



Malick & Scherer, P.C.



**Consulting Engineers  
Construction Inspectors  
Land Surveyors**

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# INTRODUCTION

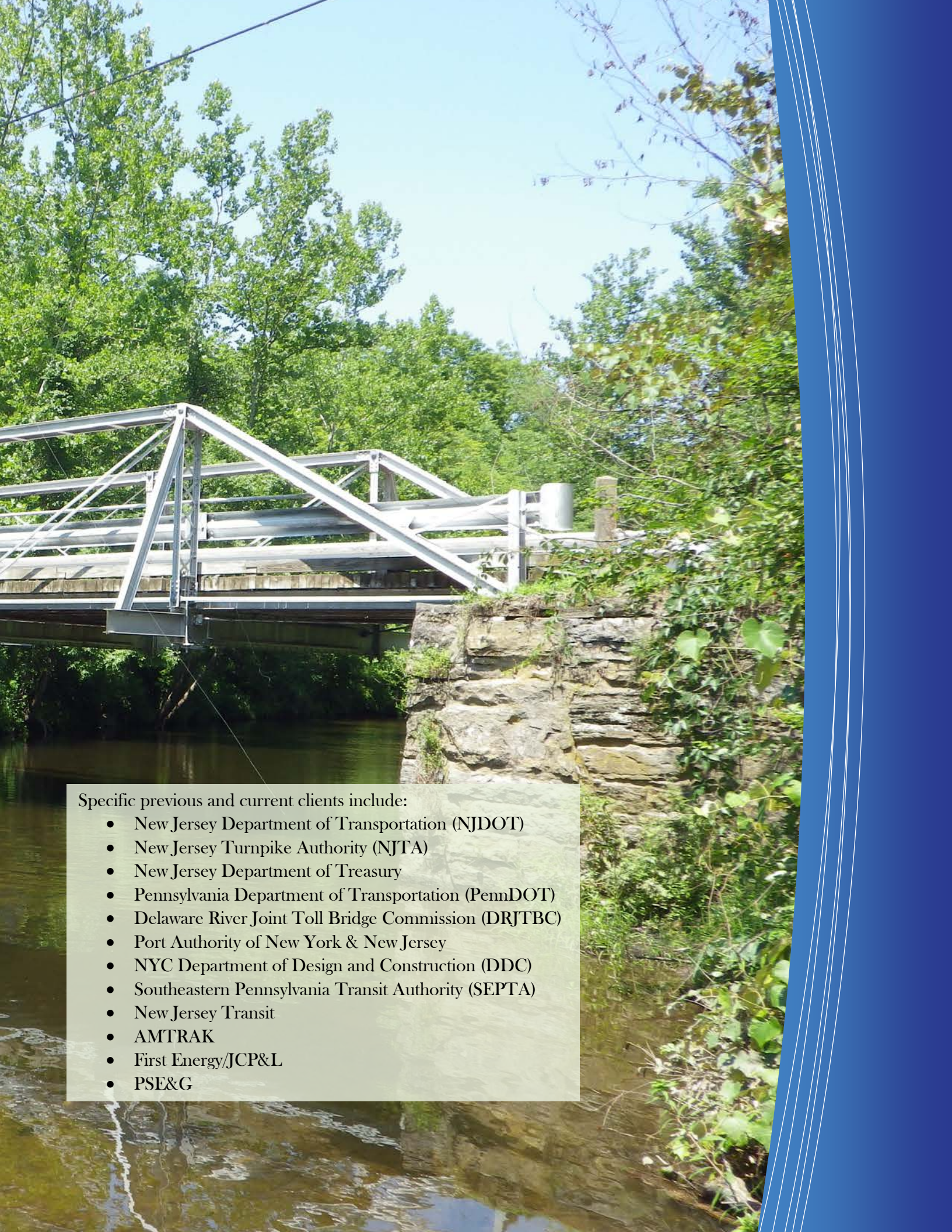
Malick & Scherer, P.C. (**M&S**) is a multi-disciplinary civil engineering consulting firm that is dedicated to serving their clients. Founded in 1998, **M&S** has a proven track record of providing excellent services and accepting the challenges faced by clients to be more innovative and cost-effective on increasingly tighter schedules.

The **M&S** Team consists of Professional Engineers, Professional Land Surveyors, Environmental Scientists, Construction Inspectors, and highly experienced support staff. This experienced and dedicated staff provides engineering design, survey and construction support services to meet each client's and project's needs. **M&S** shares the client's primary goal - to see a project to its successful completion. Our clients include municipal, state and federal agencies, utility companies, ENR Top 500 Engineering Firms, and many other private clients.

We are certified as an Emerging Small Business Enterprise (ESBE), Small Business Enterprise (SBE), Disadvantaged Business Enterprise (DBE), and Minority Business Enterprise (MBE) in New Jersey, Pennsylvania, and New York.







Specific previous and current clients include:

- New Jersey Department of Transportation (NJDOT)
- New Jersey Turnpike Authority (NJTA)
- New Jersey Department of Treasury
- Pennsylvania Department of Transportation (PennDOT)
- Delaware River Joint Toll Bridge Commission (DRJTBC)
- Port Authority of New York & New Jersey
- NYC Department of Design and Construction (DDC)
- Southeastern Pennsylvania Transit Authority (SEPTA)
- New Jersey Transit
- AMTRAK
- First Energy/JCP&L
- PSE&G



# KEY PERSONNEL



## Arif R. Malick, PE, CME - Principal

Mr. Malick is the Principal of the firm and has served the transportation industry for over thirty years, accumulating a wealth of engineering and management experience in transportation engineering and the project delivery process. He has managed multiple capital improvement projects from scoping to final design through construction and has successfully delivered projects for various public agencies including NJDOT, NJ Transit, NJ Turnpike Authority, PANYNJ, NYCDDC, DRJTBC, PennDOT, and SEPTA. As a

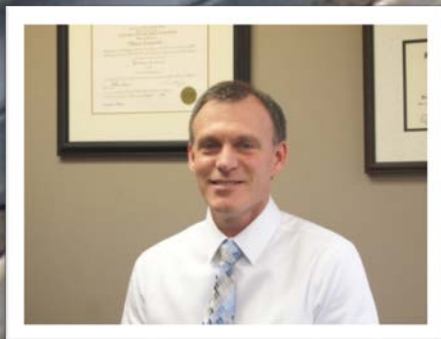
principal of the firm he is responsible for strategic growth of the firm, and client relations. Mr. Malick graduated from NED University of Engineering and Technology with a BS degree, and earned a MS degree from New Jersey Institute of Technology in 1989. He is a licensed Professional Engineer in New Jersey, New York, and Pennsylvania, and a Certified Municipal Engineer.

## Colleen Connolly, PE, PTOE - Associate

Ms. Connolly oversees the Highway/Traffic Engineering Department of the company and is a Senior Project Manager with a focus in the areas of transportation planning and traffic/roadway engineering. Ms. Connolly has successfully delivered project from concept to completion for various transportation agencies throughout New Jersey and Pennsylvania. Her experience includes concept development/ alternative analysis, roadway design, geometric design, traffic studies and analysis, traffic data collection, traffic signal design, crash analysis, and traffic control/MPT plans. She has performed these services on roadway/bridge projects as well as provided civil support to bus and rail projects. Ms. Connolly earned a BE degree from Stevens Institute of Technology and is a licensed Professional Engineer in New Jersey and New York, as well as a Professional Traffic Operations Engineer.



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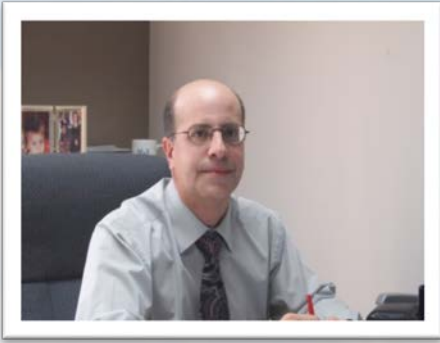


## Robert Zalewski, PE, CFM, CSM - Associate

Mr. Zalewski is the Department Manager of the M&S's Environmental/Civil Site Department and also a Senior Project Manager for civil/site engineering, stormwater management, hydraulic and hydrologic studies, bridge scour analysis, drainage design, and environmental permitting. He combines proficiency in hydrologic/hydraulic procedures and software with thorough knowledge of current environmental regulations to successfully coordinate and obtain approvals from regulatory agencies. Mr. Zalewski has served as the

Project Manager and/or Technical Supervisor for projects involving Flood Hazard, Pine-lands, CAFRA, Wetlands, Stormwater Management, Riparian Zones and Dam Safety Permits. Mr. Zalewski earned a BS degree from New Jersey Institute of Technology and is a licensed Professional Engineer in the State of New Jersey and Pennsylvania. He is also a Certified Floodplain Manager (CFM) and a Certified Stormwater Manager (CSM).





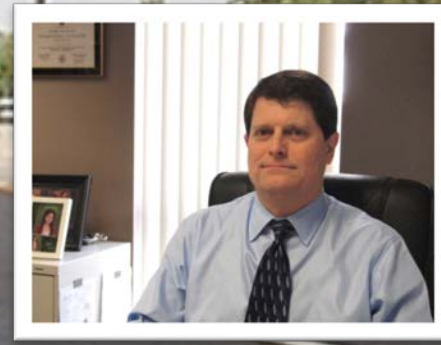
### [Steven C. Ragazzo, PE - Director of Structures](#)

Mr. Ragazzo is a Structural Engineer with over twenty five years of experience in all aspects of bridge design, rehabilitation, and inspection as well as other areas of structural design. He has served as Project Manager or Technical Lead on bridge projects that included field inspection, superstructure and substructure design, structural bridge improvements from minor repairs to full replacement and construction inspection for culverts, steel truss bridges, concrete bridges and steel beam bridges.

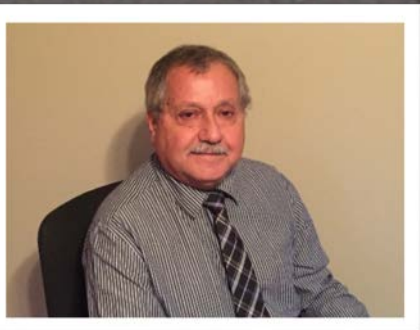
In addition, Mr. Ragazzo has been the technical lead for the initial design, structural analysis, and rehabilitation design of overhead sign structures, steel equipment support frames, monopoles, electrical towers, and utility poles. He has also been responsible for structural evaluation and rehabilitation design on projects involving transit facilities and infrastructure. Mr. Ragazzo received BS and MS degrees from Lehigh University and is a licensed Professional Engineer in New Jersey and Pennsylvania.

### [Michael J. McAlpin, PLS - Director of Surveying](#)

Mr. McAlpin is the Director of Surveying with over thirty years of land surveying experience. For more than two decades, he has focused on serving the transportation industry. He has been responsible for boundary and topographic surveys, right-of-way analysis and plans, basemapping, establishing project control and control reports, ALTA/ACSM Title surveys, as-built surveys, and subdivisions. He is experienced in the following public agency procedures and



NJTA, PennDOT, NJ Transit, SEPTA, PANYNJ, and NYCDDC. Mr. McAlpin is a licensed Professional Land Surveyor in New Jersey, New York, and Pennsylvania.



### [Joseph Aliseo, CPM - Construction Services Manager](#)

Mr. Aliseo brings over forty years of transportation experience to M&S, including 17 years of experience in organizing and managing construction services. Mr. Aliseo has extensive experience in overseeing construction personnel on teams providing construction inspection services on major roadway reconstruction and facility improvement projects for major transportation agencies such as NJDOT and NJ Turnpike Authority. He has also been responsible for painting inspection and other construction

management services for various clients throughout New Jersey. Prior to joining the transportation consultant community, Joe worked for the NJDOT for 27 years in various positions. He is a graduate of New Jersey Institute of Technology, where he earned his Bachelor's degree in Civil Engineering. He is also a Certified Public Manager (CPM).



# HIGHWAY ENGINEERING

**M&S** has provided consulting services to the transportation industry for over a decade and provides a wide range of highway engineering and design services. The **M&S** Team has the diversified expertise to handle all aspects of highway design and project management with experience working as a prime consultant directly for the NJDOT and multiple counties.

Having followed many projects from feasibility analysis to conceptual design, final design, and through construction, the dedicated professionals at **M&S** have developed the experience necessary to get a project completed. In addition, they understand the importance of incorporating quality assurance practices and constructability reviews into each stage of the project.

Plans and geometric designs can be completed in either Microstation/Inroads or AutoCAD/Autodesk Land Desktop/Civil 3D formats depending on the client's needs. The **M&S** Team is well versed in applying the standards and specifications of many large transportation clients such as NJDOT, PennDOT, NJ Turnpike, and the Port Authority of NY & NJ.







Services:

- Alignment Studies / Concept Development / Feasibility Studies
- Geometric Design of Highways and Streets
- Intersection and Roundabout Design
- Topographic Surveying and Mapping
- Drainage Design/Hydrologic and Hydraulic Analysis
- Traffic Studies
- Traffic Signal Design
- Design Exception Report
- Design, Plans, Specifications and Estimates
- Erosion and Sediment Plans and Permitting
- Right-Of-Way Research and Plan Development
- Context Sensitive Solutions
- Traffic Calming/Safety
- Utility Relocation, Design, and Coordination
- ADA Design and Inspection
- Guiderail Inspection and Design
- Pavement Marking and Signage
- Estimating and Life Cycle Cost Analysis
- Maintenance & Protection of Traffic (Phased and Detoured Construction)



# STRUCTURAL ENGINEERING

The **M&S** Structural Engineering Department provides a wide variety of engineering and design services. They have extensive capabilities in both the rehabilitation of existing structures and the design and construction of new structures.

The **M&S** Team has the experience and expertise to provide all of the essential structural engineering services required to support the transportation industry. These services include the inspection, analysis, rehabilitation, and retrofitting of existing bridges and culverts as well as the design of new bridges and culverts. Additional expertise includes a wide range of other structural engineering services including the design of retaining walls, noise walls, and sign structures, as well as the design of temporary structures such as sheet pile walls, cofferdams, and temporary utility supports.

**M&S** also offers the structural evaluation and rehabilitation design on projects involving transit facilities and infrastructure, as well as structural analysis of monopoles, and electric transmission poles.

**M&S** has the experience and knowledge to get the project completed without losing sight of the client's budget and goals.







Services:

- Vehicular and Pedestrian Bridge Design (Steel, Concrete, and Timber)
- Precast and Cast-In-Place Culvert Inspection and Design
- Structural Evaluation and Rehabilitation Design of Transit Facilities
- Retaining Wall Design
- Sign Structure Design
- Noise Wall Design
- Load Rating Analysis of Bridges
- Excavation Support Structure Design
- Utility Transmission Line Support Structure Design



# TRAFFIC ENGINEERING

**M&S** provides a full range of traffic engineering services both as part of design improvement projects and planning studies including large interchange, roadway widening, signal optimization, and intersection improvement projects. These projects included the development and analysis of improvement alternatives to determine ways to best satisfy current and future traffic demands. With an understanding of the importance of developing context sensitive designs and striving to provide viable solutions to traffic problems while mitigating environmental impacts, right-of-way impacts, and minimizing cost, **M&S** brings real world experience into concept development.

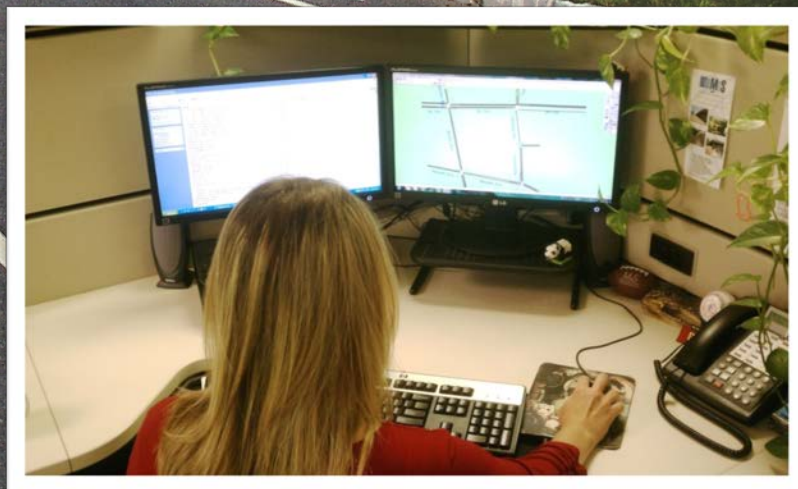
**M&S** also manages and conducts traffic data collection programs. These programs include traffic counting utilizing both manual and automated techniques, various origin/destination studies, physical inventory of geometric features, field observations of existing traffic patterns and driver tendencies, and accident data collection/crash analysis.





Services:

- Traffic Data Collection - Manual and Automatic Counts
- Origin/Destination Surveys
- Traffic Projections
- Operational Analysis
- Crash Diagrams and Analysis
- Traffic Impact Analysis
- Speed/Delay Studies and Queuing Analysis
- Alternatives Analysis
- NJDOT Access Report/Permit
- Traffic Signal Warrants Analysis
- Traffic Signal Design
- Professional Testimony





# ENVIRONMENTAL SERVICES

Over recent years, the amount and intensity of governmental regulation to protect wetlands and water resources has increased drastically causing environmental concerns to be a significant part of almost every project. **M&S** provides extensive experience in current environmental regulations and permitting processes. This knowledge is utilized not only to provide environmental services, but also to develop an environmentally sensitive and viable design.

Through our many years of experience in coordinating and preparing flood hazard, wetlands, riparian zones, dam safety, and waterfront development permit applications, **M&S** has developed an excellent working relationship with NJDEP. In addition, **M&S** has experience working with PADEP, Coastal Area Flood Review Act (CAFRA), the Pinelands Commission, New Jersey Board of Health, and various Soil Conservation Districts.



## Services:

- Wetland Delineation
- Environmental Assessment
- LOI and Wetland Permits
- Flood Hazard Permits
- Riparian Buffer Compensation
- Dam Safety Permits
- Soil Erosion & Sediment Control Permits
- Pinelands Permits
- CAFRA Permits
- Highlands Application



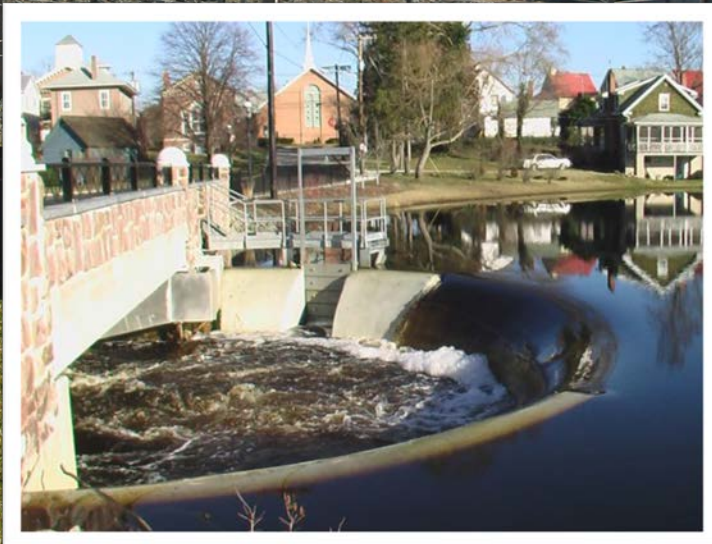
# HYDRAULIC ENGINEERING

As regulations governing flood hazard change, **M&S** reviews the regulations and obtains clarifications as necessary to develop a firm understanding of the changes. This level of understanding allows the **M&S** staff to guide clients toward maximum regulatory compliance.

**M&S** has the experience and knowledge to provide innovative design solutions to meet each client's needs leading to the reputation as hydraulic engineering specialists.

## Services:

- Dam Spillway Design
- Bridge Scour Analysis
- Flood Plain Analysis
- Hydraulic Design of Highway Structures
- Watershed Analysis
- Detention Basin Design
- Retention Basin Design
- Bio-Retention Basin Design





# UTILITY INFRASTRUCTURE

As utility companies strive to meet the needs of increasing power demands while incorporating green technologies, **M&S** has been there to provide them with overall civil support. As a multi-disciplined firm, we can offer services from the initial site feasibility screening through to construction services for new substations and transmittal lines as well as modifications to existing facilities. This depth of services allows **M&S** to address any problems that may arise throughout the design process with innovative and cost effective solutions.



## Services:

- Site feasibility including:
  - Site screening for environmentally sensitive areas
  - Preparation of constraints maps
- Survey basemapping
- Environmental permitting
- Plans and testimony for municipal zoning and planning approvals
- Design of Transmission Lines ranging from 34.5 kV - 230 kV
- Structural design of monopole, dead end structures, wood and laminated poles
- Final construction documents for bid
- Construction stake-out
- Construction support



# UTILITY COORDINATION & DESIGN

**M&S** understands that for a successful completion of any project, coordination with utility companies early in the design process is of paramount importance. **M&S** has the experience to follow utility coordination from concept through construction in compliance with the client's utility process particularly with the NJDOT, NJTA, and PennDOT procedures. This knowledge and experience allows for seamless coordination in making initial contact, obtaining as-built data, developing utility relocation plans, completing utility checklists, and preparing utility agreements. Relationships developed over years of working with various utility companies prove invaluable in getting the utility process completed.



## Services:

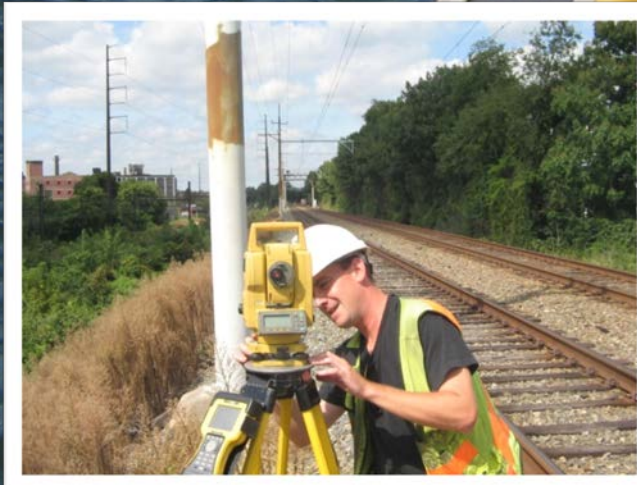
- Utility Survey and Mapping
- Utility Coordination and Design
- Utility Plans, Checklists and Agreements
- Substation layout, grading and drainage design
- Transmission and distribution line design



# LAND SURVEYING

The **M&S** Survey Department provides a broad range of surveying and mapping services to clients in both the public and private sectors with a focus on providing survey basemapping and right-of-way plans for public infrastructure projects. The staff of highly experienced licensed surveyors, field personnel and survey technicians is capable of successfully completing any size survey project.

Basemapping and contouring can be completed in either Microstation/Inroads or AutoCAD/Autodesk Land Desktop/Civil 3D formats depending on the client's needs. The **M&S** Team is well versed in applying the drafting standards of many large transportation clients such as NJDOT, PennDOT, NJ Turnpike, NYDDC, and the Port Authority of NY & NJ.





Services:

- Topographic Surveying & Mapping
- Boundary & Centerline Surveys
- Right-of-Way Surveying & Mapping
- Construction Control & Stakeout Services
- ALTA / ACSM Title Surveys
- Site As-built Surveys
- GPS Control/Location Surveys
- Right-of-Way, Easement & Parcel Map Preparation
- Aerial Control Surveys
- Subdivision Surveying & Mapping
- Electronic Data Analysis and Plotting
- Digital Terrain Modeling and Mapping
- Wetlands/Stream Encroachment Surveys
- Utility and Drainage Surveys
- Railroad and Tunnel Surveys
- Flood Certifications
- Deed, Map Data, and Document Research & Analysis
- DEP Stream Encroachment Survey/Documentation.
- Geodetic Surveys
- Property Title Surveys
- 3D High-definition Laser Scanning
- LiDAR Survey and Mapping
- Bathymetric Surveys
- Expert Testimony





# CONSTRUCTION INSPECTION

**M&S** has diversified experience in providing post design services including both construction inspection and construction engineering services for bridge and roadway related projects. These services have been provided on transportation projects for numerous agencies including NJDOT, NJTA, PennDOT, and several County Engineering Departments.



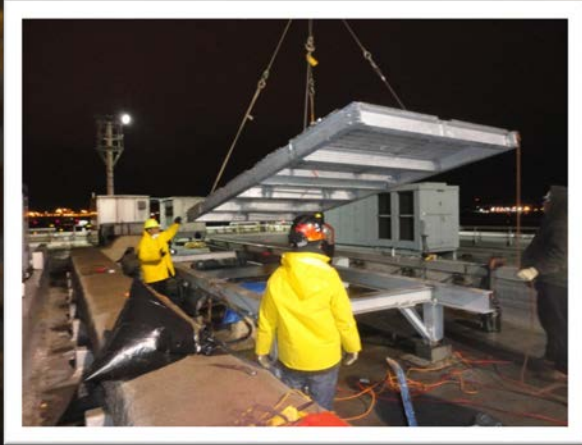
## Services:

- Construction Inspection/Observation
- Scour Inspection
- Cost Estimating
- Shop Drawing Review/Approval
- Responses to Requests for Information (RFI)



# CONSTRUCTION ENGINEERING

**M&S** has reviewed shop drawings related to all aspects of construction for numerous highway improvement and bridge replacement projects. Contractor submittals are reviewed thoroughly for conformance with the design concept and information provided in the contract plans and specifications. The working drawings and design calculations are logged, and appropriately marked, stamped, dated, signed and returned to the contractor with expedience so that project schedule can be maintained.



## Services:

- Demolition Plans
- Erection Plans
- Cofferdams
- Temporary Sheeting
- Temporary Shielding
- Proprietary Retaining Wall Systems
- Pre-stressed Bridge Beams
- Precast Culverts
- Noise Walls
- Sign Structures
- Drainage Structures





# NOTES









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