



## *William Jeffrey, Traffic/Design Specialist*

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**Education:** B.S. in Civil Engineering, Widener University, 2014

Mr. Jeffrey's is a graduate engineer with duties that include traffic signal design, intersection analysis, and various traffic data collection tasks. He has performed intersection and arterial analyses using Synchro and SimTraffic software.

### ***Relevant Projects***

- **Pennsylvania Department of Transportation E03413 District 6-0 Low Cost Safety Improvements - WO #1, WO#3 & WO#5** – Responsible for preparing traffic control plans, traffic signal designs, and field observations. PennDOT District 6-0 is seeking innovative low cost safety approaches to improve high crash locations and corridors within the district. KMJ is responsible for three work orders: WO#1 - Intersection Safety Implementation Plan (ISIP), WO#3 – New Falls Road and WO#5 – Levick Street. In the ISIP assignment, KMJ is preparing improvement plans and signal design for various intersections in all five D6 counties. For New Falls Road, KMJ is preparing traffic signal plans for five signalized intersections. **KMJ was also responsible for preparing traffic signal plans for ten intersections as well as an interconnect plan for the 1.3-mile roadway of Levick Street.** (2016-2020)
- **City of Philadelphia American Street Improvement Project – Traffic Engineering, City of Philadelphia Department of Streets** –Responsible for the development of the Traffic Control plans and designing and preparing a total of 24 ADA curb ramps. KMJ is responsible for the coordination among stakeholder groups and public coordination throughout this project. KMJ is facilitating all meetings including the Project Steering Committee Meetings, Lunchtime Business Meetings, Public Open Houses and Study Area Tours. KMJ is planning for, organizing and conducting each of these events. Along with the stakeholder involvement, **KMJ is responsible for the traffic control plans along this corridor and designing 24 ADA Curb Ramps throughout the corridor.** The City of Philadelphia has received federal funding to make improvements along the two-mile North American Street corridor between Girard and Indiana Avenues. The aim of this project is make American Street work better for its users and to provide improved streetscape amenities, including green storm-water infrastructure, while continuing to accommodate the transportation needs of this diverse corridor. (2016-2017)
- **Philadelphia International Airport On-Call Planning Services, Philadelphia PA-** Responsible for traffic signal calculation and analysis using Synchro 9, he also conducted field observations. The Philadelphia International Airport seeks to improve ground transportation options by providing a Transportation Network Companies (TNC) Parking facility. KMJ is responsible for the parking utilization analysis in the existing TNC Lot, and provided recommendations for a potential new valet/TNC Lot. KMJ also evaluated two traffic signals at the International Plaza Driveway and the Cell Phone Lot Driveway to determine congestion issues and potential improvements. This involved verifying existing conditions, calculating clearance timings and conflict factors, and measuring sight

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- distance. KMJ conducted 14-hour manual turning movement traffic counts at both intersections and conducted capacity analysis using *Synchro 9*. (2017)
- **City of Philadelphia Lincoln Drive Resurfacing and Restoration - Traffic Signal Design, City of Philadelphia Department of Streets** – Responsible for conducting field observations at six intersections along Lincoln Drive. This work is part of the city-wide traffic engineering design services to assist with highway projects, including the preliminary and final design of traffic signals, streets and roads, traffic calming measures, school zone safety improvements, street re-paving packages, ADA ramps, Intelligent Transportation Systems (ITS), traffic studies, design of line stripping, traffic control signage and trails. KMJ is responsible for conducting field observations and preparing final traffic signal permit plans for six intersections along Lincoln Drive. (2012-2016)
  - **City of Philadelphia Roosevelt Boulevard Multimodal Corridor Program -Traffic Engineering, City of Philadelphia Department of Streets** - Responsible for developing the Synchro model and field observations. Duties include documenting intersection geometry, measuring signal timings, and taking photographs of every intersection approach. The City of Philadelphia Department of Streets has taken on the robust effort to transform the bustling yet problematic Roosevelt Boulevard to a modern multimodal transportation corridor. KMJ is responsible for preparing the Synchro Model for 40 complex intersections along the Roosevelt Boulevard Corridor, between Broad Street and Devereaux Street. KMJ also conducted field observations, verified roadways and traffic signal conditions and collected data to verify the Synchro Model. (2015-2019)
  - **City of Philadelphia Transit Signal Priority System Performance (TSP)** – Responsible for collecting and analyzing Southeastern Pennsylvania Transportation Authority (SEPTA) bus routes along four key corridors and 124 signalized intersections. Using the KITS mobile app, he was able to evaluate corridor performance noting stops/starts/speed, etc. along SEPTA Routes 6, 52, 60 and 66. The City of Philadelphia, SEPTA and PennDOT sought to improve transit vehicle running time and reliability as well as improve traffic flow along capacity constrained arterials. This work consists of gathering transit vehicle travel time data, prior to implementation and post implementation to quantify the impact of providing transit signal priority (TSP) operations on transit vehicles. The collection and analysis of data will provide a measure for the overall effectiveness of the transit priority system. (2015-2016)
  - **30th Street Station Precinct Joint Master Plan** – Responsible for the development of graphics in AutoCAD, and preparation of analytical spreadsheets. A 30th Street Station District Joint Master Plan is being developed with AMTRAK, Drexel University, and Brandywine Realty Trust. This Master Plan will take into account development in and around the 30th Street Station area, including Drexel University's Innovation Neighborhood. KMJ is responsible for collecting and evaluating the current vehicular traffic conditions in the area surrounding 30th Street Station; as well as comparing the current conditions to several studies previously conducted in the area. KMJ is also responsible for evaluating future conditions with new development in the area and determining recommendations for future congestion reduction. (2014-2016)
  - **City of Philadelphia Historic Streets Curb Ramp Design, City of Philadelphia Department of Streets** – Responsible for conducting field investigations, taking measurements and preparing a photo-log to document conditions. This work order is for the reconstruction of three historical streets (Maiden Street in Manayunk and American Street and Waverly Streets in Center City). The historical nature of the roadways and adjacent buildings presents a number of design challenges that must be addressed to provide access in these areas. (2015-2017)

- **Pennsylvania Department of Transportation District 2-0 E01107/E02521/E03731 Highway Occupancy Permit (HOP) Application Reviews** – Responsible for conducting field investigations, noting lane configurations, grades, sight distance and documenting intersection geometry by taking photographs of every approach. He also assisted in reviewing capacity analyses, trip forecasting (generation, distribution, modal split, and assignment), signal warrant analyses, turn lane and phasing warrant analyses, signal timing, phasing, coordination, data collection and preparation of final review comments. (2011-2021)
- **Delaware Department of Transportation Traffic Impact Study Services (Agreements 1654, 1655, 1528)** – Responsible for conducting field investigations as part of the TIS review. Duties include noting lane configurations, verification of traffic signal phasing and documenting intersection geometry by taking photographs of every approach. KMJ's work includes data collection, field verification of intersections, development/review of current and projected traffic volumes, and analysis/review of existing and future traffic conditions both with and without the proposed site to identify potential impacts as a result of the development. In-depth investigations of the Synchro and/or HCS analyses will also be completed by KMJ staff to ensure proper modeling of the traffic operations. A list of recommendations is developed for the Final TIS review letter. (2013-2016)
- **City of Philadelphia Citywide Traffic Signal Retiming Initiative, City of Philadelphia Department of Streets** – Responsible for installation of BlueTOAD™ travel time data collection devices. The City of Philadelphia seeks to improve mobility and the flow of traffic along 21 major corridors within the City. Signal retiming remains as one of the most cost effective ways to improve traffic flow, increase capacity, and reduce congestion. (2011-2014)
- **City of Philadelphia Signal Integration Project, City of Philadelphia Department of Streets** – Responsible for field viewing signalized intersections throughout the City. Duties include noting lane configurations, verification of traffic signal phasing and documenting intersection geometry by taking photographs of every approach. The information collected in the field is used to enable the graphical features of the KITS software, the advanced transportation management software used by the City of Philadelphia, Streets Department. (2012-2013)