this project was to create optimum flow patterns based on proposed volumes generated by the proposed expansion of the existing Cumberland Mall. The total of seven intersections were part of this project, five existing and two new signals.

**Kean College, Union, New Jersey.**

Prepared traffic warrant study and signalization plan for one intersection, duties included the inventory of existing conditions and performance of highway and pedestrian analysis.

**Path Mark, Kearny, New Jersey.**

Prepared traffic signal warrant study and traffic impact study for 50,000 sf of supermarket. Develop signing, striping and signalization plan for the main access driveway.

**Costco Wholesale, Clifton, New Jersey.**

Prepared traffic signalization plans for one intersection. Duties included the inventory of existing conditions, performance of highway capacity analysis and developing phasing, timing, wiring diagram layouts and getting all approval required for construction.

**Newark Airport Traffic Study, Newark, NJ.**

Land use and transportation project. Developed future trip base on existing vacant land and unoccupied building along Frelinhuisen Avenue between Route 22 and Virginia Street. Performed Capacity Analysis at three of the major streets along this corridor and prepared recommendations for the overall project.

**Westfield Traffic Analysis, Westfield, Union, NJ.**

Performed traffic impact study for the development of 59,848 sf of supermarket, based on four different schemes. Redistributed traffic through an existing network of streets in the vicinity of the proposed site.

**Traffic Modeling for M.O.T. Network Simulation, Newark, NJ.**

The objective of this project was to add a toll node to the latest version of Synchro and SimTraffic model to allow state-of-the-art evaluation of toll facilities. The final purpose of the model is to incorporate toll plaza signal systems so that the effect of signal operation downstream and upstream of the toll facilities can be analyzed and evaluated. The model would have the capability to examine impacts of toll activities such as lane closure, increasing and decreasing number of toll bays, changing type of bay characteristics, etc. Provided some of the parameters used in the development of this software and reviewed the different software tests.

**Route 46 and Franklin Street, Denville, Morris County, NJ.**

Review final location for a proposed Pedestrian Bridge Overpass between the south-west corner (Burger King), and the north-east corner of this intersection. This study was done to determine if the proposed pedestrian bridge will obstruct the sight of line of two existing traffic signal heads located on the far side of the Route 46 East Bound approach with Franklin Street.

**Route 46 and Main Street, Borough of Netcong, Morris County, NJ.**

The project scope included the realignment of Main Street and the installation of traffic signals at the intersections of Route 46/Main Street and Route 46/Center Street and the realignment of Main Street. The operation of the signal also included pre-emption for the NJ Transit railroad crossing of Main Street. Developed and maintained a project web site for the duration of this project to give parties involved and the public crucial real-time information. Developed traffic simulation between intersections during the peak hours using Synchro 5.0 software. Coordinated disciplines and tracked status of project schedule. Developed a project web site to give parties involved crucial real-time information.

The web pages revealed the current status of the project as well as listed schedules and a member directory and email addresses.

**Route 22 Reconstruction, I-684 to CR 65, Putnam County, NY.**

4.7 km of preliminary and final design to reconstruct and widen Route 22 to four or five lane roadway with improved horizontal and vertical alignment. This aspect of the project included analysis of travel and running speed, determine ADDT projections for each stage of the project.

**Western Queens Sub-Regional ITS System, Queens, NY.**

ITS design Traffic Engineer for this large scale ITS project. Reviewed final location for all the VMS signs, radar detector, trailblazer and camera units along the Whitestone Expressway. Designed guide rail, fencing and electrical meter cabinet locations. Battery Park City, NY. Prepared traffic signalization plans for three inspections. Duties included the inventory of existing conditions, performance of highway capacity analysis and development of phasing, timing and specifications for construction.

**Van Wyck Expressway, NY.**

Operational Support Services during Design and Construction of the Light Rail System to JFK International Airport, NY. Traffic Engineer for the traffic design plans of the proposed NYSDOT projects during the design and construction of approximately 8 miles of the Light Rail Transit System (LRTS). Supervised all corridor access analyses for the 15 ramps on the Van Wyck Expressway. This included analysis of acceleration and deceleration lanes and levels of service to determine how to reduce accident rates.

**Route 6/6N Corridor Study, Inventory Existing Transportation System, Putnam and Westchester Counties, NY.**

Responsible for accident analysis for a corridor study to assess current and forecasted mobility needs in the Routes 6 and 6N. The scope of work included review of the operation of all traffic signals on this corridor and compilation of accident analysis and safety recommendations for the corridor. The study inventoried the existing and future needs such as modification of signal phasing, timing and roadway improvements and formulate and assess short/long-term alternative solutions/strategies to address identified needs. Study documentation included periodic submittal of detailed technical memoranda, preparation of draft and final corridor study report, conceptual plans and layouts.

**I-80(G) Mayhill Street Bridge, Saddle Brook, NJ.**

Identified and verified utility facilities and owners, analysis of impacts and preparation of acceptable relocation schemes and utility agreement plans.

**Companies:** Wilbur Smith and Associates, NY City  
Raymond Keyes, NY  
Langan Engineering, NJ  
The RBA Group, NJ  
Edward & Kelcey, NY City  
Keith & Schnars, FL  
Calvin, Giordano & Associates, FL

Speak and write Spanish and Italian fluently for additional information visit my personal web-site at <http://www.kmfdata.com/PRO.HTML>