



**Project Name:** Traffic Operations and ITS (TOITS) – Bustleton Avenue South  
**Owner/Client:** City of Philadelphia  
**Type of Project:** Traffic Engineering  
**Location:** Philadelphia, PA  
**Completion Date:** 2013

---

## Project Description

The City of Philadelphia Department of Streets sought to identify, plan, design, and construct improvements to make streets and intersections safer for all roadway users. This program was the design and implementation of traffic signal and operational safety improvements along several corridors in the City of Philadelphia through a federal TIGER3 Grant. This work order in particular addressed the Bustleton Avenue South corridor.

## KMJ's Approach

KMJ was responsible for preparing the safety review report for the entire Bustleton Avenue South corridor along with preliminary and final design plans for 11 signalized intersections. This fast-tracked effort required significant coordination between and among the team as well as across projects being completed for different city departments to ensure a seamless design and implementation. The following tasks were completed:



**Preliminary Traffic Signal Design** – KMJ prepared Safety Review and Design Field View (DFV) traffic signal plans for 11 intersections along the Bustleton Avenue South project corridor. KMJ field verified these 11 intersections against existing survey. KMJ coordinated with the project team on such issues as proper placement of traffic signal equipment, intersection lane alignment, pavement marking and sign layout. Coordination from a recent repaving contract along Bustleton Avenue South was needed to ensure recently installed curb ramps were correctly placed on the plans. “The City of Philadelphia Traffic Guidelines” were followed in the design process.

**Safety Review/Audit** – KMJ performed a crash analysis for the entire Bustleton Avenue South corridor from Frankford Avenue to Tustin Avenue (30 signalized intersection and midblock locations), evaluating the most recent five-year crash history available from PennDOT’s CDART system. A detailed crash report was developed for the ten highest crash intersections along the corridor, which included collision diagrams, tables, and written description. PennDOT’s Design Manual 1A and Publication 212 were used as guidance for the report and crash reduction factors were derived from FHWA guidance.

## Client Contact/Reference

Richard Montanez, PE  
City of Philadelphia  
1401 JFK Boulevard, Suite 900 MSB  
Philadelphia, PA 19103  
215-686-5515  
Richard.montanez@phila.gov

Jeannette J. Quirus, PE, PTOE  
McCormick Taylor  
2001 Market Street, 10<sup>th</sup> Floor  
Philadelphia, PA 19103  
215-592-4200  
jjquirus@mccormicktaylor.com