



## **Heather M. Balgowan, P.E., PTOE**

RM Balgowan Forensic & Engineering Services  
Civil Engineer, Highway & Traffic Engineering Expert

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### **License**

New Jersey Professional Engineer #24GE05069300  
Professional Traffic Operations Engineer (PTOE)

### **Education**

1999-2004: Bachelor of Science in Civil Engineering  
Drexel University, Philadelphia, PA

### **Areas of Expertise**

I provide expert witness services in traffic engineering and highway design with knowledge and experience in national construction, design, operations and maintenance standards (e.g. AASHTO, FHWA, MUTCD, ANSI/ASTM, Public Agency Standards). The following is a list of major categories of my expertise:

- Highway Safety
- Guardrails and Barriers
- Parking Facilities
- Obstructions, Road hazards and Clear Recovery Zone
- Crosswalk Incidents
- Road Maintenance and Operations
- Roadway signage and markings
- Highway Maintenance Standards and Safety Procedures and Manuals
- Trip and Falls
- Construction Zone Safety
- Traffic Control Devices and Signal Timing/Phasing
- Accident Analysis & Reconstruction
- Vision Obstruction
- Roadway Surface Inconsistencies
- Geometric Roadway Design
- Motorcycle, Bicycle & Pedestrian Safety
- Engineering Specifications, Standards and Manuals
- ADA requirements

## **Professional Summary**

2021 to Present

**RM Balgowan Forensic & Engineering Services, LLC**

*Civil Engineer, Highway & Traffic Engineering Expert*

Provides expert witness services, litigation support, investigations, reports, and analysis on matters related to pedestrian and vehicular safety on private property and public roadways and sidewalks. Areas of expertise include, but are not limited to, traffic control devices; the design, construction, and analysis of roadways and intersections; bicycle and pedestrian safety; trip and falls; temporary work zones; parking facilities; clear zones; guide rail; roadside hazards; surface defects; roadway defects; design failures; road maintenance; roadway safety; and code compliance.

2005 to Present

**McMahon Associates, Inc.**

*Project Manager*

Involved in a variety of transportation engineering and planning projects, including preparation of the traffic engineering components of Municipal, County, and DOT corridor studies, alternatives evaluations, and land development reviews. Traffic impact work includes both public and private sectors such as trip generation calculations, forecasting, capacity/level-of-service, queuing, gap, & traffic signal warrant analysis, traffic signal design calculations, auxiliary lane warrant analysis, traffic simulation, parking accumulation and demand studies, analysis of future roadway networks, vehicle progression and safety studies. Very experienced with traffic operations/modeling analysis utilizing Synchro, SimTraffic, and Highway Capacity Software.

## **Affiliations**

Institute of Transportation Engineers (ITE)

Greater Mercer TMA

American Society of Civil Engineers of NJ (ACEC/NJ)

Women's Transportation Seminar (WTS NJ)

## **Awards**

Top Transportation Demand Management (TDM) Professionals Under 40

## **Presentations**

Presented various traffic engineering topics for the Certified Municipal Engineering (CME) program

## **Continuing Education**

New Jersey Work Zone Safety Conference, April 2022

Design of ADA Curb Ramps and Pedestrian Access Routes, March 2022

An Overview of the Environmental Process for Engineers, October 2021

Traffic Calming, May 2020

ADA Standards for Accessible Design, March 2020

TrafiRadar signal detection system, March 2020

Pedestrian and Bicycle Safety Assessments, February 2020

Women Executives in Engineering, November 2019

3D data visualization and animation capacities for public presentations of transportation projects, July 2019

Connected and Autonomous Vehicles, March 2019

Tru-Traffic, March 2019

Women Executives in Engineering, November 2018

Autonomous Vehicles, March 2018

FHWA Findings of Sign Deficiencies and Interim Approvals for Bicycle Treatments, March 2018

Subsurface Utility Engineering, February 2018

Transportation Systems and Capital Program Management Engineering Design Processes, October 2017

Limited Scope Delivery Process: Comparing CPM and TSM, October 2017

MASITE Annual Conference, October 2017

MASITE Annual Conference - Ethics Training, October 2017

Multi-Use Trails, September 2017

Traffic Signal Inventory Projects, December 2016

Innovative Left Turn Treatments at Signalized Intersections, September 2015

Ethical issues for Engineers, November 2013

Subsurface Utility Engineering, May 2013

Synchro and SimTraffic, May 2011

Traffic Calming: What's Working, What's Not Web Briefing, February 2006