EXHIBIT B

(M&J ENGINEERING TECHNICAL PROPOSAL TO STAMFORD RFQ NO. 685)

Request for Qualifications for

Construction Inspection Services of Fiber Optic Truck Cable Installation

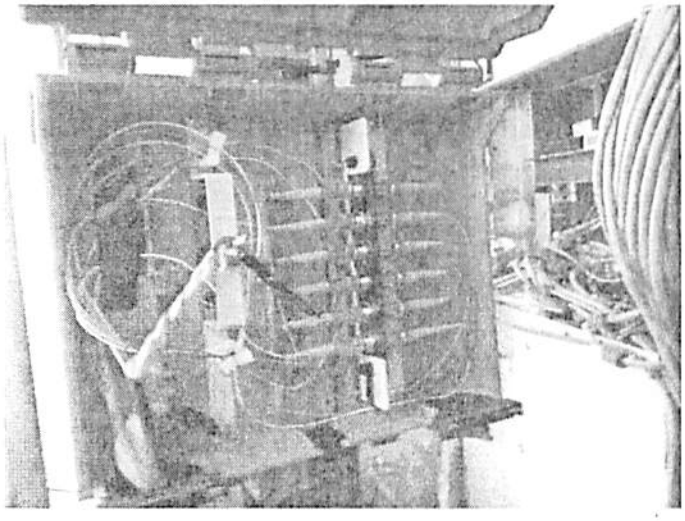
RFQ No. 685

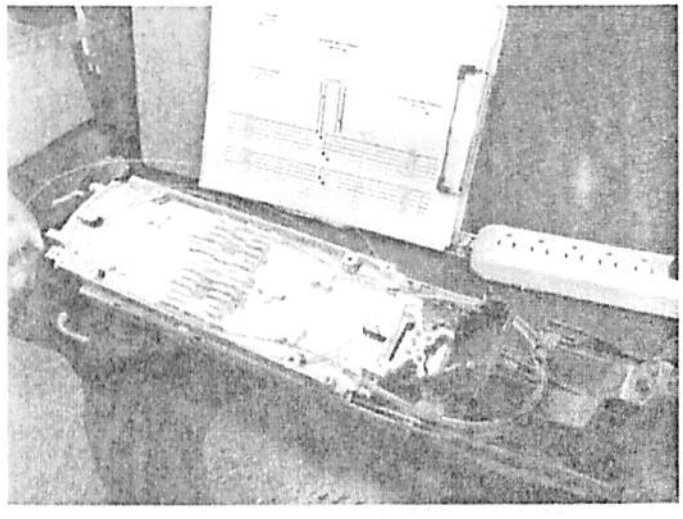
July, 2015

Technical Proposal

M&J ENGINEERING P.C.

"INNOVATIVE AND STATE-OF-THE-ART SOLUTIONS"





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Section 1 – Letter of Transmittal

M & J Engineering, P.C.

Consulting Engineers

July 29, 2015

City of Stamford
888 Washington Boulevard
Stamford, CT 06904-2152

Attention: Ms. Beverly A. Aveni, Purchasing Agent

Re: RFQ No. 685 – Construction Inspection Services of Fiber Optic Trunk Cable Installation

Dear Ms. Aveni:

M & J Engineering, P.C. is pleased to submit this Request for Qualifications in response to the Construction Inspection Services of Fiber Optic Trunk Cable Installation. We are a Connecticut DOT Pre-Qualified (ITS, Traffic, + Construction Inspection) and DBE firm that was organized in 2004. We specialize in all aspects of Construction Management and Inspection, ITS/Traffic System Design, Integration, Software, and Implementation. The principals include four veteran PEs with over 20 years' experience each serving with major local engineering firms with long track records in the planning, design and construction of infrastructure projects for transportation agencies. Current backlog exceeds $30 million and we have a professional staff exceeding 80. We are working extensively in Connecticut including Stamford, Norwalk, Greenwich, and completed an ITS assignment directly for the Connecticut DOT, and we have recently opened an office in East Berlin, CT.

M&J Engineering and our proposed project manager, Arnold Rubenstein, has been serving on the signal system since 1988. Mr. Rubenstein has been involved in most aspects of the system and has served in the design, integration, timing plan development, and software aspects of the project. Mr. Rubenstein is extremely familiar with the fiber-optic conversion and Ethernet upgrades that have now been completed for the first half of the intersections as well as the SUT work which has been ongoing throughout this period.

Outside of Stamford, M&J has been a leader in the inspection of ITS systems in the region. Mr. Rubenstein is completing an assignment for New Jersey DOT where he served as the Project Manager/Resident Engineer for two task orders totaling nearly $10 Million in construction. These projects included extensive traffic signal work, modern traffic control equipment, installation of Ethernet Switches, fiber optic trunk and drop cables, and other construction very comparable to that required for these projects.

Recent M&J inspection projects include a wide spectrum of efforts, many of which M&J is serving as the prime consultant and are further documented in other sections of this RFP:

- ✓ *Nassau County Incident Management System Inspection for Old Country Road (Prime)*
- ✓ *New Jersey Turnpike DMS and Guide Signs (Prime)*
- ✓ *TBTA QM40 Queens Midtown Tunnel Sandy Reconstruction Project (Prime JV)*
- ✓ *NYSDOT Region 8 (Westchester) ITS (Resident)*
- ✓ *NJDOT On-Call ITS Inspection (Prime)*
- ✓ *NJDOT Smart Moves 2014 South ITS Project (Prime)*

133-33 Brookville Boulevard, Rosedale, NY 11422
Tel: 718-525-5500 - Fax: 718-228-8411
Web: www.mjengineers.com e-mail: info@mjengineers.com

- ✓ *NYSDOT Region 10 (Nassau + Suffolk) Traffic Signal and Lighting Maintenance Project (Prime)*
- ✓ *NYSDOT Region 11New York City ITS Maintenance Project*
- ✓ *City of Stamford Urban Transitway-II ITS (Prime – Inspection)*
- ✓ *Northern State Parkway INFORM/ITS, Construction Inspection*

We have included a Project Understanding and Management Plan which fully explains our approach to the project and how we will achieve the city's objectives.

Please contact Mr. Arnold Rubenstein at (718) 525-5500 x123 (Email: arubenstein@mjengineers.com) for any questions or additional information that may be required concerning this Request for Qualifications. Thank you very much for your consideration.

Sincerely,

Arnold Rubenstein

Arnold D. Rubenstein, P.E.
Vice President of M&J Engineering, P.C.

Section 2 – Project Understanding

SECTION 2 – PROJECT UNDERSTANDING

OVERVIEW OF THE SCOPE OF WORK FOR THE FIBER PROJECT

The City of Stamford operates a state-of-the-art traffic control system that communicates with nearly two hundred intersections. The system was originally constructed with twisted-pair cable utilizing municipal gain in underground utility ducts and aerial segments outside of the CBD. The twisted-pair cable was originally installed in the mid-eighties with much of it almost thirty-years ago. In that time, fiber-optics has become the preferred method of achieving communications given its higher bandwidths and reliability. The city has been replacing the twisted-pair with fiber optics operating over Ethernet switches which has improved reliability and speed required by NTCIP compatible devices. The city has already replaced approximately half of the twisted pair interconnect cables with fiber optic trunk cables. This project will replace the remaining segments utilizing similar methods.

The latest traffic control equipment and related traffic control systems require higher band widths to observe the status of equipment, return all of the available information, and to support advanced features such as TSP (Transportation Signal Priority) that have been deployed. This completion of the network will allow these features to be supported to those intersections that were not on the existing fiber optic network in Stamford. Drop cable connection from this trunk cable along with a termination panels and fiber optic switches will be installed to provide reliable communications with the upgraded signal system central hardware. This project will also replace wiring at some intersections with new signal cables to prevent them from going to conflict flash mode due to frail insulation of old cables.

The scope of the construction work for this project includes the replacement of approximately 20 miles of existing twisted-pair cable which is aging and cannot reliably support the higher bandwidths required by modern traffic controllers, CCTV, and VIDS. This completion of the network will allow these features to be supported to those intersections that have not already been reached by the fiber optic network in Stamford, and will improve system reliability and will reduce maintenance costs for the older twisted pair cable.

Software integration for this project involves the incorporation of all existing and new CCTV that are along the new fiber trunks into the Digital Video Server. In addition, all of the intersections along the new fiber trunks will be equipped with an Ethernet Switch. The controllers and VIDS will be connected to the Ethernet Switch and the central software's database will be modified to control the intersection via Ethernet instead of the existing modem rack.

HISTORY AND PERSPECTIVE OF PROJECT

The following provides a summary of the preceding work for the Stamford Traffic Signal System:

- ✓ Phase I - In 1987, the first phase of the system became operational and included approximately 56 downtown intersections. Work involved the construction of a control center, supply of the mini computer based UTCS. Construction of a twisted pair communication system in SNET downtown ducts, and retrofit of existing NEMA control cabinets within external RCU telemetry device. This work was funded by the city.

- ✓ Phase II - In 1998 the second phase of the system became operational and included the addition of approximately 20 additional intersections immediately surrounding the initial core downtown intersections. This work was federally funded.

- ✓ Phase III - In 1990, this phase included an expansion of thirteen intersections on High Ridge Road. These state intersections were transferred to city operations and the project was federally funded.

- ✓ Phase IV - In 1992, a system upgrade was accomplished which substantially improved the software and reliability of the original system. In addition, new timing was developed and installed for the downtown core. This work was funded exclusively by the city.

- ✓ Phase V - In 1995, five additional intersections were added on West Main Street. This work was funded as part of a CTDOT project.

- ✓ Phase VI - In 1996, approximately 30 intersection control cabinets, dating back to the seventies, were replaced with modern NEMA assemblies. Approximately half of these intersections were on the system.

Another six phase system upgrade project was undertaken between 1996 and 2010 to implement a PC based Traffic Control System and extend the central computer control to intersections that were not included in the system, and integrate them into the control system. All these projects were completed with Federal Funds and were administered by the CTDOT.

Phase A	Central main frame computer was replaced with a PC based Traffic Control System in 1996. Changes to operating system coupled with an on-street remote processing cabinet, significantly reduced the maintenance costs by providing a more reliable system. Project also involved installation of 6 video cameras for monitoring the traffic.
Phase B	Involved addition of communication cable and pick-up of around 50 intersections for communication. Project involved cabinet replacement and a little overhead work.
Phase C	This project involved expansion of central computer control to 60 additional intersections by upgrading the signal equipment and communication units.
Phase D	This project involved expansion of central computer control to 21 additional intersections by upgrading the signal equipment, CCTV and communication units.
Phase E	This project involved expansion of central computer control to 19 additional intersections by upgrading the signal equipment, CCTV and communication units.
Phase F	This project involved expansion of central computer control to 21 additional intersections by upgrading the signal equipment, including video detection, CCTV and communication units.

The Traffic Control System currently includes virtually all the intersections within the City. These intersections are configured in a grid (downtown) and/or linked arterials. Currently there are fourteen operational sub-systems; each intersection has three to six timing plans.

OBJECTIVES OF THE PROJECT

Since 2000, fiber-optics has become the city's preferred method of achieving communications given its higher bandwidths and reliability. The city has been replacing the twisted-pair with fiber optics operating over Ethernet switches which has improved reliability and speed required by NTCIP compatible devices. The city has already replaced approximately half of the twisted pair. This project will replace the remaining segments utilizing similar methods. The latest traffic control equipment and related traffic control systems require higher band widths to observe the status of equipment, return all of the available information, and to support advanced features such as TSP (Transportation Signal Priority) that have been deployed. This completion of the network will allow these features to be supported to those intersections that have not already been reached by the fiber optic network in Stamford.

The existing twisted-pair cable network is aging and cannot reliably support the higher bandwidths required by modern traffic controllers, CCTV, and VIDS. Maintenance of reliable communications on many of the twisted pair trunks is becoming increasingly difficult. The primary control relies on once-per-second commands being issued from the central. Noise and leakage to ground in the splice boots and termination panels, temporary opening of splice joints, moisture, and break-down of lighting suppression all result in increased disruption of the signal and intermittent operation. Often, isolation and correction of these issues requires methods beyond the in-house staff and requires support from outside contractors and consultants.

Improved system reliability will reduce maintenance costs for the older twisted pair cables. Fiber Optics along with Ethernet Switches equipped with fiber transceivers is the current state-of-the-art for traffic control and ITS systems. Fiber optics is not vulnerable to "noise" and analog signal levels and tends to either work 100% or fail completely. As a result, isolation of issues is possible with the use of modern OTDR and Power Light Meters and failures can easily be identified. Ethernet switches utilize TCP/IP and modern networking principals that are well understood and widely utilized in IT. As such, specialized equipment and proprietary materials are not generally required.

KEY ISSUES FROM THE PERSPECTIVE OF THE CONSTRUCTION INSPECTION TEAM

Most of the project involves the replacement of twisted-pair cable with fiber-optic cable. For the aerial segments, such replacements are relatively easy in that the existing twisted pair cable can remain and be used as a "messenger" to attach the fiber optics to. This type of installation is relatively straightforward and can be accomplished with minimal effort. As such, a single inspector is likely to be able to monitor this type of operation.

The project also includes installation of fiber optics underground in existing and possibly some new conduit work. For segments that are underground in utility ducts, previous experience in Stamford indicates that there are likely to be segments that are either blocked or not accessible. The contract includes a "Clean Conduit" item which can be used to clear some obstructions. However, the inspection team will have to be able to monitor the use of this item and determine when it is not possible to use a segment of conduit. Items exist for installation of new conduits with the required

trenching and backfill. However, such work is expensive, and the inspection team will need to be vigilant in insuring that the item is used effectively and only when necessary. Another issue is that it is desirable to maintain the existing twisted-pair communications to each intersection operational until the complete fiber optic switch-out can be accomplished. Problems could occur if it is necessary to pull out twisted-pair cables before the fiber can be installed. If required, the inspection team will need to insure that any outages are minimal and that the contractor provides the necessary services to switch out the communications to a given intersection in an expeditious fashion.

The project also includes replacement of signal cable at various locations with new wiring. This type of work generally requires the intersection to be taken down and would likely require police while the intersection is not operating. The inspection team will need to coordinate this work closely and maintain records on the use of police so proper reimbursement can be processed.

The project plans do not include detailed splicing and patch panel assignments. The inspection team will need to work with the contractor in insuring that this information is generated sufficiently ahead of time to allow the construction to move ahead effectively while insuring the city's objectives will be met by the completed installation.

The project also includes other associated work and bid items that are necessary to transfer all of the intersections along the fiber route to full Ethernet operation including all IP devices in the cabinets. Integration work for the Digital Video System and the Traffic Signal System is required. The inspection team will need to work closely with the city's traffic signal system engineer to insure that all of the objectives will be met.

GENERAL ITS INSPECTION SERVICES

The traffic signal work included in the subject projects involves conventional routine signal construction practices. However, the installation of over 20 miles of fiber cable aerially and in conduit is significant and often requires more complex installation and testing techniques. Stamford has already successfully installed many miles of fiber optics equipped with modern Gigabit Ethernet field switches. In addition, our team has substantial experience with fiber optics which has now become routine and straight forward for us. Fiber cable installation, splicing, provisioning of the Ethernet equipment, and testing are critical elements of these projects and will require close monitoring and oversight to assure a successful result.

This project involves construction work to be performed in public spaces with potential impacts to residents, businesses and the traveling public. This can cause significant public concerns and it will be essential to have a Resident Engineer/Inspection Staff with the expertise to deal with the public respectfully and effectively. The highly seasoned professionals of the magnitude that we are proposing for this effort have the experience to re-assure concerned citizens and businesses that the work will be completed quickly and the resulting work will be of benefit to them once it is completed efficiently.

Construction projects of this magnitude will always have issues that need to be dealt with, including utility conflicts, coordination with other contractors, contract interpretations, material availability, right of way issues, public and business community involvement and scheduling issues. Issue resolution efforts can range from simple to stressful and can have a dramatic effect on schedule and productivity. It will be essential to maintain the current signal operation until the new installations are complete at a

given intersection. The basis for the M&J Team's approach to resolving construction issues is to make a fair assessment of a problem with a goal of moving the project forward while trying to avoid blame assessment. In our experience, developing a non- adversarial working relationship with contractors will have positive results for all involved.

The above tasks will require a broad cross section of contractor capabilities ranging from routine construction operations to complex fiber cable splicing. The M&J Team has the corresponding construction inspection skills that will be required to monitor, supervise, and deliver a successfully installed and operational signal control system. The City of Stamford has developed a highly seasoned contractor community who normally compete for these projects. These are highly experienced professional contractor firms that need a highly competent inspection team to partner with.

In order to assure that the signal and interconnect elements included are constructed in accordance with Stamford and Connecticut DOT requirements, there are numerous construction management skills that will be required. However, the most critical element will be close coordination with the city's traffic engineering staff to which the inspection team will report to.

The first order of business will be to meet with the highly capable engineering staff to establish lines of communication and to assure that all of the city's expectations are met. The Engineer will be continually advised of construction progress as well as construction or operational issues that may develop. The city's highly capable engineering staff, that has extensive experience in deploying the earlier phases and a keen knowledge of local issues and concerns, will be an important resource to our team in insuring successful implementation of the project.

CONSTRUCTION SERVICES

Contract administration and documentation requirements and preferences will be discussed with the city and will be performed in accordance with the Connecticut DOT procedures.

Existing field conditions will be reviewed prior to the start of construction operations to determine if substantial changes from the conditions shown on the contract construction plans exist. When and where necessary, potential remedies will be proposed and discussed with the Engineer to identify plan modifications that may be required to account for current conditions.

The M&J Team fully understands that the various project sites will encompass local community residences and/or businesses, and that the execution and completion of the construction work in a safe and expeditious manner is essential for the successful completion of each of the projects. To this end, the M& J Team will coordinate and cooperate with all appropriate city departments, in-house staff, and the construction contractors to minimize impact. Active coordination will also extend to other stakeholders including utility owners whose infrastructure may be affected by the construction work or residential and commercial property owners who will be impacted by the day-to-day work.

The goal would be to provide full-time inspection staff that will perform all day-to-day duties as required to assure that construction is progressed in compliance with the contract documents. We have provided a management plan in Section 5 of this proposal that discussed how we would intend to manage the project to achieve the objectives with minimal cost to the city. Field inspectors will review all construction operations and measure work item quantities installed by the contractor on a daily basis. The M&J Team will prepare inspectors daily reports in accordance with Connecticut DOT

standards. However, the level of funding will need to be negotiated and established which will need to insure that all critical activities will be monitored.

M&J will assume full responsibility for the accuracy of the project inspection work which includes the documentation of all construction work completed by the contractor and any and all required revisions to the documentation required per Connecticut DOT inspection guidelines (All 4 Volumes) and/or modifications to all documents that may arise at any time.

Section 3 – Experience

Section 3 – Experience

ARCHITECT – ENGINEER QUALIFICATIONS

PART I – CONTRACT SPECIFIC QUALIFICATIONS

A. CONTRACT INFORMATION

1. TITLE AND LOCATION *(City and State)*

Construction Inspection Services of Fiber Optic Trunk Cable Installation

2. PUBLIC NOTICE DATE	3. SOLICITATION OR PROJECT NUMBER
July, 2015	RFQ No. 685

B. ARCHITECT – ENGINEER POINT OF CONTACT

4. NAME AND TITLE
Arnold D. Rubenstein, P.E., Vice-President

5. NAME OF FIRM
M & J Engineering, P.C.

6. TELEPHONE NUMBER	7. FAX NUMBER	8. E-MAIL ADDRESS
718-525-5500	718-228-8411	arubenstein@mjengineers.com

C. PROPOSED TEAM

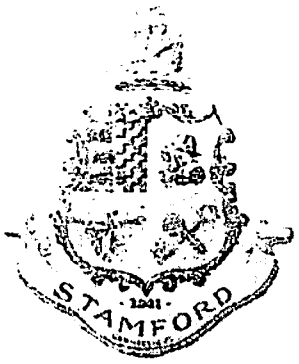
(Complete this section for the prime contractor and all key subcontractors.)

	(Check) PRIME	(Check) JV PARTNER	(Check) SUBCONTRACTOR	9. FIRM NAME	10. ADDRESS	11. ROLE IN THIS CONTRACT
a.	X			M & J Engineering, P.C. [ ] CHECK IF BRANCH OFFICE	133-33 Brookville Boulevard Suite 213 Rosedale, New York 11422	Construction Inspection Services
b.				[ ] CHECK IF BRANCH OFFICE		
c.				[ ] CHECK IF BRANCH OFFICE		
d.				[ ] CHECK IF BRANCH OFFICE		
e.				[ ] CHECK IF BRANCH OFFICE		
f.				[ ] CHECK IF BRANCH OFFICE		

D. ORGANIZATIONAL CHART OF PROPOSED TEAM [X] *(Attached)*

M&J Engineering Project Organization Chart

Request for Qualifications No. 685
Construction Inspection Services of
Fiber Optic Trunk Cable Installation



City of Stamford
Project Manager

PROJECT MANAGER / RESIDENT ENGINEER
Arnold Rubenstein, P.E

Principa
Maqsoo

Field Inspection
Masood Malik

Field Inspection / Office Engineer Support
Nicole Rawlins, E.I.T.

Senior Inspector / Office Engineer
Amaresh Jena

Tech
Ric

M&J ENGINEERING P.C.
"INNOVATIVE AND STATE
STANDARD F

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Arnold Rubenstein, P.E.	**Project Manager/Resident Engineer**	30+	8

15. FIRM NAME AND LOCATION *(City and State)*
M & J Engineering, P.C., One Cross Island Plaza, Rosedale, NY 11422

16. EDUCATION *(DEGREE AND SPECIALIZATION)*	17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*
B.E. / Civil Engineering / Cooper Union / 1977 MBA / Computer Methodology / Bernard Baruch / 1983	Professional Engineer: New York, New Jersey, Connecticut, Florida, Pennsylvania(Pending) and NCEES Record

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*
Institute of Transportation Engineers

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
Stamford Urban Transitway – ITS Components, Stamford, Connecticut	PROFESSIONAL SERVICES **2007**	CONSTRUCTION (If Applicable)
(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE	[X] Check if project performed with current firm	

Project Manager/Lead Systems Engineer serving as a sub consultant to a local Connecticut engineering firm responsible for the preliminary design, RFP development, construction support, and specialty item software development for an ITS system, including Bus/AVL CAD system deployment, Parking Management System, Gigabit Ethernet Fiber-Optic LAN/WAN, On-Street Next Bus Arrival Signage and Advanced Traveler Information components. System includes 11 On-street Parking Management VMS and 8 shelter mounted Next Bus Arrival VMS. Currently performing construction support services including comprehensive CDR/Shop drawing review and comprehensive system testing. Project includes wireless communications and integration of a large scale hybrid IP network. Gigabit Ethernet system includes fiber-optics, all electronics, DSL landlines, splice tables, and switches.

b.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
NJDOT Term Agreement for Providing ITS Construction Inspection Personnel – Statewide	PROFESSIONAL SERVICES **2014 – Present**	CONSTRUCTION (If Applicable)
(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE	[X] Check if project performed with current firm	

Served as the lead in the development of the fiber optic and communication drawings including splicing, electronics block diagrams, and fiber optic drawings. In this capacity, Mr. Rubenstein is helping to apply lessons learned from the Route 1 Adaptive to the new design. Supervised ITS Design, established Familiarity with NJ ITS Standards, Design of a Completed and Operational ITS System including CTSS, DMS, CSS, Traffic Detectors, and Advance Traffic Signal Control Systems. Design project includes Data and Video Communication Network and System Communications on fiber optics. Work included QAQC of the completed design on all analysis and submissions.

c.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
City of Norwalk Phase C Traffic Control System, City of Norwalk, CT	PROFESSIONAL SERVICES **2014**	CONSTRUCTION (If Applicable)
(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE	[X] Check if project performed with current firm	

Project Manager. M&J is providing communications design and networking for the City of Norwalk (CTSS) system expansion including 10 upgraded intersections. The intersections are being upgraded to utilize the 2070 TS2 architecture and a trunk-spoke fiber optic architecture. M&J developed the SEAFORM (ITS System Engineer) for the project to satisfy the FHWA and Connecticut DOT requirements for System Engineer. The scope includes the development of specifications for upgraded central components and a new IP Monitoring System. Mr. Rubenstein Supervised ITS Design, developed FHWA System Engineering Procedures (SEAFORM) for the project, Design of a Completed and Operational ITS System including CTSS, Traffic Detectors, and ATSC, Experience developing Testing and Acceptance Specifications for a complete ITS deployment for agency acceptance, Experience with ITS Architecture & System Engineering Process, Experience in design project involving Data and Video Communications Network including System integration on Fiber, Conducted Systems Engineering Analysis for ITS in accordance with FHWA Guidelines, and provided detailed QAQC on all project submissions and deliverables. Gained experience with putting together a complete design and construction package (bid documents, specifications, permits, approvals, and engineers estimates).

d.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
MTA Bridges and Tunnels ATM IDEAS, Project AW-37, New York, NY	PROFESSIONAL SERVICES **2003**	CONSTRUCTION (If Applicable)
(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE	[ ] Check if project performed with current firm	

Agency Project Manager/ Lead Systems Engineer for comprehensive state-of-the-art ATMS (Advanced Traffic Management System) including 9 Distributed Linux Server Systems for 7 Major Bridges and 2 Major Tunnels in NYC and an OCCC (Operations Command and Control Center). Supervised the work of Transdyn Controls who served as the primary software developer and system integrator for the effort. In addition, completed a large percentage of the project directly managing in-house and consultant personnel who designed and integrated the control hardware, modified the physical TMC facilities, and developed substantial system software to allow integration to legacy system components and to augment the primary software. Work included extensive training and support of the Bridge and Tunnel Officer Operations Staff.

e.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
Troop G New York State Albany TMC Center –NYS OGS/NYSDOT	PROFESSIONAL SERVICES **2007**	CONSTRUCTION (If Applicable)
(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE	[X] Check if project performed with current firm	

Project Manager/Lead Systems Engineer. Work included the design of a new Traffic Management Center in the Albany, NY that is jointly operated by NYSDOT Region 1 and the New York State Police. The work involved designing new central TMC components to support the Gigabit Ethernet fiber-optic implementation and a complete digital video and data system. Work included the comprehensive field inventory of over 30 permanent VMS (Daktronics/Imago/Display Solution/3M DMS) and as-built documentation.

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Maqsood A. Malik, P.E.	Principal-In-Charge	25	11

15. FIRM NAME AND LOCATION *(City and State)*
M & J ENGINEERING, P.C., ROSEDALE, NEW YORK

16. EDUCATION *(DEGREE AND SPECIALIZATION)*	17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*
MS / Civil Engineering/ Construction Management. BS / Civil Engineering	New York, Delaware, Pennsylvania, Maryland, Ohio, New Jersey, Connecticut, Massachusetts/ Prof Engineer;

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*
Professional Affiliations: Member of ASCE, Member National Society of Professional Engineers,
Course Work: 2003/NTCIP Trained. 2004/Work Zone Safety

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*: **Northern State Parkway INFORM/ITS. Support/ Construction Inspection Services, Nassau and Suffolk Counties. NY**

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: **2005** — CONSTRUCTION (If Applicable):

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

[X] Check if project performed with current firm

Resident Engineer for the INFORM/ITS System upgrade on the Northern State Parkway from the NYC line to Route 454. Work included installation of 155,000m of fiber optic trunk cables, 44,000m of conduits, 588 pull boxes, new power drops, installation of 90 new poles and 118 control cabinets, 9 CCTV cameras and 24 acoustic detectors, installation of 13 TTS and 27 Transmit antennas. Responsibilities included managing this project, reviewing shop drawings, testing procedures, coordinating project's work with other contractor and agencies, reviewing project design, making field design changes, approving payments and conducting project coordination and safety meetings. Construction Cost: $15 million. Client: NYS

b.

(1) TITLE AND LOCATION *(City and State)*: **Bronx/Northern Manhattan ITS, D008599 NYSDOT Region 11**

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: **2006** — CONSTRUCTION (If Applicable):

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

[X] Check if project performed with current firm

Expert Services were provided to analysis the issues involved with a contract dispute that occurred as part of the construction of the Bruckner Expressway corridor. The scope of this work was to determine the root causes of the problem and to identify the most economical course of action to correct the deficiencies. A report was provided to the project manager outlining the findings that outlined the suggested mitigations to correct the situation.

c.

(1) TITLE AND LOCATION *(City and State)*: **ITS Maintenance; Bronx, Kings, New York, Queens, & Richmond, D015659, New York State DOT/Region 11**

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: **2009** — CONSTRUCTION (If Applicable):

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

[X] Check if project performed with current firm

Project Manager. M&J Engineers is a major sub consultant providing Maintenance Inspection and System Support for the ongoing maintenance and upgrade of the citywide JTOC. The JTOC is a TMC that is jointly manned by NYSDOT and the New York City Police and maintenance and support of the facility is covered under this contract. System includes over 188 CCTV, 300 Radar Based Detectors, and 71 VMS. Responsibilities include the development of the work tasks assigned to the electrical contractor and the subsequent supervision of the work. The original construction cost for this work was over $200 Million.

d.

(1) TITLE AND LOCATION *(City and State)*: **ITS Installations on the Bruckner and Sheridan Expressways D012587, New York State DOT/Region 11**

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: **2003** — CONSTRUCTION (If Applicable):

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

[ ] Check if project performed with current firm

Resident Engineer. Installation of fiber optic network and field equipment including installation of 17,000 meters of conduit, 248 Fiber Optic Pull Boxes, 31,000 Meters of Fiber Optic Cable, 15 CCTV, 2 VMS, 24 Field Processing Cabinets, 11 Radar Detectors, 17 Vehicle Classification Detectors, Eight Vehicle Image Detectors (VIDS), and 17 Overhead Vehicle Classification Detectors. Construction Cost $18 Million.

e.

(1) TITLE AND LOCATION *(City and State)*: **TAMS Implementation / ITS Support, Brooklyn, Queens, Bronx and Northern Manhattan, NY**

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: **Ongoing** — CONSTRUCTION (If Applicable):

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

[X] Check if project performed with current firm

Project Manager until 3/2007. Performed supervision of the implementation of Transportation Asset Management System (TAMS). Used TAM System to inventory, monitor and manage transportation/ITS assets and other key non-ITS assets. Performed the services to support the department in pre final inspection of the ITS/ATMS installed on Bruckner Expressway. Identified accurate geographic locations of assets using GPS, complete the asset information required by the TAM System including installation, design details/plans, as-builts, catalog-cuts, photos, etc. Determine relationship between various assets (e.g., power or communications source for CCTVs, structures for VMS, etc.) Synchronized/checked the data for quality control.

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Amaresh Jena	**Senior Inspector/Office Engineer**	14	<1

15. FIRM NAME AND LOCATION *(City and State)*
M & J Engineering, P.C., Rosedale, New York

16. EDUCATION *(DEGREE AND SPECIALIZATION)*	17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*
M.S., Civil Engineering, Illinois Institute of Technology, 2007 B.S., Civil Engineering, College of Engineering and Technology, India, 2000	ACI-Certified Concrete Field Testing Grade I Institute of Transportation Engineers (ITE) Primavera Contract Management, 2012

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*
Mr. Jena has over 14 years of experience which includes substantial Construction Inspection experience on large and complex projects including the Connecticut Department of Transportation. He has worked both as a Senior Inspector and an Office Engineer on various highway projects throughout Connecticut and India.

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If Applicable)
CTDOT, Construction of I-95 between Interchanges 14 and 15 and Route-1, Norwalk, CT	**2012-2015**	
(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE	[ ] Check if project performed with current firm	

Office Engineer. This project involved full construction and replacement of three overpass bridges at Taylor Avenue (Bridge No.00053), Cedar Street (Bridge No.00054) and Fairfield Avenue (Bridge No.00055) between interchanges 14 and 15 and construction of an auxiliary lane for approximately 701 meters (2300 feet) between the interstate 95 (I-95) Southbound interchange 15 on-ramp from Route 7 to the interchange 14 off-ramp to Route 1. Tasks include: preparation and maintaining all Volume-I, Volume-III, Volume-IV books of the project; preparation of drainage book and checking all drainage quantities being paid as per contract and specifications, shop drawing review, project specifications and plans; reviewing daily work reports and checking all quantities paid by inspectors are as per contract and specifications; bi-weekly and month end payments of the work done by contractor; responsible for all material testing for the entire project.

b.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If Applicable)
Rehabilitation of Arrigoni Bridge, Middletown and Portland, CT,	**2011-2012**	
(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE	[ ] Check if project performed with current firm	

Senior Inspector. This project involved the rehabilitation of Arrigoni Bridge (Bridge No. 00524), which carries Route 66 and Route 17 across the Connecticut River, connecting Middletown and Portland. Work tasks included the inspection of both daytime and nighttime work operation at the bridge, inspection of all construction activities for the replacement of grid decks in three stages of construction; inspection of all precast and cast in place concrete barrier curb and sidewalk at both sides of bridge; preparation of daily quantities, cost plus items, monthly estimate and entered inspection reports into Site Manager, inspection of traffic operations at the staged construction, review of shop drawings, project specifications and work plan; and responsible for all electrical work, paving operations and all concrete work at site.

c.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If Applicable)
ConnDOT, Rehabilitation of I-84, Sisson Avenue Interchange Bridges, Hartford, CT	**2011-2102**	
(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE	[ ] Check if project performed with current firm	

Construction Inspector. This project is a portion of I-84 that extends for approximately ¾ mile near downtown Hartford, between the Ayslum and Capitol Avenue interchange and the Sisson Avenue interchange. Work items included the inspection of all operations including jacking and replacement for existing bearing at all piers, drainage items, concrete work, structural steel repairs throughout the project site, inspection of all night time construction work of bearing replacement, Class "S" Concrete, Asphaltic Plug Expansion joint system and other items; and the preparation of daily quantity and Inspection Reports into Site Manager.

d.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If Applicable)
CTDOT, Reconstruction of South Maple Street Bridge Over Scantic River, Enfield, CT	**2010-2011**	
(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE	[ ] Check if project performed with current firm	

Inspector/Office Engineer. Work included the inspection of all construction activities and maintaining all the records from start to finish of this project, inspection of the installation process of all precast units i.e. precast box beams, footings, abutment walls, bridge seats, approach slabs, cheek walls and wing walls, drainage items i.e catch basins and manholes in the project, all materials used in the project to meet the design requirement also prepared all material testing reports and submitted to DOT lab, concrete work including Class "F" and Class "C" concrete used for deck slab and sidewalk, paving operations of Hot Mix Asphalt (Superpave 0.5"), Class 2, and Class 3 asphalt mix, prepared all Volumes (I, II, III, and IV) as per the CTDOT standards, prepared monthly estimate and weekly progress report also maintained all records, and processed Construction Orders for the new items and increased/decreased design quantities.

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Richard Rom, P.E.	**Technical Support**	34	1

15. FIRM NAME AND LOCATION *(City and State)*

M & J Engineering, P.C., One Cross Island Plaza, Rosedale, NY 11422

16. EDUCATION *(DEGREE AND SPECIALIZATION)*	17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*
MS / Electrical Engineering / Polytechnic Institute / 1985 MS / Electrical Engineering / Polytechnic Institute / 1983	Professional Engineer: New York

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If Applicable)
Stamford Urban Transitway – ITS Components, Stamford, Connecticut	2014-Present	

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — [X] Check if project performed with current firm

Design Engineer responsible for the design and construction support services for the ITS system including a Bus AVL/CAD, Parking Management Signs, Next Bus Arrival Signs, and a Fiber optic Gigabit Ethernet system for the downtime. The system has reached the System Acceptance Test milestone and Mr. Rom is witnessing the test and evaluating the results of the ongoing test program.

b.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If Applicable)
NJDOT, Route 78 Ramps over Route 1&9, New Jersey	2014-Present	

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — [X] Check if project performed with current firm

Principal Engineer responsible for the design of Highway Lighting on three ramp structures and the surrounding area. The lighting system being designed replaces the original conduit lighting system installed in 1970 which has been out of service for a significant number of years. M&J utilized the Visual 2012 lighting package to develop the design based on NJDOT standards. The work also includes under-deck lighting for the three ramp structures involved in the work. Mr. Rom is currently responsible for utilizing the Visual 2012 lighting design software, voltage drop calculations, and developing the design plan utilizing the NJDOT standards.

c.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If Applicable)
NJDOT, Route 18 Adaptive Signal System, New Jersey	2014-Present	

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — [X] Check if project performed with current firm

Design Engineer responsible for the fast paced design of the system communications including re-termination of existing fiber optics, installation of new Gigabit Ethernet Switches at each of 13 locations, modified splicing, and system block and networking drawings for the system. Work also includes the development of a technical memorandum summarizing the proposed fiber communication system and the design rationale behind the proposed implementation. Mr. Rom is assisting in the development of the fiber/networking design and preparation of the technical memorandum.

d.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If Applicable)
NYSDOT Sagtikos Corridor ITS	2014	

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — [X] Check if project performed with current firm

The Sagitikos Parkway Corridor in Suffolk County is a major North/South route in Western Suffolk County that is experiencing major grown and increasing congestion. The project involves the study and identification of various alternatives, in addition to providing additional lanes, to reduce congestion and support anticipated additional demand from the proposed Heartland development. M&J's work on the project involves the use of ITS technology alternatives for both long term and potential early deployment projects. A list of potential early action treatments has been developed with work on a potential ITS early action project expected to initiate over the next few months.

e.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If Applicable)
City of New Rochelle Traffic Control System Expansion	2012	2014

(4) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — [X] Check if project performed with current firm

Electrical/Communications Engineer: Responsible for the design of the communication system to extend the current system to an additional forty-five intersections. Developed conceptual plans and estimates for the extension utilizing a hybrid of fiber optics and wireless transceivers utilizing Ethernet communications. Work also includes the addition of a CCTV system and expansion and relocation of the existing TMC.

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Masood Malik	**Field Inspector**	8	3+

15. FIRM NAME AND LOCATION *(City and State)*
M & J Engineering, P.C., Rosedale, New York

16. EDUCATION *(DEGREE AND SPECIALIZATION)*	17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*
BS / 1998 / Electrical Engineering; MBA 2002	

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*
Microsoft Certified Professional/Microsoft Windows Server 2003; Microsoft Certified System Administrator/Microsoft Windows Server 2003; Rutgers Traffic Control Coordinator; American Concrete Institute Concrete Field Technician

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
NJDOT, ITS Maintenance Construction Inspection, New Jersey	PROFESSIONAL SERVICES	CONSTRUCTION (If Applicable)
	2013	
(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE	[X] Check if project performed with current firm	

Electrical Inspector responsible for providing Construction Inspection Services for the installation and testing of CCTV, Fiber Optic Cable, electrical fee, inspection of feed from utility companies, inspection of wires according to National Electrical Code. Responsibilities included plan review, specifications and other related documents; checking construction for compliance with contract plans and approved shop drawings; reviewing and recommending ITS-related construction progress schedules and schedule updates; taking field measurements, conducting tests utilizing video test bar generators and OTDR, and gathering pertinent records, reports and calculations in accordance with NJDOT procedures.

b.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
NJDOT, Task Order ITS Installation for CCTV, DMS Over Fiber Optic Cable, New Jersey	PROFESSIONAL SERVICES	CONSTRUCTION (If Applicable)
	2013	
(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE	[X] Check if project performed with current firm	

Electrical Inspector provided Construction Inspection Services for the installation and testing of CCTV and Fiber Optic Cable. His responsibilities involved reviewing plans, specifications and other related documents; checking construction for compliance with contract plans and approving shop drawings; reviewing and recommending ITS-related construction progress schedules and schedule updates; taking field measurements, conducting tests utilizing video test bar generators and OTDR, and gathering pertinent records, reports and calculations in accordance with NJDOT procedures.

c.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
NJDOT, Smart Moves, New Jersey	PROFESSIONAL SERVICES	CONSTRUCTION (If Applicable)
	2013	
(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE	[X] Check if project performed with current firm	

Lead ITS Inspector for this ITS Project that consisted of the installation of ITS components on Interstate Highways. Project included various highways in northern NJ involving the installation and testing of CCTV, VMS, and HAR equipment including the installation of foundations for signs and posts for CCTV cameras in the town of Summerville, Route 202 Traffic Circle, and on Interstate 80.

d.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
TBTA, Security & Access Control System Installation, Throgs Neck Bridge, New York	PROFESSIONAL SERVICES	CONSTRUCTION (If Applicable)
	2013	
(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE	[X] Check if project performed with current firm	

Lead ITS Inspector responsible for inspecting the installation of above and in ground Fiber Optic Conduits at the Throgs Neck Bridge Queens Approach for the installation of Security and Access control System.

e.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
NYSTA, TANY 10-341, Installation of ITS Devices, New York, NY	PROFESSIONAL SERVICES	CONSTRUCTION (If Applicable)
	2011	
(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE	[X] Check if project performed with current firm	

Lead ITS Inspector responsible for the installation and testing of an ITS project installing 11 VMS, 12 CCTV, 16 Detector stations, Fiber Optics, Wireless, and 3 Transmit Sites for the New York Division. Project limits included I-95 (New England Thruway) to I-87 (Milepost 77). Inspected foundations for VMS Structures and CCTV poles including concrete testing (Slump, Air, Pressure, etc) and electrical connections to utility. Entered daily inspection reports in CEES including measurement and verification of quantities completed. Responsible for the inspection and setup of MPT work zones.

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Nicole Rawlins, E.I.T.	Field Inspector/Office Engineer	3	3

15. FIRM NAME AND LOCATION *(City and State)*
M & J Engineering, P.C., One Cross Island Plaza, Rosedale, NY 11422

16. EDUCATION *(DEGREE AND SPECIALIZATION)*	17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*
B.S. Civil Engineering, Rutgers University, 2009	EIT Certificate #15126

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
NYCDOT, Phase 6+7 Signal Retiming, NY	PROFESSIONAL SERVICES: 2013	CONSTRUCTION (If Applicable)
(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE	[X] Check if project performed with current firm	

ITS Engineer. M&J is developing revised off-peak signal timing for the West Street, Nostrand Avenue, and Boston Road Corridors. Ms. Rawlins is utilizing the Tru-Traffic timing plan development package and is entering the existing timing data into Tru-Traffic, conducting Speed + Delay runs, entering configuration information, coupling analysis, and developing new timings.

b.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
NJDOT, ITS Construction Inspection Personnel, Statewide, NJ	PROFESSIONAL SERVICES: 2015	CONSTRUCTION (If Applicable)
(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE	[X] Check if project performed with current firm	

Field Inspector/Office Engineer. Provided assistance with day-to-day administration of the project including processing of change orders, interface with the ITS Project Managers to insure that the department's interests are being met, day-to-day supervision of the inspection staff, testing of the completed work, status reports, processing of payment requests.

c.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
NYSDOT, Troop G Traffic Management Center, NY	PROFESSIONAL SERVICES: 2010	CONSTRUCTION (If Applicable)
(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE	[X] Check if project performed with current firm	

ITS Engineer. Work included the design of a new Traffic Management Center in the Albany, NY that is jointly operated by NYSDOT Region 1 and the New York State Police. Most notably, she has significant responsibilities in conducting a field inventory of all of the ITS assets for the NYSDOT Region 1 Capital Region ITS. This system includes VMS, CCTV, Loop Detectors, Transmit, and a significant fiber optic and leased wireless infrastructure. Ms. Rawlins developed the ACCESS database and populated the database with the data and photo information collected in the field survey.

d.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
City of New Rochelle Traffic System Expansion, New Rochelle, NY	PROFESSIONAL SERVICES: 2012	CONSTRUCTION (If Applicable)
(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE	[X] Check if project performed with current firm	

ITS Engineer. As a sub-consultant to Lochner, M & J is designing the communication system for a forty-five intersection expansion of the city's existing McCain system which utilizes a fiber optic backbone. Ms. Rawlins developed a Google Earth KML database with all key locations identified and did a preliminary estimate of the number of utility poles involved with the arterials to be covered by the installation. Ms. Rawlins assisted in the development of a conceptual design and cost estimate for a wireless communication system for the expansion.

e.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
ConnDOT, Stamford Urban Transitway ITS, Stamford, CT	PROFESSIONAL SERVICES: 2007	CONSTRUCTION (If Applicable)
(4) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE	[X] Check if project performed with current firm	

Field Inspector/Office Engineer. Serving as a sub consultant to a local Connecticut engineering firm responsible for the preliminary design, RFP development, construction support, and specialty item software development for an ITS system including Bus/AVL CAD system deployment, Parking Management System, Gigabit Ethernet Fiber-Optic LAN/WAN, On-Street Next Bus Arrival Signage, and Advanced Traveler Information components.

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT *(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)*	20. EXAMPLE PROJECT KEY NUMBER 1

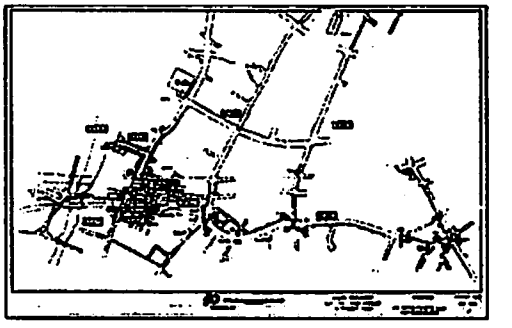
21. TITLE AND LOCATION *(City and State)*	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If Applicable)
Stamford Urban Transitway – ITS Components Stamford, Connecticut	**2014**	

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
City of Stamford/CT Transit	**Ann Brown, P.E.**	**(203) 977-4003**

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

This project is the Intelligent Transportation System component for the Stamford Urban Transitway project which is building a new direct arterial route to the Stamford Train station in downtown. The goal of the project is to minimize congestion on existing routes to the station and to maximize and promote the use of mass transportation in the community.



The work includes:

- Bus AVL/CAD System for CT Transit Consisting of 55 Buses
- Terminal and Shelter Based Real Time Arrival/Departure Signage for the Bus System
- Parking Management System for Station Garage with Real-Time Space Availability signs near the garage and remotely at key roadway access points
- Advanced Traveler Information System for the station designed to use web-based technology to inform station patrons of roadway conditions exiting the garage and transit system conditions while arriving
- Bus Transit Signal Priority system to minimize travel time for busses running late on selected corridors
- Design of a Fiber Optic Interconnection between City of Stamford Government Center, CTransit Depot, Stamford Train Station, and intersections along the SUT corridor including all electronics and fiber-optic cable installation in utility ducts and some private conduits
- ITS System Engineering Functions

M&J has taken the lead role in developing RFP documents for the AVL/CAD and Parking Management Systems and will be providing final integration and software for the ATIS and Bus Transit Signal Priority mechanism. In addition, construction support will be provided to the client.

The RFP has recently been completed and proposals for the construction work will be received shortly by the city.

Design Fee: 0.3 Million, Construction Fee: 2.5 Million (Estimated)

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
a.	**M & J Engineering, P.C.**	**Rosedale, NY**	**ITS**

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT *(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)*	20. EXAMPLE PROJECT KEY NUMBER 2

21. TITLE AND LOCATION *(City and State)*	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (if Applicable)
City of Norwalk Traffic Control System Expansion	2013	2015

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
City of Norwalk	Fred Eshraghi	(203) 854-7843

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

As a sub consultant to Urban Engineers, M & J is responsible for the design of the communication system and networking additions to accommodate an additional 11 intersections. The system utilizes a CISCO fiber trunk consisting of five nodes and various branch secondary "spoke" rings. The communication network is utilized for comprehensive intersection communications including controller, conflict monitor, emergency pre-empt, VIDS processor, and CCTV.

M&J developed preliminary plans to extend the fiber system over two spoke runs which will replace old twisted-pair cable with fiber. In addition, the work consisted of an evaluation of available Network Management packages and a subsequent recommendation on which package to deploy. M&J also developed the SEAFORM System Engineering documentation for the project.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
a.	M & J Engineering, P.C.	Rosedale, NY	Communications / Networking

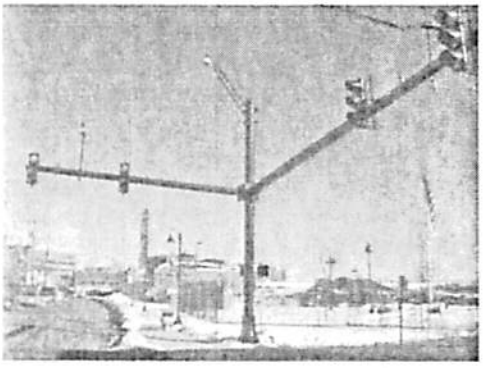
F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT *(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)*	20. EXAMPLE PROJECT KEY NUMBER 3

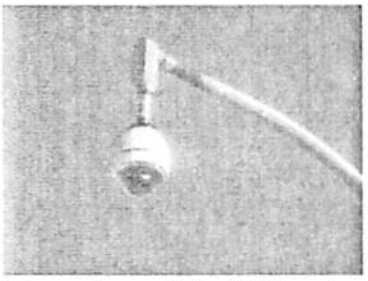
21. TITLE AND LOCATION *(City and State)*	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (if Applicable)
City of New Rochelle Traffic Control System Expansion	2015	

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
City of New Rochelle	Michael Briska	(914) 654-2135

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*





As a sub consultant to Lochner, M & J is responsible for the design of the communication system to 45 new intersections, addition of CCTV, and the design of a new TMC and updated central equipment. In addition, we are providing assistance in updating the existing system timing plans utilizing Tru-Traffic. Work included the conceptual design and preliminary cost estimation which has been completed and will be followed by Phase V and VI design. The new intersections are on the Main/Hugenot and Pelham Road.

The existing City of New Rochelle traffic system utilizes a McCain central server and utilizes both 170 and 2070 controllers in New York State cabinets. The new intersections will be 2070 equipment. The conceptual design for the communication system first considered alternatives that would extend the existing fiber trunk on North Avenue with predominantly aerial attached fiber optics. Obtainment of easements from the utility companies was considered to be problematic. The design then centered on a wireless approach. Various options were considered in conjunction with a police department initiative that is ongoing.

Consultant Services Fee: $0.2 Million
Construction Contract: $10 Million(total) – Systems $1 Million

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
a.	M&J Engineering, P.C.	Rosedale, New York	Communications, System, CCTV, and TMC

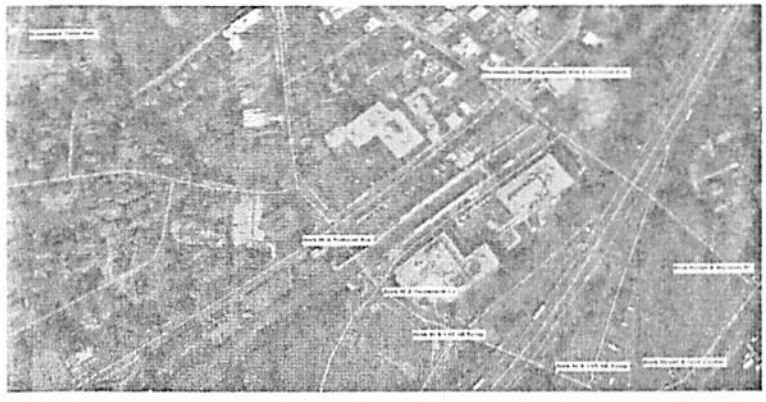
F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT *(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)*	20. EXAMPLE PROJECT KEY NUMBER 4

21. TITLE AND LOCATION *(City and State)*	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (if Applicable)
Arch Street Corridor Adaptive Signal Project Town of Greenwich, Connecticut	2016	N/A

23. PROJECT OWNER'S INFORMATION

PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
Town of Greenwich Dept. of Public Works	James W. Michel, Chief Engineer	(203) 622-7813

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*



M&J Engineering is providing sub consultant design services for the communication system for the Arch Street Corridor Adaptive Signal Project. The project includes six (6) heavily congested intersections connecting the downtown, I-95, and Metro North rail station.

The intersections are currently controlled by a Peek IQCentral closed loop system which is connected to the arterial over a dial-up communications line. The intersections are interconnected with twisted-pair copper. In order to support the needs of the adaptive system and to allow for video, the project is anticipated to convert the twisted-pair to fiber optics utilizing a Gigabit Ethernet system. New cable will be required to reach the City Hall.

M&J's work on the project includes the design of the upgraded communication system including Preliminary, Semi-Final, and Final in Connecticut DOT format. In addition, M&J has supported the development of a SEAFORM for the project.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
a.	M&J Engineering, P.C.	Rosedale, NY	ITS Design Services

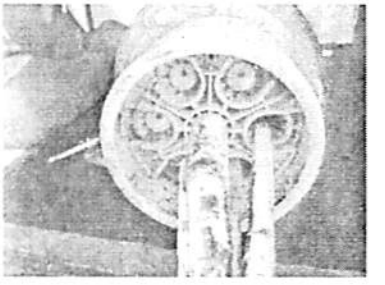
F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT *(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)*	20. EXAMPLE PROJECT KEY NUMBER 5

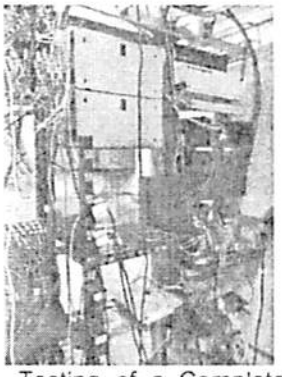
21. TITLE AND LOCATION *(City and State)*	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (if Applicable)
NJDOT Term Agreement for Providing ITS Construction Inspection Personnel – Statewide	2015	2015

23. PROJECT OWNER'S INFORMATION

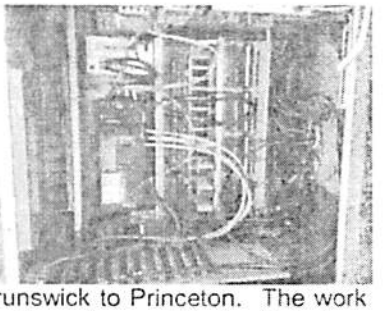
PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
New Jersey Department of Transportation	Frank Prezioso, P.M. Don Albanese, P.M.	(609) 947-9411 (609) 530-6105

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*





M&J Engineering is serving as the prime consultant for the current NJDOT ITS On-Call for ITS Inspection. We have completed two task orders including ITS 2013 Maintenance (Task Order #1) and the Route 1 Adaptive Traffic Control System (Task Order #2). M&J has provided the Resident Engineer and inspection staff and is responsible for the day-to-day administration of the projects including processing of change orders, interface with the ITS Project Managers to insure that the department's interests are being met, day-to-day supervision of the inspection staff, testing of the completed work, status reports, processing of payment requests, site-manager, as-built quantity and plan generation, and coordination with MMS maintenance groups in executing the work. In this capacity, M&J has developed excellent Familiarity with NJDOT Road and Bridge Construction Standard Specifications 2007 and all NJ DOT ITS Standards and the Testing of a Completed and Operational ITS System including DMS, CSS, CTSS, Traffic Detectors, Advance Traffic Signal Control Systems, and all other equipment operated by MMS today. The ITS 2013 Maintenance project involves capital improvements to the existing New Jersey ITS base and includes task such as the replacement of DMS and CCTV. A significant portion of the project involved the installation of Ethernet Switches to replace older fiber-optic transceiver equipment. In addition, the work includes repairs to the equipment base such as replacing "knocked-down" meter cabinets and broken conduits. The project is executed without plans and requires field analysis to develop how the work will be built. The Route 1 Adaptive included the installation of a complete traffic system for twenty-two (22) intersections on Route 1 from North Brunswick to Princeton. The work included the installation of Adaptive Processors, Video Image Detectors, Fiber Optic Upgrades, and Radar Detectors and involved extensive testing of the completed system. M&J also developed extensive "As-Built" documentation taken into account the significant number of change orders that were executed.



25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
a.	M&J Engineering, P.C.	Rosedale, NY	ITS Inspection Services

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT *(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)*	20. EXAMPLE PROJECT KEY NUMBER 6

21. TITLE AND LOCATION *(City and State)*	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (if Applicable)
Old Country Road Traffic Signal Replacement Nassau County, NY	N/A	N/A

23. PROJECT OWNER'S INFORMATION

PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
Nassau County Dept. of Public Works	Sheila Dukacz Jeff Lindgren	(516) 572-0465 (516) 571-6998

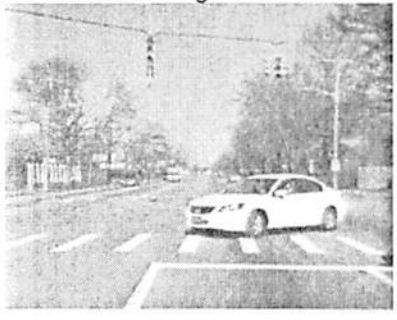
24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

M&J Engineering is providing Resident Engineering and Inspection services for this project which includes the replacement or modification of 72 signalized intersections on a busy corridor in Nassau County.

The replacement or modification of the 72 traffic signals includes the installation of fiber cable in over 15 roadway miles of interconnect conduit and will require a more complex installation as well as testing techniques. Fiber cable installation, splicing, provisioning of the Ethernet equipment, and testing are critical elements of this project and requires close monitoring and oversight to assure a successful result.

The fiber cable installed under this project will provide for the expansion of infrastructure of central signal control utilizing fiber technology in Nassau County and will also provide a backbone for the installation of Intelligent Transportation System (ITS) equipment to provide centrally controlled traffic management capabilities on County roads. Increased trunk line capacity will also allow expansion of the fiber optic network to adjoining arterials that this major east-west arterial crosses.

Other major elements include the removal of existing signal poles, control cabinets, cable foundations and signal displays, span and mast arm pole and foundation installation, LED vehicular and pedestrian signal display installation, signal cable installation, 2070 Microcomputer control equipment installation, vehicle detector and pedestrian pushbutton installation, video detection equipment to replace traditional loops requiring zone configuration and possible interface to network, pavement marking modification and installation, pavement restoration to support loop installations, signal and interconnect conduit installation, fiber optic cable installation, splicing and testing and roadway and sidewalk restoration. (Construction Cost: $10 Million; Fee $2.4 Million)



25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
a.	M&J Engineering, P.C.	Rosedale, NY	Resident Engineering Inspection Services

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT *(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)*	20. EXAMPLE PROJECT KEY NUMBER 7

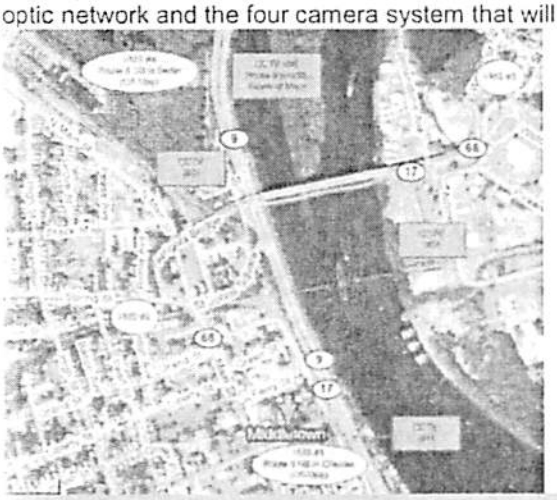
21. TITLE AND LOCATION *(City and State)*	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (if Applicable)
ConnDOT, Route 66+9 Incident Management System, Middletown, CT	2008	N/A

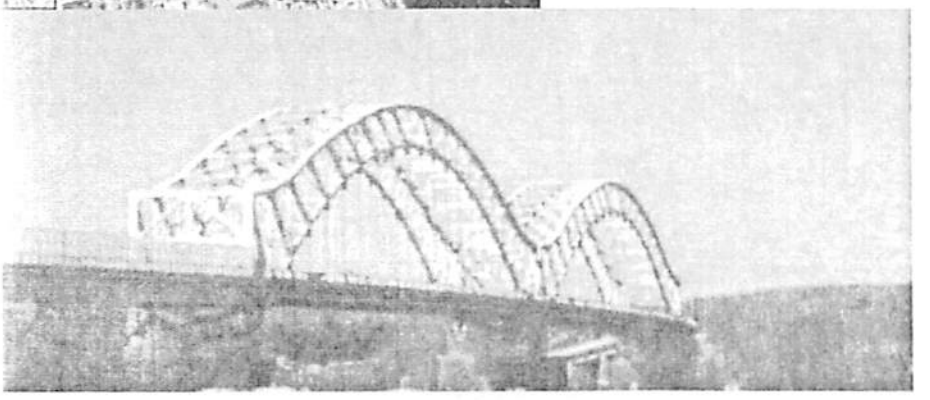
23. PROJECT OWNER'S INFORMATION

PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
Connecticut Department of Transportation	Ken Lussier	(860)-657-2926

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

As a sub consultant to GM2, M&J provided \ ITS technical support on the project and has designed the fiber-optics, splicing, lane control system, system engineering documentation (SEAFORM), and other support to construct the fiber-optic network and the four camera system that will be deployed as part of this project.





25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
a.	M&J Engineering, P.C.	Rosedale, NY	ITS Technical Support

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT *(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)*	20. EXAMPLE PROJECT KEY NUMBER 8

21. TITLE AND LOCATION *(City and State)*	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (if Applicable)
NYSDOT, ITS Infrastructure Maintenance in New York City	2011	N/A

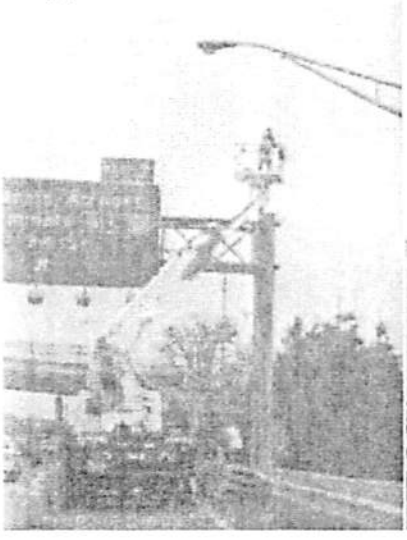
23. PROJECT OWNER'S INFORMATION

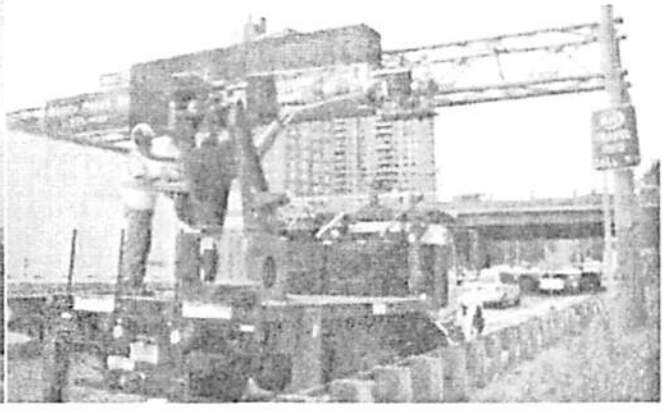
PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
New York State Department of Transportation	Kevin Ledlon, P.E.	(718) 239-0743

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

M & J Engineering has been providing Resident Engineering Construction Inspection Services for When and Where Maintenance of existing ITS systems in the five (5) boroughs of New York City. ITS component include traffic signals, controllers, sensors, fiber optics lines, closed circuit cameras, variable message signs, travel time signs, vehicle classification and weather sensing equipment, and other legacy communication software/hardware. The construction contract work includes diagnosis and performance of remedial work to fix problem and restore system to normal operations. The project also include traffic management strategies such as construction phasing, lane closure restrictions, night and weekend work, etc., as well as the relocation and redeployment of portable variable message sign units at some locations for traffic management purposes. Scope of Services also include: ensuring that the work of the contractor conforms to the provisions of the contract documents; on-site field testing of materials and other construction activities as necessary including field measurements and collection of data necessary to submit monthly and final estimates and progress reports, and preparation of record plans showing all changes from the contract plans; record keeping in accordance with the Manual of Record Keeping (MURK).

- ITS Equipment Maintenance and Inspection Work along the Grand Central Parkway in Queens, NY, in the vicinity of LaGuardia Airport, where Average Annual Daily (AADT) Traffic amounts to 150,000 Vehicles
- Variable Message Sign Maintenance and Inspection Work along the Major Deegan Expressway (I-87) in the Bronx, NY





25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
a.	M&J Engineering, P.C.	Rosedale, NY	Resident Engineering Inspection Services

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT *(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)*	20. EXAMPLE PROJECT KEY NUMBER 9

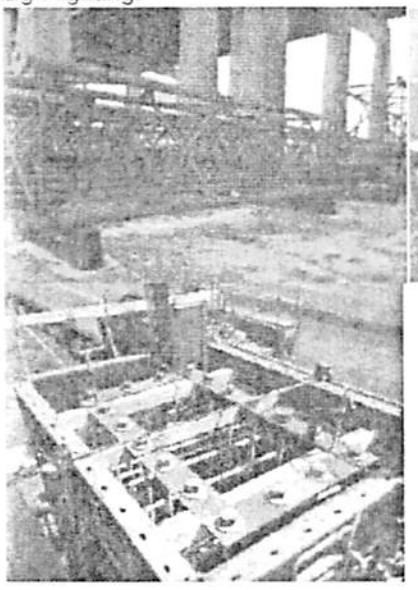
21. TITLE AND LOCATION *(City and State)*	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (if Applicable)
NJTA, Guide Sign Improvements on the NJ Turnpike and Garden State Parkway	2012	N/A

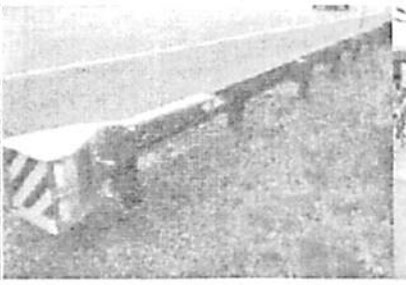
23. PROJECT OWNER'S INFORMATION

PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
New Jersey Turnpike Authority	Andrew McConnell	(732) 750-5300

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

M & J Engineering has been providing Resident Engineering and Construction Inspection Services for the replacement of guide signs along the New Jersey Turnpike from Milepost 105.5 to Milepost 115.5 (Eastern Spur and Western Spur) and along the Garden State Parkway from Milepost 128.3 to Milepost 143.2. This project consists of Guide Sign Improvements to enhance Traffic Safety, and the work includes: drilled shaft foundations, guide rail installation, embankment, sign structure and panel installation, fabrication inspection, onsite material testing and processing, pedestal foundation installation, rebar, median barrier, curb, berm surfacing, field verifications, coordination with utility companies, sign foundations, new guide signs and sign structures, replacement and or removal of existing guide sign panels, replacement of aluminum structures, removal of existing sign structures, ITS associated lighting systems, removal of existing aluminum sign structures, removal of bridge mounted signs, installation of new overhead cantilever and overhead span sign structures including new sign panels, removal of existing sign panels on existing structures and replacement with new panels, installation of new sign lighting, upgrading existing sign lighting and removal of existing sign lighting.





25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
a.	M&J Engineering, P.C.	Rosedale, NY	Resident Engineering Inspection Services

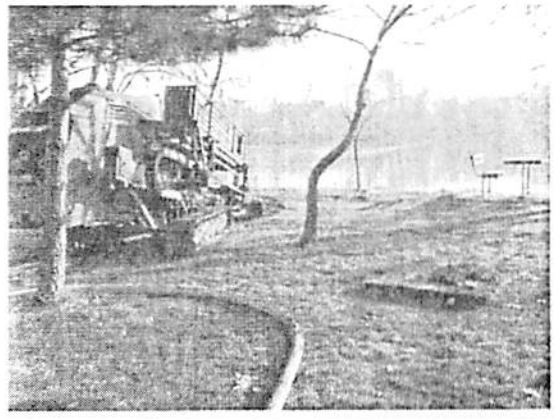
F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT *(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)*	20. EXAMPLE PROJECT KEY NUMBER 10

21. TITLE AND LOCATION *(City and State)*	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (if Applicable)
ATIS Communication Network (SMRP SBP, HRP, & CCP) Various Towns, Westchester County	2010	Ongoing

23. PROJECT OWNER'S INFORMATION

PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
New York State Department of Transportation, Region 8	Boris Vays	(914) 347-4670

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*



Under NYSDOT Consultant Project No. D030860; Construction Contract No. D261374, M & J Engineering is providing Resident Engineering Inspection services for an Advanced Traffic Management System/Advanced Traveler Information System (ATMS/ATIS) system. The work includes conduit excavation/backfill, fiber optic cable installation, pull/junction box installation, electric service/cabinet installation, conduit jacking or boring, pole excavation and concrete foundations, installation of various components (switches) for the system. The work is located on Parkways in Westchester County including the Saw Mill River Parkway, Sprain Brook Parkway, Hutchinson River Parkway and the Cross County Parkway. Once completed system/equipment to be tested by the contractor to verify satisfactory operation. Also included is guide rail removal and replacement in work areas and landscape development to establish plantings and turf. The required services associated with this contract include, but are not limited to: CI Services to be performed by the Consultant are to ensure that the work of the Contractor conforms to the provisions of the contract documents. Services are being performed include detailed inspection, on-site field testing of materials and other construction activities as necessary, including field measurement and collection of data necessary to submit monthly and final estimates and progress reports, and preparation of record plans showing all changes from the contract plans. All records are being kept in accordance with the Manual of Uniform Record Keeping (MURK). In addition, M & J's Resident Engineer maintains the Engineer's daily project diary describing the progress of the work, specific problems encountered, and other pertinent information relative to the execution of the contract work.
($800,000 fee)

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
a.	M & J Engineering, P.C.	Poughkeepsie, NY	Resident Engineering Inspection Services

G. KEY PERSONNEL PARTICIPATION IN EXAMPLE PROJECTS

26. *NAMES OF KEY PERSONNEL* (From Section E, Block 12)	27. ROLE IN THIS CONTRACT (From Section E, Block 13)	28. EXAMPLE PROJECTS LISTED IN SECTION F (Fill in "Example Projects Key" section below before completing table. Place "X" under project key number for participation in same or similar role.)									
		1	2	3	4	5	6	7	8	9	10
Maqsood Malik, P.E.	Principal-In-Charge	X	X	X	X	X	X	X	X	X	X
Arnold D. Rubenstein, P.E.	Project Manager	X	X	X	X	X	X	X	X	X	X
Richard Rom, P.E.	Technical Support	X		X	X						
Amaresh Jena	Senior Inspector/Office Engineer										
Masood Malik	Field Inspector					X	X		X		X
Nicole Rawlins, E.I.T.	Field Inspector/Office Engineer	X	X	X	X						

29. EXAMPLE PROJECTS KEY

NO.	TITLE OF EXAMPLE PROJECT (FROM SECTION F)	NO.	TITLE OF EXAMPLE PROJECT (FROM SECTION F)
1	Stamford Urban Transitway – ITS Components Stamford, Connecticut	6	Old Country Road Traffic Signal Replacement Nassau County, NY
2	City of Norwalk Traffic Control System Expansion	7	ConnDOT, Route 66+9 Incident Management System, Middletown, CT
3	City of New Rochelle Traffic Control System Expansion	8	NYSDOT, ITS Infrastructure Maintenance in New York City
4	Arch Street Corridor Adaptive Signal Project Town of Greenwich, Connecticut	9	NJTA, Guide Sign Improvements on the NJ Turnpike and Garden State Parkway
5	NJDOT Term Agreement for Providing ITS Construction Inspection Personnel – Statewide	10	ATIS Communication Network (SMRP SBP, HRP, & CCP), Various Towns, Westchester County

H. ADDITIONAL INFORMATION

30. PROVIDE ANY ADDITIONAL INFORMATION REQUESTED BY THE AGENCY. ATTACH ADDITIONAL SHEETS AS NEEDED.

Firm Profile

M&J Engineering, P.C. is a Connecticut and New York certified DBE engineering firm that was organized in 2004. We have a strong ITS design group headed by a veteran professional engineer with over 30 years of experience each with ITS, VMS, Controllers, and Communications. Our firm is currently advancing several ITS design and construction inspection initiatives as evidenced by the project profiles included in this SF330 profile and the project summary included here. In addition, we are very strong in traditional Construction Inspection and have many residents serving on large ITS initiatives. The Principals include four veteran PEs with over 20 years' experience each serving with major local engineering firms with long track records in the planning, design and construction of infrastructure projects for transportation agencies. Current backlog exceeds $25 million and we have a professional staff exceeding eighty. M&J maintains a Connecticut regional office and a corporate office in Rosedale, New York.

ITS/Traffic Design Project Summary

The following is a summary of some of the key ITS design and support efforts that we have recently completed or that are on-going:

Stamford Urban Transitway ITS - This project involves the deployment of an ITS for the Stamford Urban Transitway project. This ITS system is a multifaceted system consisting of the following major subcomponents:

- ✓ Full-Feature Bus AVL/CAD
- ✓ Bus Transit Signal Priority (TSP)
- ✓ Station Advanced Traveler Information
- ✓ On-Street Park Availability VMS (11)
- ✓ Next Bus Arrival Signs (8)
- ✓ Parking Garage Space Availability
- ✓ Gigabit Ethernet Fiber-Optic Network

M&J developed the Conceptual Report, RFP and Design, and is currently supply Construct Support and Testing services, and is developing much of the software including the Traffic Signal Priority, ATIS, Digital Signage Application, and Database interface to the existing Trapeze application.

NYSDOT Rehabilitation of Major Deegan Expressway (I-87) Bridge over Mosholu Parkway - This project involves the design of a replacement of the existing Major Deegan Expressway Bridge over the Mosholu Parkway. M&J is designing the ITS aspects of the project including the relocation of a fiber-optic trunk cable that is currently attached to the existing structure that will be demolished. An existing CCTV at the southern end of the structure is connected via this cable and needs to be kept in service throughout the construction project and VMS to the north of the area need to be maintained in service

City of New Rochelle Traffic Signal System ITS - M & J is responsible for the design of the communication system to 45 new intersections, addition of CCTV, and the design of a new TMC and updated central equipment. Work includes the conceptual design, preliminary cost estimates, and detailed designs.

MTA-PD Regional Radio System Infrasture - this project involves a conceptual design/ alternative analysis and subsequent 30% design for a new two-way radio system for the MTA Police. The new two way radio system is expected to provide continuous patrol car radio coverage for all of the rail lines. The goal of the project is to provide coverage along the railroad right-of-way and also the areas between routes to the greatest extent feasible. M&J's work centers on identification of existing back-haul, development of costs and analysis of existing and potentially new tower sites, cost estimates for backhaul and equipment specification, and the development of the 30% plan set including tower site work. M&J has recently completed work on a 30%

conceptual design plan for the tower sites including control cabinets, tower structural, foundations, and site plan and is expected to provide services in a subsequent task order for maintenance and support in public hearings for particular transmission sites.

NYCDOT – ITS ESA – this project is a large ITS on-call task order ITS project for NYCDOT. Completed tasks include large corridor based data collection projects, ATR counts, lighting system design, and timing plan development.

NYSDOT Troop G Traffic Management Center – Albany, NY. - M&J developed conceptual designs for the TMC operated by the NYSDOT Region 1 and the New York State Police. The new TMC components include a state-of-the-art IP based Digital Video System with integration to a large scale Video Wall. The central components hand-off video to the cable TV consortium and include interfaces to new Gig-E IP distribution system and remote devices over leased cellular wireless. Work includes System Engineering with Concept of Operations detailing how the new components will operate. Current work includes the documentation of the new control and field assets which include over thirty permanent VMS installations connected over fiber and leased wireless service.

Nassau County "On-Call" Traffic Engineering Services Contract – M&J is advancing several assignments including traffic signal design, fiber-optic trunk cable, Accessible Pedestrian Signal Study, and CCTV design.

NYSDOT Region 11 "In-House" ITS Expert Advisor – M&J is providing an "extension of staff" in-house expert who works directly with the ITS Group of NYSDOT responsible for ITS in New York City. Mr. Omid Akhaven provides primary support involving the on-going maintenance of this large scale ITS system consisting of over 100 VMS, CCTV, extensive fiber-optic network, wireless links spanning all five boroughs of New York City. Mr. Akhaven also reviews on-going design plans and provides guidance to consultants working on the program and supports the planning for future expansion.

NYSDOT Region 11 Bronx Corridor Fiber Optic Study – M&J conducted a fiber optic study for the Bronx corridor to "reverse engineer" the fiber trunk lines, splices, and to test all lit and dark fibers. The study was conducted with our own field technicians and engineers and involved running OTDR testing and physically opening and examining all of the splice boots. From this information, we were able to develop detailed fiber assignment tables which documented exactly what fibers were spliced at each junction to each other for the purpose of establish paths for future connections on the network.

ITS System Construction Inspection/Construction Support Projects

The following is a summary of some of the major ITS construction inspection efforts that M&J has recently completed or are currently working on.

- NJDOT Statewide On-Call ITS Inspection
- New Jersey Turnpike OPS NO. A3384 SUPERVISION OF CONSTRUCTION SERVICES FOR CONTRACT NO. A600.102D INSTALLATION OF VARIABLE MESSAGE SIGNS AT NEW AND EXISTING LOCATIONS ON THE TURNPIKE AND PARKWAY(Prime/Resident)
- NYSDOT Region 11ITS When and Where Maintenance Projects(Prime/Resident)
- New York State Thruway TANY 10-34 (D213736) Installation of ITS Devices at Various Locations in the New York Division
- NYSDOT Region 8 Westchester ITS System (Resident)

M&J Engineering has many other distinguished ITS Resident Engineers and ITS Inspectors including:

Alex Constantinides, P.E.	Extensive work as Resident Engineer for three major New Jersey Turnpike Authority projects involving the installation of DMS (Dynamic Messages Signs – Full Color) including CCTV and System Detectors (Sensys). Currently serving as the Resident Engineer for the TBTA QM 40 project, which is a reconstruction of the internals of the QMT Tunnels at a cost of over $300 Million. The complete traffic control, fiber optic, and CCTV system is

	being replaced as part of this huge effort. Prior to the NJTA engagement, Mr. Constantinides served as the Resident Engineer for the NYSDOT Region 11 New York City ITS Maintenance projects.
Albert Pozotrigo, P.E.	Recently served as the Resident Engineer for the NYSDOT major Alexander Hamilton Bridge – I-95 rehabilitation project. Project costs exceeded $400 Million. In addition to the extensive structural work performed, the work included ITS, Fiber-Optics, CCTV, and Weigh-In-Motion station. Mr. Pozotrigo is currently the project manager for the NJDOT Smart Moves 2014 South project, which is expanding the NJDOT ITS network including fiber optic cable, CCTV, and DMS.
Ramesh Ramanathan	Currently serving as the Resident Engineer for NYSDOT Region 11 New York City ITS Maintenance project. This project includes upgrades and maintenance for the very extensive New York City ITS infrastructure throughout the five boroughs. Work includes extensive fiber-optics as well as maintenance/replacement of CCTV, DMS, Radar Detectors, and Video Detection. Mr. Ramanathan has over 30 years' experience as a Resident Engineer for NYSDOT, Suffolk County, and Nassau County, much of which is with Traffic Signals and ITS.
Steve Tservengos, P.E.	Currently serving as the Resident Engineer for the Nassau County Old Country Road Traffic Signal Upgrade Project. The scope includes new fiber optics for over 15 miles and signal upgrades for over 40 intersections. Mr. Tservengos recently retired from NYSDOT as an EIC in Region 10 with over thirty-year's experience.
Maqsood Malik, P.E.	President and founder of M&J, Mr. Malik has an extensive background as an ITS Resident Engineer as documented in his SF330 resident attached. He was in charge of many of the early NYSDOT Region 11 ITS projects. He continues as a Project Manager for many of M&J's inspection efforts.

From this base, M&J is extremely well positioned to provide deep staff and support for the Stamford Project.

Recent M&J inspection projects include a wide spectrum of efforts, many of which M&J is serving as the prime consultant and are further documented in other sections of this RFP:

- Nassau County Incident Management System Inspection for Old Country Road (Prime)
- New Jersey Turnpike DMS and Guide Signs (Prime)
- TBTA QM40 Queens Midtown Tunnel Sandy Reconstruction Project (Prime JV)
- NYSDOT Region 8 (Westchester) ITS (Resident)
- NJDOT On-Call ITS Inspection (Prime)
- NJDOT Smart Moves 2014 South ITS Project (Prime)
- NYSDOT Region 10 (Nassau + Suffolk) Traffic Signal and Lighting Maintenance Project (Prime)
- NYSDOT Region 11New York City ITS Maintenance Project
- City of Stamford Urban Transitway-II ITS (Prime – Inspection)
- Northern State Parkway INFORM/ITS, Construction Inspection

Proposed Project Staff

M&J's ITS Group along with our construction inspection personnel, would make up the core of the staff that would be assigned to the construction inspection work to be provided on the project. This staff is summarized as follows:

- **Arnold D. Rubenstein, P.E., Project Manager:** is an ITS expert with over 30 years deployment with extensive experience with VMS and NTCIP from a design, integration, operations, and software development perspective. Mr. Rubenstein leads the four member M&J Design group and is a Vice President with the firm and has a major role in all of our ITS design efforts to date. The design group is currently advancing many ITS initiatives. Prior to joining M&J in 2007, Mr. Rubenstein served with MTA Bridges and Tunnels as an ITS project manager and had substantial involvement in the deployment of new NTCIP based VMS for the major bridge facilities (Verrazano, Throgs Neck, RFK, etc.), LCS for the Queens Midtown Tunnel, and Speed-of-Progression signs for the Throgs Neck. In addition, he was responsible for the integration of many of the older legacy VMS (Telespot, etc) and development of interface drivers that allowed them to be controlled from an NTCIP central VMS and to display Transmit Travel Time messages. For the QMT, he developed and Integrated a PLC that allowed integration of the existing LCS system to the new NTCIP ATMS deployed and superior PC control with manual control panel backup with integration with VMS at the portals. Mr. Rubenstein currently manages all of M&J's ITS design initiatives including the City of Stamford Urban Transitway, City of New Rochelle Signal System, Major Deegan, and NYSDOT Region 1 Troop G TMC including over thirty permanent VMS. In addition, he serves as a technical advisor to the NJTA VMS deployment project that includes over 28 new VMS/CCTV/System Detector/LCS stations and conducts acceptance testing for many of NJDOT's VMS deployments around the state. Mr. Rubenstein also designed the ITS and communication elements for a LCS system for Connecticut DOT and VMS.

- **Amaresh Jena, (Senior Inspector/Office Engineer)** – has over 14 years of experience years of experience (predominantly for CTDOT) as both a Senior Inspector and an Office Engineer and has worked on large and complex Construction Inspection projects in Connecticut including the reconstruction I-95 between interchanges 14 and 15, the Rehabilitation of the Arrigoni Bridge in Middletown, the rehabilitation of I-84, Sisson Avenue Interchange Bridges in Hartford, the reconstruction of South Maple Street Bridge over Scantic River, Front Street in Hartford, and I-95 New Haven Harbor Crossing Corridor Improvement Program.

- **Richard Rom, P.E. (Technical Support)** – is currently serving on many of M&J's ongoing design initiatives including the City of New Rochelle, Major Deegan, and Nassau County DPW efforts. He is an accomplished designer with excellent capabilities with AutoCAD Civil 3D and Microstation.

- **Masood Malik (Field Inspection)** - Mr. Malik has over 15 years of experience in providing design, integration, troubleshooting, and construction inspection services for projects involving CCTV along major highway and bridge corridors throughout the tri-state area. His experience includes CCTV, fiber-optic plant, encoders/decoders/multipliers, and video switches utilized in complex video systems.

- **Nicole Rawlins (Field Inspection/Office Engineering Support)** – is currently serving in our Design Group. She is a young versatile engineer that is serving on many of our ongoing initiatives. She has substantial expertise with traffic signals, ITS, Data Collection, and Computer Applications.

I. AUTHORIZED REPRESENTATIVE The foregoing is a statement of facts.	
1. SIGNATURE	3. DATE July 29, 2015
2. NAME AND TITLE Maqsood Malik, PE, President	

ARCHITECT ENGINEER QUALIFICATIONS

1. SOLICITATION NUMBER *(If any)*: RFQ No. 685

PART II - GENERAL QUALIFICATIONS

(If a firm has branch offices, complete for each specific branch office seeking work.)

2a. FIRM (OR BRANCH OFFICE) NAME	3. YEAR ESTABLISHED	4. DUNS NUMBER
M & J Engineering, P.C.	2004	619804599

2b. STREET	5. OWNERSHIP
One Cross Island Plaza, Suite 213	

2c. CITY	2d. STATE	2e. ZIP CODE	a. TYPE
Rosedale	NY	11422	Corporation

6a. POINT OF CONTACT NAME AND TITLE	b. SMALL BUSINESS STATUS
Arnold Rubenstein, Vice-President	D/MBE

6b. TELEPHONE NUMBER	6c. E-MAIL ADDRESS	7. NAME OF FIRM *(If block 2a is a branch office)*
718-525-5500	arubenstein@mjengineers.com	

8a. FORMER FIRM NAME(S) *(If any)*	8b. YR. ESTABLISHED	8c. DUNS NUMBER

9. EMPLOYEES BY DISCIPLINE

a. Function Code	b. Discipline	c. No. of Employees (1) FIRM	c. No. of Employees (2) BRANCH
02	Administrative	17	
04	Aeronautical Engineer	01	
06	Architect	01	
08	CADD Technician	02	
12	Civil Engineer	05	
13	Communications Engineer	01	
14	Computer Programmer	02	
15	Construction Inspector	13	
16	Construction Managers	08	
18	Cost Engineer/Estimator	02	
21	Electrical Engineer	04	
22	Electronics Engineer	01	
23	Environmental Engineer	01	
42	Mechanical Engineer	02	
48	Project Manager	04	
53	Scheduler	01	
54	Security Specialist	01	
56	Structural Engineer	01	
60	Transportation Engineer	05	
62	Water Resources Engineer	03	
	Total	75	

10. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST 5 YEARS

a. Profile Code	b. Experience	c. Revenue Index Number *(see below)*
B02	Bridges	5
C12	Communication Systems	4
C15	Construction Management	4
E03	Electrical Studies & Design	1
E04	Electronics	3
G04	GIS	1
H07	Highways	4
I04	Intelligent Transportation Systems	5
R03	Rail & Rapid Transit	2
T02	Testing & Inspection Services	1
T03	Traffic & Transportation Engineering	2

11. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS

(Insert revenue index number shown at right)

a. Federal Work	0
b. Non-Federal Work	6
c. Total Work	6

PROFESSIONAL SERVICES REVENUE INDEX NUMBER

1. Less than $100,000
2. $100,000 to less than $250,000
3. $250,000 to less than $500,000
4. $500,000 to less than $1 million
5. $1 million to less than $2 million
6. $2 million to less than $5 million
7. $5 million to less than $10 million
8. $10 million to less than $25 million
9. $25 million to less than $50 million
10. $50 million or greater

12. AUTHORIZED REPRESENTATIVE

The foregoing is a statement of facts.

a. SIGNATURE

b. DATE: July 29, 2015

c. NAME AND TITLE: Maqsood A. Malik, PE, President

Section 4 – Staffing Plan

Section 4 – Staffing Plan

ARNOLD RUBENSTEIN, P.E.

Proposed Project Assignment
Project Manager

Years of Experience
30

Education
- BS, Civil Engineering, 1977, Cooper Union
- MBA, Computer Methodology, 1983, Bernard Baruch

Professional Registrations
- Professional Engineer (New York, New Jersey, Florida)

Key Qualifications

Mr. Rubenstein has over 30 years of experience in all aspects of Intelligent Transportation Systems, Traffic Signal Systems, Communications, and Software development. He has a long history in designing and integrating traffic signal systems and has significant expertise with 2070/170 controllers. He has recently served in the EIC/RE engineer role with the MTA Bridges and Tunnels where he was in charge of the AW-37 IDEAS project that deployed an agency-wide ATMS system including facility retrofit and roadway equipment installations. Mr. Rubenstein is currently serving NJDOT as is responsible for conducting ITS tests for their recent installations of VMS, CCTV, and Fiber Optics and is providing construction support for the NYSDOT Region 8 ATIS project. Mr. Rubenstein has been extensively involved in the design and construction of ITS infrastructure including conduits, foundations, trenches, structural attachments, cabinets, and electrical connections. Mr. Rubenstein has provided extensive hands-on construction support for numerous large scale ITS projects including the NYSDOT Western Queens ITS on the Long Island Expressway, BQE, NJDOT I-80 Magic, and the Van Wyck. Mr. Rubenstein is also designing NCDPW for traffic signals and CCTV/Incident Management System.

RELEVANT EXPERIENCE

Stamford Urban Transitway ITS; City Of Stamford/CT Transit/Connecticut DOT/FTA; 03/2007-Present, Lead Systems Engineer - Serving as a sub consultant to a local Connecticut engineering firm responsible for the preliminary design, RFP development, construction support, and specialty item software development for an ITS system including Bus/AVL CAD system deployment, Parking Management System, Gigabit Ethernet Fiber-Optic LAN/WAN, On-Street Next Bus Arrival Signage, and Advanced Traveler Information components. Mr. Rubenstein is currently collectively developing System Engineering documentation. Gigabit Ethernet system includes fiber-optics, all electronics, backup DSL land-lines, splice tables, switches, and routers. A two tier network was developed connecting four (4) Cisco Gigabit Ethernet Switches in a redundant loop and a lower loop using 100Base-FX switches to connect field equipment. ITS Subsystem Components estimated at $2.5 Million. Entire SUT project estimated at $50 Million.

Connecticut DOT Construction Of Variable Message Signs On Route 9 & 66; 10/2007-06/2008, Lead Systems Engineer- Serving as a sub consultant to a local Connecticut engineering firm responsible for the design and specification of the communications and remaining electronic equipment including fiber optics, CCTV, digital transmission equipment, 100Base-FX switches, and DS-3 communications mini-hub, Developed Conceptual Design Report for the communication alternatives. Work involves integration of the new equipment to the TMC and field deployments including fiber splice tables. Work also includes the design of a Reversible Lane Control system for the Arrigoni Bridge including PLC, Lane Signals, and Communications. He was responsible for System Engineering including the development of a SEAFORM System Engineering management plan.

NYSDOT Troop G Traffic Management Center; 07/2007-Present, Project Manager/Lead Systems Engineer - Work is ongoing on the design of a new Traffic Management Center in the Albany, New York area that is jointly operated by the NYSDOT Region 1 and the New York State Police. The work involves designing new central TMC components to support the Gigabit Ethernet fiber-optic implementation and a complete digital video and data system while maintaining some legacy equipment (i.e.: T-1 Multiplexers) to support field equipment which may not be transitioned to the fiber-optic network in-time for the TMC move. A Conceptual Design Report was completed which provided the necessary input to the architects of the facility to plan for the TMC. In addition, rack layouts and estimation of power and heat generation for a possible TMC configuration was developed and included in the architectural plans for the center. System Engineering is underway and a Concept of Operations in being developed which will be followed by a formal System Requirements document.

MTA-PD Regional Radio System Infrastructure, New York, NY, 11/2010-Present, Project Manager- Developed a conceptual design and subsequent detailed design for an upgraded two-way public safety radio system for the MTA Police. The work involves the analysis of various alternatives and the subsequent selection of an optimum approach which will improve service to be provided. Work on the project involves the design of the "backhaul" which provides communications between the various radio components from the head-end. Work also includes site design including tower analysis for anticipated new and updated transmission sites as well as detailed cost estimates for the preliminary design report.

New York State Department of Transportation, Bronx/Northern Manhattan Corridor ITS, 2007-Present, Project Manager – Responsible for leading numerous tasks in support of the Region 11 ITS system. Tasks included the management and technical over site of a "hands-on" project to reverse engineer the fiber optic installation

for the cable serving four HUBS. Work included planning for MPT to insure safe access to the field equipment. The work included OTDR testing of the 60 and 72 fiber trunk cables, physically locating and opening the splice boots to determine the splicing, and the development of reports that provided complete documentation of the usage and splicing of the fiber optic plant. He also managed a comprehensive inventory of all of the equipment installed in the new JTMC facility to validate that the equipment procured from a variety of sources and funding streams was present and accounted for. In addition, managed and supervised the TAMS inventory process which field inventoried and identified all of the installed field equipment in the corridors utilizing a GIS system. Inventory involved review of the original design plans, as-built documentation where available, and field verification of the installed equipment base including VMS, CCTV, HAR, Fiber Optics, Radar and VIDS detectors, and Roadway Classification units

City Of Stamford Traffic Control System; City Of Stamford; $5 Million, 03/1997-Present, Project Manager/Lead Systems Engineer/Software Development/Timing Plan Development- Expansion and Upgrade of an intersection traffic control system consisting of over 200 intersections and approximately 20 CCTV. Work Involved extensive design of intersections, timing plan development and deployment, central distributed system software development and implementation, traffic controller programming and data entry, interconnect cable, communication system, construction, and O&M support. Project added over 100 new intersections to the system including development and fine-tuning of a complete timing plan library utilizing Transyt 7-F and Synchro. Developed entirely new distributed Central Control System (STDWIN) including AutoCAD based Real-Time Maps featuring once a second update rates, perpetual Split Monitoring and other advanced features. System was completed in 2001 and our efforts involve continued support and upgrade of the installation.

New York State Department of Transportation Region 11, Western Queens Corridor ITS, Queens And Kings Counties, NY; D008598, $90 Million, 1996 To 2001, Project Manager - Comprehensive corridor ITS system to implement ATMS for the Van Wyck, BQE, LIE, and GCP corridors in New York City. Served as project manager of this multi-discipline effort which included preliminary and conceptual design, detailed design, construction support and inspection, and the initial program O&M efforts. Project included the installation of VMS, CCTV, System Detectors, Communications, TOC, and Early Deployment system software for the Van Wyck and LIE corridors. Responsibilities included the management of a 10+ engineering and software development staff.

Nassau County Phase 7 Signal Expansion, Nassau County, NY, 2007-2008, Project Manager- As a sub consultant to GPI., managed the M & J Engineering design efforts for two on-call assignments. One task involved the complete independent design of the Traffic Signals at Americana Mall and Searington Road. This work included field survey, base mapping, preliminary and final design drawings and involved resolution of Nassau County staff which allowed the design drawings to be finalized and submitted to the county for construction. A second task included a field survey and the development of AutoCAD base mapping for conduit installation on several Nassau County arterials including Jerusalem/Gardner, Wantagh Avenue, East Meadow, and North Jerusalem. This work included approximately ten miles of mapping which was derived from the county's GIS system.

Nassau County Phase 5 Signal Expansion, Nassau County, NY, 2010-Present, Project Manager- As a sub-consultant to LKM, M & J Engineering is currently designing the fiber optic system for a segment of Lakeville Road from the Long Island Expressway to Union Turnpike. The work includes Base Mapping, routing of underground 3" conduit within sidewalks and in-street alignments, bridge overpasses, identification of utilities, fiber optic splicing tables, removal plans for existing conduits, identification of ROW, and interconnection to existing.

MAQSOOD MALIK, P.E.

Proposed Project Assignment
Principal-In-Charge

Years of Experience
25+

Education
- MS, Civil Engineering, 1994
- BS, Civil Engineering, 1988

Professional Registrations
- Professional Engineer in 8 States including NY,NJ,CT & DE
- NTCIP Trained

Key Qualifications

Mr. Malik has 20+ years of experience in all aspects of highway/bridge, structural/civil engineering and ITS construction. He has over 10 years of experience as an active ITS resident on three major corridor projects including the Northern State Parkway, Van Wyck Expressway, and Bruckner projects which have built all types of ITS and Communication networks utilized on roadway projects. He also has significant inspection expertise in more traditional highway and bridge construction projects. In recent years, Mr. Malik has served as a Project Manager for many ITS and Civil projects and has developed managerial skills that are critical to managing the staff and achieving the objectives of the clients. Mr. Malik is a problem solver who has substantial skills as an arbitrator which helps improve the working relationship between the various parties that must work together to successful achieve the mission results. He has the proven ability to hire and maintain the critical staff that is necessary to achieve success.

RELEVANT EXPERIENCE

NYSDOT, Alexander Hamilton Bridge & Highbridge Interchange Reconstruction from Amsterdam Avenue in New York County to Undercliff Avenue in the Bronx County, NY, Cost: $407Million, (2009-Present) - Project Manager - for this $407M Project that includes the rehabilitation of the Alexander Hamilton Bridge (concrete deck replacement and steel arch repairs), and 8 bridge structures (6 ramp structures including concrete deck replacements and substructure rehabilitation, and 2 bridge structures involving complete bridge replacement). The segments of on-grade roadways between the bridge structures and the end approach roadways include full reconstruction and resurfacing. The construction effort includes extensive MPT including detours, structure demolition, foundations, bridge pier construction, pile driving, new steel girders, floor beams, diaphragms, stiffeners, bridge bearings, new deck joints, concrete barriers, drainage, electrical utilities, lighting, ITS elements, sign structures, and landscaping.

NYSDOT D261344, Kew Gardens Interchange Contract No 1 – Van Wyck Expressway (VWE)/ Grand Central Parkway (GCP), Queens County, Cost: $146 Million, 3/2011 – Present, This Project includes the Removal and Replacement of 4 Bridges; Removal and Replacement of Superstructures, and Repair of Wing Walls and Abutments of 2 Bridges. The construction effort will result in the widening of the VWE – 1 travel lane in both directions, (NB and SB). Work elements include median barrier, roadway and bridge drainage, retaining walls, new pavement (concrete and asphalt pavement on grade), pavement delineation, earthwork, and landscaping. Include inspection of ITS / Electrical Components, Roadway Signage and Lighting to assure compliance with the plans and specifications and construction item quantities for payments to the Contractor.

NJ Turnpike Authority, OPS 3384, CI Services for the Installation of VMS/Sign Structures on the Turnpike and Parkway, Cost: $27M, (2011-Present). Project Manager - The work includes constructing foundations for the sign structures, furnishing and installation of overhead sign support structures, installation and testing of VMS/VSLS, installations of roadway safety features and associated electrical and ITS work. H-Piles; drilled shaft foundations, spread footings, pedestals, concrete piers, overhead span structures (70'-100'). Coordinating Lane Closures and MPT; Monitoring all testing; Maintaining daily records of the numbers and classification of workers employed by the Contractor using the Turnpike's CapEx Manager System.

TBTA, Construction Inspection Services under GFM-488A, Contract Number PSC-08-2849A, Cost: $1Million, 2010-2011, Project Manager. Construction Inspection Services on an As-Needed Basis for Task-3, BBM-344, Manhattan & Brooklyn Toll Plazas Lighting and Upgrade at the Brooklyn Battery Tunnel. M & J provided Inspection Services for Electrical Work on this Project for the Rehabilitation of the existing Light Poles at the Brooklyn and Manhattan Approaches to the Brooklyn Battery Tunnel. The rehabilitation effort included: Removal of the Existing Light Poles; Installation of Temporary Light Poles; Removal of Capstones / Concrete as required; Shop Refurbishing of the existing Light Poles; Repairing Anchor Bolts as required; Re-installing the Capstones; and Re-installing the Refurbished Light Poles. The work location is at the Brooklyn and Manhattan Parapets, and at the Brooklyn and Manhattan Median Areas.

NJDOT, Bridge Deck Replacements for three (3) Bridges Middlesex County, New Jersey, Cost: $7.8Million, (2010-2011) Project Manager for Construction Inspection Services for this $7.8M project involving typical deck replacement tasks at various bridges. Currently the work is ongoing at the following locations. Bridge deck replacement of Rt. 440 ramp WK over Woodbridge Ave, Rt. 440 NB over ramp WI and Smith Road ramp GW located in Edison Township of Middlesex County. for the replacement of concrete bridge decks; bridge repairs; new bridge parapets and bearings; protective shielding; concrete abutments, wingwalls and headers; cleaning and painting of steel; traffic control; portable variable message signs; new curbs, sidewalks, fencing and guide rail; pavement excavation and milling; erosion control; 12" aggregate base course; Hot Mix Asphalt (HMA) courses; new pavement striping; traffic signs; highway lighting; under deck lighting; and topsoil and seeding.

NYSDOT Region 8 Intersection Improvements Rt. 9W at Short Clove Road, Town of Haverstraw, Rockland County, NY, Cost: $38Million, Project Manager for Construction Inspection Services on this $38M project for providing CI Services for Rt. 9W Improvements that include the elimination of a Railroad Grade Crossing at Short Clove Road, the construction of a new intersection, two (2) new concrete bridges, and the reconstruction of Route 9W in the Village

of Haverstraw, Rockland County, NY. Duties have included: work zone traffic control, MPT, preparation of field change sheets, quantity work-ups, monitoring of contractor's demolition and bridge erection operations, containment systems, protective shielding, and structural lifting operations that affect existing and proposed structures.

NYSDOT, D030538, CI Services for Preventive Maintenance of Masonry Retaining Walls at various locations in New York, Kings and Richmond Counties, Cost: $13Million, (2009-2011). Project Manager - for this $13 Million project for which the scope is to provide construction inspection services for the Preventive Maintenance of Masonry Retaining Walls at various locations in New York, Kings and Richmond Counties, NYC. The construction effort will rehabilitate brick veneer retaining walls in various degrees of deterioration. Existing conditions being the driving force, design details will be utilized as required to remove isolated locations by installing temporary structural steel shelf supports for the portions of the brick veneer. All locations require removal of Lead Based Paint and/or Asbestos Abatement prior to brick veneer treatment. Night and Day Time Work Zone Traffic Control require Night Lighting. In over 50% of the locations, prefabricated Simulated Brick Panels will be placed extensively where erosion has not compromised the structural integrity of the brick panels. CPM scheduling and coordination with other agencies, such as Port Authority of New York and New Jersey, Metropolitan Transit Authority, New York City OCMC and NYPD will be required. Tree Removal and Landscape Development is also included.

NYSDOT R-11, D030834; Contract No. D261223; Construction Inspection, ITS System Preventive Maintenance and Emergency Repairs for Bronx and Queens Counties, NY, Cost: $7Million, 2010-2011, Project Manager The scope of this $7M Project is to provide Resident Engineering Inspection Services for routine maintenance as well as emergency repairs to ITS system assets along I-278, I-95, and Bruckner Interchange in Bronx County; the Van Wyck Expressway in Queens County; and the Traffic Command Center in Long Island City, Queens. CI services are being provided for the ITS system which involves the following ITS items: CCTV Cameras, Portable Variable Message Signs (PVMS); Highway Advisory Radios (HAR) Stations, HAR Beacon Signs, Video Image Detectors, Ranging Radar Detectors, Vehicle Classification Detectors, Variable Message Signs (VMS), 20,000+ meters of Fiber Optic Cable maintenance, Microwave Transceiver Set Assemblies, Splice Maintenance, and all electronic installations. All maintenance work is coordinated with the central Joint Traffic Management Center (JTMC).

NYSDOT, Consultant Project No. D030860; Construction Contract No. D261374; ATIS Communication Network (SMRP SBP, HRP, & CCP), Westchester County, NY, Cost: $24Million, 2010-Present, Project Manager for the inspection services of an ATMS/ATIS system for the Westchester Parkways including the RE and Expert ITS technical support. Regularly attends meetings and has provided problem resolution support. The project is installing a high bandwidth microwave backbone with 4.9 Ghz Public Safety band distribution including 22'-120' poles. The project extensively utilizes solar powered field devices and includes conduit excavation/backfill, fiber optic cable, pull/junction boxs, electric service/cabinet installation, conduit jacking or boring, pole excavation and concrete foundations, installation of various components (switches) for the system. All records are being kept in accordance with the Manual of Uniform Record Keeping(MURK).

NJDOT, Train Preemption North Contract – 2010 – 2011, $2Million, Project Manager for CI services to upgrade 14 intersections with state-of-the-art traffic control equipment with advanced railroad pre-emption capability and video surveillance. Inspection tasks include: taking measurement and gathering information required to compile monthly and final estimate, reports, and prepare As-Built plans in accordance with NJDOT requirements

NJDOT, Smart Moves 2007 – Construction Inspection Services, $4Million, (2008-2009) – Project Manager for providing CI Services for his $4M project that involved installation of ITS components including VMS and CCTV on various routes on Interstate Highways, Arterial Roadways, and County Roads in northern NJ. The Project included extensive traffic control patterns on various roadways throughout the northern region of the State. This included work on Route I-195; I 295; US 202/206; Route 80 and CR 571. Items of work in this contract included milling and excavation of roadways, concrete sidewalk work, excavation for the installation of conduits, foundations, junction boxes, guiderail work, CCTV cameras and roadway restoration.

NYSDOT, R-10 Northern State Parkway ITS/INFORM Upgrade, NY; D259535, $15Million, 06/2004-8/2005. Resident Engineer for inspection services for the ITS/INFORM System upgrade on the Northern State Parkway from the NYC line to Route 454 in Nassau and Suffolk

Counties. Work included the installation of 155,000m of fiber optic trunk cables, 44,000m of conduits, 588 pull boxes, branch cable installations new power drops, installation of 90 new poles, 118 control cabinets, installation of 9 CCTV, 24 acoustic detectors, and 13 Travel Time Signs and 27 Transmit antennas. Responsible for the management of project, reviewed shop drawings, test procedures, coordinated project's work with other contractor and agencies, reviewed project design and made field design changes. Approved payments. Conducted project coordination and safety meetings.

NYSDOT, Maintenance of ITS Systems in the Bronx, Queens and Kings Counties, NYC; $5Million, 2002 – 2003. Resident Engineer on this $5 million project that provided maintenance of *ITS* systems along Interstate Routes 278, 95, and Bruckner Interchange in Bronx County; the Van Wyck Expressway in Queens County; the Gowanus/Prospect Expressway in Kings County; and the Traffic Command Center in Long Island City, Queens. Having previously served as Resident Engineer for the installation of these ITS system, Mr. Malik provided maintenance services that involved the following ITS items: 54 CCTV Cameras, 6 PVMS (Portable Variable Message Signs); 5HAR (Highway Advisory Radio Stations), 4 HAR Beacon Signs, 43 Video Image Detectors, 30 Ranging Radar Detectors, 20 Vehicle Classification Detectors, 9 VMS (Variable Message Signs), 40,000+ meters of Fiber Optic Cable maintenance, 8 Microwave Transceiver Set Assemblies, Splice Maintenance, all electronic installments and maintenance of the central Joint Traffic Management Center (JTMC) and the Brooklyn Communications Shelter field installed facility.

NYSDOT, Installation of ITS Systems on the Bruckner and Sheridan Expressways, Bronx River Pkwy, Cross Bronx and Throgs Neck Expressway, NYC; $20Million, 2001 – 2003, Resident Engineer for construction inspection services on this $20 million large-scale ITS project for the Bronx region of NYC. The project entailed the installation of fiber optic network and field equipment. The fiber optic network connects the field equipment to two (2) "Hubs" which link to the Joint Traffic Operation Center (JTOC) through leased T-1 lines. In addition to the field equipment along the fiber optic network route, two "stand alone" CCTV cameras were installed along the Cross Bronx Expressway. Dedicated T-1 lines connect each of these cameras to the JTOC. The work performed included: (3) full span sign structures with VMS, installation of fiber optic communications devices including data and video transceivers; video switchers; central data processing and communications equipment; relocation of existing equipment in the traffic operation center; modifying existing equipment including detector processing cabinets and VMSs for communications over the fiber optic network; interfacing with and providing for the connection of leased communication services from Verizon and Verizon Mobile; providing for power from Con Edison; providing all incidental equipment and performing all necessary tasks to provide a smooth and continuous integration of all the equipment as one system. Detailed elements of the project included: Installation of 17,000 meters of new fiber optic conduits, 27,000 meters fiber optic innerduct, 248 fiber optic pull boxes, 31,000 meters of fiber optic cables, 41 splices and splice enclosures, connectors and other incidentals necessary to provide a complete fiber optic cable plant (the cable plant was used to connect existing and new field equipment to hubs); and installation of two "Mini-Hub" communication cabinets and associated electronics (these mini-hubs included T-1 channel banks, fiber optic data transceivers, fiber optic video receivers, video switchers, and video communication interface units).

AMARESH JENA, E.I.T.

Proposed Project Assignment
Senior Inspector/Office Engineer (Day-to-Day Operations)

Years of Experience
14

Education
- M.S., Civil Engineering, Illinois Institute of Technology, 2007
- B.S., Civil Engineering, College of Engineering and Technology, India, 2000

Certifications
- ACI-Certified Concrete Field Testing Grade I
- Institute of Transportation Engineers (ITE)
- Primavera Contract Management, 2012

Key Qualifications
Mr. Jena has over 14 years of experience which includes substantial Construction Inspection experience on large and complex projects including the Connecticut Department of Transportation. He has worked both as a Senior Inspector and an Office Engineer on various highway projects throughout Connecticut and India.

RELEVANT EXPERIENCE

Construction of I-95 between Interchanges 14 and 15 and Route-1, Norwalk, CT, 05/2012–Present, Office Engineer – This project involves full construction and replacement of three overpass bridges at Taylor Avenue (Bridge No.00053), Cedar Street (Bridge No.00054) and Fairfield Avenue (Bridge No.00055) between interchanges 14 and 15 and construction of an auxiliary lane for approximately 701 meters (2300 feet) between the interstate 95 (I-95) Southbound interchange 15 on-ramp from Route 7 to the interchange 14 off-ramp to Route 1. The auxiliary lane will expand into two lanes for the exit 14 off-ramp to Route 1. These two lanes exiting I-95 will then expand into three lanes at the junction with Route 1. There will be two left turn lanes and one right-turn lane to provide storage and improve traffic operations. Route 1 will be widened to accommodate 2.1 meter (7 feet) sidewalks on both sides of the roadway and lengthen left turn lane from Route 1 to the I-95 Southbound on-ramp. This project also includes traffic and safety improvements for the cedar street intersection, upgrade traffic signals, widening of Taylor Avenue, Cedar Street and Fairfield Avenue bridges with new abutments and new superstructures to accommodate the auxiliary lane on I-95 Southbound, right-of-way taking, cut and fill activities, drainage structure improvements and utility realignments. Tasks include: preparation and maintaining all Volume-I, Volume-III, Volume-IV books of the project; preparation of drainage book and checking all drainage quantities being paid as per contract and specifications, shop drawing review, project specifications and plans; reviewing daily work reports and checking all quantities paid by inspectors are as per contract and specifications; bi-weekly and month end payments of the work done by contractor; responsible for all material testing for the entire project. Preparation of all material testing reports in Site Manager and submitting to Connecticut Department of Material Testing Lab; preparation of all change orders and quantity adjustments required by contract; reviewing and creating submittals and transmittals through Primavera Contract Management software tools; preparation of all extra or cost plus work sheets and estimating cost sheets of the project; responsible for all DOT audit reports; preparing and maintaining payroll logs and prevailing wage rates for prime and sub-contractors; and reviewing various types of Concrete and HMA mix designs from approved production plants.

Rehabilitation of Arrigoni Bridge, Middletown and Portland, CT, 10/2011-04/2012, Senior Inspector - This project involved the rehabilitation of Arrigoni Bridge (Bridge No. 00524), which carries Route 66 and Route 17 across the Connecticut River, connecting Middletown and Portland. This is steel bridge through four lanes, undivided longest arch bridge in the state of Connecticut which provides an important transportation link in central Connecticut. The current bridge deck is composed of concrete-filled steel grid deck panels overlaid with bituminous concrete. The rehabilitation includes replacement of the existing concrete filled steel grid decks of 1210 feet long and 50 feet wide sidewalks on two main arch spans. These sections will be removed and replaced with new decking, barrier curb, sidewalks including repair and reinstallation of decorative handrail and fencing. The entire bridge drainage system will also be cleaned and restored. Current Arch Span conditions are poor in ride quality due to deteriorated of the wearing surface, deteriorated expansion joints, deficient deck and sidewalk conditions. All work will be completed from the bridge and from a temporary work platform suspended below the bridge. Other work includes replacement of elastomeric bearings, pedestal repairs on the Portland side, new bituminous overlay on the main spans, and new expansion joints. Work tasks included the inspection of both daytime and nighttime work operation at the bridge, inspection of all construction activities for the replacement of grid decks in three stages of construction; inspection of all precast and cast in place concrete barrier curb and sidewalk at both sides of bridge; preparation of daily quantities, cost plus items, monthly estimate and entered inspection reports into Site

Manager, inspection of traffic operations at the staged construction, review of shop drawings, project specifications and work plan; and responsible for all electrical work, paving operations and all concrete work at site.

Rehabilitation of I-84, Sisson Avenue Interchange Bridges, Hartford, CT -10/2011-3/2012, Construction Inspector – This project is a portion of I-84 that extends for approximately ¾ mile near downtown Hartford, between the Ayslum and Capitol Avenue interchange and the Sisson Avenue interchange. ConnDOT commissioned a detailed technical analysis of the condition of this viaduct structure. This assessment identified viaduct structure is a poor condition and need for near term repair and a more comprehensive long term rehabilitation strategy. The state has initiated a repair program intended to stabilize the structure until a permanent replacement can be put in place. Work items included the inspection of all operations including jacking and replacement for existing bearing at all piers, drainage items, concrete work, structural steel repairs throughout the project site, inspection of all night time construction work of bearing replacement, Class "S" Concrete, Asphaltic Plug Expansion joint system and other items; and the preparation of daily quantity and Inspection Reports into Site Manager.

Reconstruction of South Maple Street Bridge Over Scantic River, Enfield, CT, 7/2010–3/2011, Inspector/Office Engineer – This is the first precast bridge construction in the state of Connecticut. The primary goal is to replace an existing single 66-feet span steel truss superstructure supported on stone masonry and concrete Abutments Bridge (No. 03972) to 82 feet single span structure using adjacent prestressed/precast concrete box beams on concrete abutments. It accommodates both vehicular and pedestrian travel sidewalk. The proposed new bridge is consist of all precast units i.e. precast box beams (82' length each), precast footings, precast abutment walls, precast bridge seats approach slabs, precast cheek walls and precast wing walls. Work included the inspection of all construction activities and maintaining all the records from start to finish of this project, inspection of the installation process of all precast units i.e. precast box beams, footings, abutment walls, bridge seats, approach slabs, cheek walls and wing walls, drainage items i.e catch basins and manholes in the project, all materials used in the project to meet the design requirement also prepared all material testing reports and submitted to DOT lab, concrete work including Class "F" and Class "C" concrete used for deck slab and sidewalk, paving operations of Hot Mix Asphalt (Superpave 0.5"), Class 2, and Class 3 asphalt mix. prepared all Volumes (I, II, III, and IV) as per the CTDOT standards, prepared monthly estimate and weekly progress report also maintained all records, and processed Construction Orders for the new items and increased/decreased design quantities.

Front Street Project, Hartford, CT, 1/2010–7/2010, Construction Inspector – Front Street District, is the final phase of Adriaen's Landing, a State and Privately-funded master planned development project. Intention is to attract activity to downtown by way of residents, retail, and other commercial activity. The plan includes a bridge which connects the existing Connecticut Convention Center, Connecticut Science Center and Marriot Hartford Hotel, also includes 60,000 square feet of retail space, 115residental units, and a 325-space parking garage. As a construction Inspector, Mr. Jena was responsible for all construction activities towards front street and garage. Work items included the inspection of all cast-in-place concrete for sidewalks, electric light poles base, precast concrete work; responsible for paving Hot Mix Asphalt concrete towards Front Street, temporary parking lot and roadways towards Constitution way; preparation of all Volumes (I, II, III and IV) as per the CTDOT standards, preparation of monthly estimate and weekly progress report, and preparation of weekly environmental and erosion control report.

CONNDOT I-95 New Haven Harbor Crossing (NHHC) Corridor Improvement Program, 1/2008–1/2009, Design Engineer – This is a multi-modal transportation improvement program that features public transit enhancements and roadway

improvements along 7.2 miles of I-95, between Exit 46 (Sargent Drive) in New Haven and Exit 54 (Cedar Street) in Branford. The Program includes a major signature structure for Connecticut- the new Pearl Harbor Memorial Bridge. The Program will replace the existing I-95 crossing over New Haven Harbor, known as the Pearl Harbor Memorial Bridge (locally known as the "Q" Bridge) with ten-lane extradosed bridge. Responsibilities included: staged construction plan development for the final design of the I-91/I-95/SR 34 Interchange, New Haven, CT; estimated all the quantities involved in the drainage plan for the I-95 Norwalk project for Connecticut Department of Transportation (CTDOT); developed temperature adjustment models for the State of California pavement management plan; and applied the developed models to deflection data collected from approximately 1,500 pavement sections across California (Caltrans) and provided solutions for different type of pavement (Flexible, concrete and composite) to improve its service.

Illinois Institute of Technology, Chicago, IL, 1/2006-12/2007, Graduate Research Assistant – Responsible for analysis of complex behavior of traffic at signalized intersection with various traffic micro simulation tools (HCS, Syncro, and Corsim). Developed models to account for the effect of certain measures on a number of vehicle crashes on rural roads for the provision of engineering solutions for rural road safety. Performed literature reviews and assisted in the model development process for the Illinois Department of Transportation (IDOT).

Golden Quadrilateral, India, 2/2004–12/2005, Construction Inspector – This is an enormous highway project in India which consists of four major expressways connecting the key cities of Chennai, Mumbai, Delhi, and Kolkata. The expressways range from four to six lanes and more than 3600 miles (5800km). More than $12 billion US dollars have been pumped into the Golden Quadrilateral project, making it one of the largest public works projects in India's modern history. Mr. Jena was involved in a portion of this project which included 15 miles of new road construction and about 5 miles of minor and major bridge construction. Responsibilities included: supervising all construction activities of new roadway, strengthening and widening of existing road and construction of new minor and major bridges; inspected material production from Concrete Batching plant, Wet Mix plant and Hot Mix Asphalt Plant; checked design calculations, estimates, and specifications produced by other engineers; supervised all construction activities of sub-base, base and surface course of the road and inspected all cast in place concrete of concrete piers, well foundations, bottom plug, pier cap; developed mix design for all types of concrete used in the project and Hot Mix Bituminous Concrete; tested all materials used in the project i.e. concrete, asphalt, soil, concrete and all other materials used in road construction and performed Quality Control/Quality Assurance test and prepared quality control and quality assurance manual; and verified monthly bills of quantity and prepared monthly payment certificates.

World Bank Funded State Road Improvement Project in India, 12/2001–1/2004, Project Engineer – Responsible for construction supervision and on-time delivery to client and for design of deep foundations, pile caps, columns, deck (post-tensioned and conventionally reinforced), box girder splices. Tested all types of concrete, asphalt mix cement, bricks and soil as per the design specifications. Performed DCP and Benkelman beam tests for the resurfacing of existing road and conducted testing for material suitability for the structures to sustain. Verified data processing work and generated digital terrain models by collected survey data. Computed quantities and checked mathematical calculations and used AutoCAD and Civil Cad for plotting different drawings.

MASOOD MALIK, A-III

Proposed Project Assignment
Electrical Inspector

Years of Experience
15

Education
- B.S., Electrical Engineering, 1998
- Masters in Business Administration, 2002

Memberships
- TCC – Rutgers University Traffic Control Coordinator Designation, 2009
- ACI – Concrete Field Technician I, 2009

Key Qualifications
Mr. Malik has over 15 years of experience in providing design, integration, troubleshooting, and construction inspection services for projects involving CCTV along major highway and bridge corridors in the five (5) Boroughs of NYC and in New Jersey. His experience includes CCTV, fiber-optic plant, encoders/decoders/multipliers, and video switches utilized in complex video systems.

RELEVANT EXPERIENCE

MTA-TBTA, VN-80C, Construction of New Bus/HOV Ramp at the Verrazano Narrows Bridge, 9/2014-Present, Electrical Inspector – Work on this project includes the inspection of electrical distribution lines, 3 Phase and Single Phase, installation of electrical devices, preparation of daily reports, taking, material records, make sure that materials are being installed according to specifications and required submittals and plans. Also responsible for the preparation of as-builts and compliance with National Electrical Code, functionality testing of electrical equipment. Reference, Tom Cirrinicione (718) 836-0157, Construction Cost: $20 Million

NJDOT, Intelligent Transportation Systems (ITS) Maintenance Construction Inspection involving ITS Equipment Installations on North and South Lead ITS Inspector, 10/2013-9/2014, Electrical Inspector - Responsible for providing Construction Inspection Services for the installation and testing of CCTV, Fiber Optic Cable, electrical fee, inspection of feed from utility companies, inspection of wires according to National Electrical Code. Responsibilities included plan review, specifications and other related documents; checking construction for compliance with contract plans and approved shop drawings; reviewing and recommending ITS-related construction progress schedules and schedule updates; taking field measurements, conducting tests utilizing video test bar generators and OTDR, and gathering pertinent records, reports and calculations in accordance with NJDOT procedures. Reference, Frank Prezioso, Project Manager, (609) 530-2591.

NJDOT, Task Order ITS Installation for CCTV, DMS over Fiber Optic Cable., Lead ITS Inspector, Electrical Inspector 6/2013-12/2013 - Mr. Malik provided Construction Inspection Services for the installation and testing of CCTV and Fiber Optic Cable. His responsibilities involved reviewing plans, specifications and other related documents; checking construction for compliance with contract plans and approving shop drawings; reviewing and recommending ITS-related construction progress schedules and schedule updates; taking field measurements, conducting tests utilizing video test bar generators and OTDR, and gathering pertinent records, reports and calculations in accordance with NJDOT procedures.

NJDOT, Smart Moves, 4/2013-June 2013, Lead ITS Inspector - Lead ITS Inspector for this ITS Project that consisted of the installation of ITS components on Interstate Highways. Project included various highways in northern NJ involving the installation and testing of CCTV, VMS, and HAR equipment including the installation of foundations for signs and posts for CCTV cameras in the town of Summerville, Route 202 Traffic Circle, and on Interstate 80. Reference: Robert Scholnick, Resident Engineer (609) 530-5513.

TBTA, Security & Access Control System Installation at the Throgs Neck Bridge, 3/2013-4/2013, Lead ITS Inspector - Lead ITS Inspector responsible for inspecting the installation of above and in ground Fiber Optic Conduits at the Throgs Neck Bridge Queens Approach for the installation of Security and Access control System.

NYSDOT/NYSOGS, Troop G Traffic Management Center, Albany, NY., 1/2013-3/2013, Lead ITS Inspector - Lead ITS Inspector performed extensive field survey of the legacy equipment for the preparation of Conceptual Design Report that provides the necessary input to the architects of the facility to plan for the TMC and designing new central TMC components to support the Gigabit Ethernet fiber-optic implementation and a complete digital video and data system.

NYSDOT, Contract D030841, Design Phases V-VI, ITS System Maintenance in Bronx and Queens Counties, 9/2012–12/2012, Lead ITS Inspector - Lead ITS Inspector assisted in the preliminary design of ITS maintenance in Bronx, New York and Queens Counties. Work included conducting field surveys of existing ITS equipment, taking off quantities for the pull boxes and Fiber Optic drop cables.

NYSTA, TANY 10-341, Installation of ITS Devices in New York Division of the New York State Thruway Authority, 1/2011–8/2012, Lead ITS Inspector – Lead ITS Inspector responsible for the installation and testing of an ITS project installing 11 VMS, 12 CCTV, 16 Detector stations, Fiber Optics, Wireless, and 3 Transmit Sites for the New York Division. Project limits included I-95 (New England Thruway) to I-87 (Milepost 77). Inspected foundations for VMS Structures and CCTV poles including concrete testing (Slump, Air, Pressure, etc) and electrical connections to utility. Entered daily inspection reports in CEES including measurement and verification of quantities completed. Responsible for the inspection and setup of MPT work zones.

NJDOT, Intelligent Transportation Systems (ITS) Construction Inspection Term Agreement No. 2008 involving ITS equipment installations on I-287, 7/2009-12/2010, Field Inspector - Field Inspector responsible for providing Construction Inspection Services for the installation and testing of CCTV and Fiber Optic Cable. His responsibilities involve: reviewing plans, specifications and other related documents; checking construction for compliance with contract plans and approved shop drawings; reviewing and recommending ITS-related construction progress schedules and schedule updates; taking field measurements, conducting tests utilizing video test bar generators and OTDR, and gathering pertinent records, reports and calculations in accordance with NJDOT procedures.

NJDOT, ITS SMART MOVES 2007, Contract # 07600, 1/2009-6/2009, Lead ITS Inspector - Mr. Malik served as an Inspector on this ITS Smart Moves 2007 Project involving the installation and testing of CCTV, VMS, and HAR equipment at various highway locations statewide for the North and South Traffic Operation Centers (TOCs). His responsibilities included providing construction inspection services for the installation of foundations for signs and CCTV cameras in the northern NJ area, in the town of Summerville, in the vicinity of the Route 202 Traffic Circle, and on Interstate 80.

RICHARD ROM, P.E.

Proposed Project Assignment
Technical Support

Years of Experience
34

Education
- M.S., Electrical Engineering, Polytechnic Institute, Brooklyn, NY
- B.S., Electrical Engineering, Polytechnic Institute, Brooklyn, NY

Professional Registrations
- Professional Engineer, NY

Key Qualifications

Mr. Rom recently jointed M&J after a distinguished career in the high technology aerospace industry. Mr. Rom is currently designing Highway Lighting and ITS and conducting Acceptance Testing four the Stamford Urban Transitway ITS project. He is a versatile Electrical Engineer who is progressively responsible, and has diversified experience in research, development, and production programs for ITS, Highway Lighting, aerospace and land navigation systems. He has demonstrated success in the electronics development, in all aspects from specifications and design to testing and delivery. Additionally, his experiences also includes: expertise in mixed signal hardware, embedded firmware design, and FPGA design coupled with extensive hardware/software integration experience. He has a proven analytical ability, troubleshooting, debugging, and communication skills with high personal standards. Furthermore, he is seen as a mentor and consultant to other engineers.

RELEVANT EXPERIENCE

City of Stamford Urban Transitway ITS, 2014-Present, Design Engineer - Responsible for the design and construction support services for the ITS system including a Bus AVL/CAD, Parking Management Signs, Next Bus Arrival Signs, and a Fiber optic Gigabit Ethernet system for the downtime. The system has reached the System Acceptance Test milestone and Mr. Rom is witnessing the test and evaluating the results of the ongoing test program.

NJDOT, Route 78 Ramps over Route 1&9, 2014-Present, Principal Engineer - Responsible for the design of Highway Lighting on three ramp structures and the surrounding area. The lighting system being designed replaces the original conduit lighting system installed in 1970 which has been out of service for a significant number of years. M&J utilized the Visual 2012 lighting package to develop the design based on NJDOT standards. The work also includes under-deck lighting for the three ramp structures involved in the work. Mr. Rom is currently responsible for utilizing the Visual 2012 lighting design software, voltage drop calculations, and developing the design plan utilizing the NJDOT standards.

NJDOT, Route 18 Adaptive Signal System, 2014-Present, Design Engineer - Responsible for the fast paced design of the system communications including re-termination of existing fiber optics, installation of new Gigabit Ethernet Switches at each of 13 locations, modified splicing, and system block and networking drawings for the system. Work also includes the development of a technical memorandum summarizing the proposed fiber communication system and the design rationale behind the proposed implementation. Mr. Rom is assisting in the development of the fiber/networking design and preparation of the technical memorandum.

NYSDOT Sagtikos Corridor ITS - The Sagitikos Parkway Corridor in Suffolk County is a major North/South route in Western Suffolk County that is experiencing major grown and increasing congestion. The project involves the study and identification of various alternatives, in addition to providing additional lanes, to reduce congestion and support anticipated additional demand from the proposed Heartland development. M&J's work on the project involves the use of ITS technology alternatives for both long term and potential early deployment projects. A list of potential early action treatments has been developed with work on a potential ITS early action project expected to initiate over the next few months.

City of New Rochelle Traffic Control System Expansion, Electrical / Communications Engineer – Responsible for the design of the communication system to extend the current system to an additional forty-five intersections. Developed conceptual plans and estimates for the extension utilizing a hybrid of fiber optics and wireless transceivers utilizing Ethernet communications. Work also includes the addition of a CCTV system and expansion and relocation of the existing TMC.

L3 COMMUNICATIONS, Space and Navigation, Budd Lake, NJ, 1995-2014, Principal Engineer - Responsible for full electrical engineering coverage across all guidance and control system product lines at both the sensor and system level: Ring Laser Gyroscopes (RLGs) and Fiber Optic Gyroscopes (FOGs), accelerometers, Control Moment Gyroscope (CMG), momentum and reaction wheels, RLG and FOG based inertial measurement and navigation systems. Specified and designed FPGAs for two newly developed FOG based Inertial Reference Units implementing all system operational and test interface functions. Implemented a MIL-STD-1553 serial interface without the use of a processor- first time ever done at L3. Incorporated a UART with a RS232 electrical interface and high-speed custom serial interface. FPGA programming was done in VHDL using the Actel Libero Integrated route tool, ModelSim simulation

tool, and Actel FlashPro programming tool. Generated appropriate test benches for design verification.

- Designed a rigid-flex Circuit Card Assembly (CCA) providing system EMI, ESD, and lightning protection. Managed layout, routing, and stackup. Wrote requirements definition, test specification, and test procedure. Generated lightning effects analysis and developed printed wiring board trace pulse power and energy analysis spreadsheet.
- Designed several mixed signal analog/digital CCAs incorporating a TI C6711 DSP, ADCS, and DACs after completing function partitioning and parts selection. Designed and developed embedded firmware used to replace a legacy analog electronics control loop for a RLG sensor with digital implementation. Managed layout, routing, and stackup via third party hardware consultants.
- Provided analysis and trade studies over a broad range of topics in a clear, organized, and professional way. Created analysis tools and models in MSExcel to accelerate repetitive tasks. Analyses include circuit analysis and simulation, power estimates, component stress and performance margins, failure and overstress, radiation effects, control loop, and test data reduction, and database development with performance metrics tracking.
- Generated the test plan and compliance matrices for a land navigation upgrade program. Wrote the qualification analysis report providing all the analyses required to show the system compliance to requirements.
- Designed LabVIEW based RLG and CMG test equipment.
- Supervised assemblers, testers, and technicians in product and test equipment integration, rework, troubleshooting, repair, and maintenance.
- Valued contributor to "tiger teams", technical proposals, preliminary and critical design reviews, and customer reviews.
- Interfaced with several external customers involving technical presentations, on-site visits, and telephone support. Committed to both internal and external customer satisfaction.

UNISYS Corporation, Great Neck, NY, 1980-1995, Engineer/Associate Engineer
Responsible for:

- Contributed to the development of an automated fingerprint identification system by developing and implementing C and assembly code running on a massively parallel co-processor to accelerate image processing on a UNIX workstation.
- Designed a single-board microcomputer with an embedded Fairchild F9450 microprocessor in a real time application with custom serial and parallel digital interfaces.
- Wrote test programs for testing of analog and digital circuit cards on automatic test equipment, implementing fault detection and isolation down to the component level through the use of a flying probe.
- Evaluated and debugged digital circuit designs and software modules using microprocessor development systems, logic analyzers, and other diagnostic equipment.

NICOLE J. RAWLINS

Proposed Project Assignment
Field Inspector/Office Engineering Support

Years of Experience
3

Education
- BS in Civil Engineering, 2009, Rutgers University

Professional Registrations
- EIT Certificate #15126

Computer Skills
AutoCAD
Visual Basic
Microsoft Access Database
Microsoft Office XP/2010
Word/Excel/PowerPoint/Visio/ Publisher
Mobile Mapper 6 GIS Software
GPS Photo Link

Key Qualifications
Ms. Rawlins is a Civil Engineer with significant computer expertise. She has expertise with AutoCad and Access databases. Since joining M&J, she has worked on several of our ongoing ITS/Traffic initiatives. Most notably, she had significant responsibilities in conducting a field inventory of all of the ITS assets for the NYSDOT Region 1 Capital Region ITS. This system includes VMS, CCTV, Loop Detectors, Transmit, and a significant fiber optic and leased wireless infrastructure. Ms. Rawlins developed the ACCESS database and populated the database with the data and photo information collected in the field survey. The MobileMapper 6 GIS software uses a hand-held Mobile PC platform which has the ability to automatically Geocode the photographs taken with it. In addition, Ms. Rawlins has worked extensively on the City of New Rochelle communication design, the Major Deegan ITS design, and the Nostrand Avenue data collection effort.

RELEVANT EXPERIENCE

NYCDOT ESA Contract: 84110MBTR477 Phase 6+7 Signal Retiming, 2013-Present, Traffic Engineer II – As a subconsultant to GPI, M&J is developing revised off-peak signal timing for the West Street, Nostrand Avenue, and Boston Road Corridors. Ms. Rawlins is utilizing the Tru-Traffic timing plan development package and is entering the existing timing data into Tru-Traffic, conducting Speed + Delay runs, entering configuration information, coupling analysis, and developing new timings.

NYSDOT Troop G Traffic Management Center; 2010- Present, ITS Engineer - Work included the design of a new Traffic Management Center in the Albany, NY that is jointly operated by NYSDOT Region 1 and the New York State Police. Most notably, she has significant responsibilities in conducting a field inventory of all of the ITS assets for the NYSDOT Region 1 Capital Region ITS. This system includes VMS, CCTV, Loop Detectors, Transmit, and a significant fiber optic and leased wireless infrastructure. Ms. Rawlins developed the ACCESS database and populated the database with the data and photo information collected in the field survey. The MobileMapper 6 platform was utilized which runs on a hand-held Mobile PC pltaform which has the ability to automatically Geocode the photographs taken with it.

City of New Rochelle Traffic System Expansion; 2012-Present, ITS Engineer – As a sub-consultant to Lochner, M & J is designing the communication system for a forty-five intersection expansion of the city's existing McCain system which utilizes a fiber optic backbone. Ms. Rawlins developed a Google Earth KML database with all key locations identified and did a preliminary estimate of the number of utility poles involved with the arterials to be covered by the installation. Ms. Rawlins assisted in the development of a conceptual design and cost estimate for a wireless communication system for the expansion.

Nostrand Avenue B44 TSP Data Collection, Brooklyn and Staten Island, NY, 2012, Data Collection Study Supervisor- As a sub-consultant to GPI, M&J recently completed the field work for a major data collection effort for the Nostrand Avenue Corridor (Rogers to Emmons) in Brooklyn and Staten Island. The study included comprehensive turning movement, pedestrian, queue lengths, vehicle occupancy, speed and delay runs, and ATR counts for thirty-five intersections. The study was completed in four days of field work. The work included classification of vehicles into five categories and bi-directional pedestrian activity into five categories. Ms. Rawlins served as an assistant supervisor for the effort and was responsible for developing the field collection forms, scheduling personnel, validating the information collected, and the data reduction work.

NYSDOT Suffolk County Traffic Signal Timing, Suffolk County, NY, 2011-Present, Data Collection Study Supervisor - As a sub-consultant to GPI, M&J has completed a series of turning movement data collection for various arterials in Suffolk County. To date, approximately 50 intersections have been completed. Ms. Rawlins served as an assistant supervisor and performed some of the manual turning movement collection when necessary to relieve and augment the data collection personnel. Ms. Rawlins has also performed data reduction services on the project.

NYSDOT Region 11 Major Deegan over Mosholu Parkway Bridge Replacement, Bronx, NY, 2012-Present, CAD Designer – As a sub-consultant to PTG, M&J has initiated an assignment to design the ITS components for the bridge replacement work. The assignment involves the relocation of the fiber optic cable and support for the CCTV and VMS in the area. Ms. Rawlins has been involved with the field data collection and routing alternatives.

STATE OF CONNECTICUT ✦ DEPARTMENT OF CONSUMER PROTECTION

Be it known that

M & J ENGINEERING PC

1 CROSS ISLAND PLZ STE 213

ROSEDALE, NY 11422-1401

has been certified by the Department of Consumer Protection as a licensed

PROFESSIONAL ENGINEERING CORPORATION

License # PEC.0001490

Effective: 11/20/2014

Expiration: 11/19/2015

William M. Rubenstein, Commissioner

PL-02 Rev 06 13

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STATE OF CONNECTICUT
DEPARTMENT OF CONSUMER PROTECTION
165 Capitol Avenue ✦ Hartford Connecticut 06106

Attached is your license. Such license shall be shown to any properly interested person on request. No such license shall be transferred to or used by any other person than the person to whom the license was issued. Questions can be directed to the Occupational & Professional Licensing Division at (860) 713-6135 or email dcp.occupationalprofessional@ct.gov.

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ARNOLD D RUBENSTEIN
133 LINCOLN AVE
SADDLE BROOK, NJ 07663-5208

STATE OF CONNECTICUT
DEPARTMENT OF CONSUMER PROTECTION

PROFESSIONAL ENGINEER
ARNOLD D RUBENSTEIN
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SADDLE BROOK, NJ 07663-5208

LIC. / REG NO	EFFECTIVE	EXPIRES
PEN.0029704	02/01/2015	01/31/2016

SIGNED _____

STATE OF CONNECTICUT ✦ DEPARTMENT OF CONSUMER PROTECTION

Be it known that

ARNOLD D RUBENSTEIN
133 LINCOLN AVE
SADDLE BROOK, NJ 07663-5208

has been certified by the Department of Consumer Protection as a licensed

PROFESSIONAL ENGINEER

License # PEN.0029704

Effective: 02/01/2015
Expiration: 01/31/2016

William M. Rubenstein, Commissioner

Section 5 – Management Plan

SECTION 5 – MANAGEMENT PLAN

INTRODUCTION

M&J Engineering provides the City of Stamford with unique capabilities that can ideally achieve the goals of the project.

M&J Engineering and our proposed Project Manager, Arnold Rubenstein, P.E., has been serving on the signal system since 1988. Mr. Rubenstein has been involved in most aspects of the system and has served in the design, integration, timing plan development, and software aspects of the project. Mr. Rubenstein is extremely familiar with the fiber-optic conversion and Ethernet upgrades that have now been completed for the first half of the intersections as well as the SUT work which has been ongoing throughout this period.

EXPERIENCE

M&J has been selected by Nassau County to provide Resident Engineering and Inspection services for the Old Country Road Signal System upgrade project. Work is anticipated to start shortly. As indicated in our SF330s, this project includes ***over fifteen miles of fiber optic trunk cable, new controllers, above ground signal hardware,*** and other work which is very similar to the work required by Stamford in this RFP.

Outside of Stamford, M&J has been ***a leader in the inspection of ITS systems*** in the region. Mr. Rubenstein is completing an assignment for New Jersey DOT where he served as the Project Manager/Resident Engineer for two task orders ***totaling nearly $10 Million in construction.*** These projects included ***extensive traffic signal work, modern traffic control equipment, installation of Ethernet Switches, fiber optic trunk and drop cables, and other construction very comparable to that required for these projects.***

M&J Engineering has many other distinguished ITS Resident Engineers and ITS Inspectors including:

Alex Constantinides, P.E.	Extensive work as Resident Engineer for three major New Jersey Turnpike Authority projects involving the ***installation of DMS (Dynamic Messages Signs – Full Color) including CCTV and System Detectors (Sensys).*** Currently serving as the Resident Engineer for the TBTA QM 40 project, which is a reconstruction of the internals of the QMT Tunnels at a cost of over ***$300 Million.*** The ***complete traffic control, fiber optic, and CCTV system is being replaced*** as part of this huge effort. Prior to the NJTA engagement, Mr. Constantinides served as the Resident Engineer for the NYSDOT Region 11 New York City ITS Maintenance projects.
Albert Pozotrigo, P.E.	Recently served as the Resident Engineer for the NYSDOT major Alexander Hamilton Bridge – I-95 rehabilitation project. Project costs ***exceeded $400 Million.*** In addition to the extensive structural

	work performed, the work included ***ITS, Fiber-Optics, CCTV, and Weigh-In-Motion station.*** Mr. Pozotrigo is currently the project manager for the NJDOT Smart Moves 2014 South project, which is expanding the ***NJDOT ITS network including fiber optic cable, CCTV, and DMS.***
Ramesh Ramanathan	Currently serving as the Resident Engineer for NYSDOT Region 11 New York City ITS Maintenance project. This project includes upgrades and maintenance for the ***very extensive New York City ITS infrastructure throughout the five boroughs.*** Work includes extensive fiber-optics as well as maintenance/replacement of CCTV, DMS, Radar Detectors, and Video Detection. Mr. Ramanathan has over 30 years' experience as a Resident Engineer for NYSDOT, Suffolk County, and Nassau County, much of which is with Traffic Signals and ITS.
Steve Tservengos, P.E.	Currently serving as the Resident Engineer for the Nassau County Old Country Road Traffic Signal Upgrade Project. The scope includes new ***fiber optics for over 15 miles and signal upgrades for over 40 intersections.*** Mr. Tservengos recently retired from NYSDOT as an EIC in Region 10 with over thirty-year's experience.
Maqsood Malik, P.E.	President and founder of M&J, Mr. Malik has an ***extensive background as an ITS Resident Engineer*** as documented in his SF330 resume attached. He was in charge of many of the early NYSDOT Region 11 ITS projects. He continues as a Project Manager for many of M&J's inspection efforts.

From this base, M&J is extremely well positioned to provide deep staff and support for the Stamford Project.

Recent M&J inspection projects include a wide spectrum of efforts, many of which M&J is serving as the prime consultant and are further documented in other sections of this RFP:

- *Nassau County Incident Management System Inspection for Old Country Road (Prime)*
- *New Jersey Turnpike DMS and Guide Signs (Prime)*
- *TBTA QM40 Queens Midtown Tunnel Sandy Reconstruction Project (Prime JV)*
- *NYSDOT Region 8 (Westchester) ITS (Resident)*
- *NJDOT On-Call ITS Inspection (Prime)*
- *NJDOT Smart Moves 2014 South ITS Project (Prime)*
- *NYSDOT Region 10 (Nassau + Suffolk) Traffic Signal and Lighting Maintenance Project (Prime)*

- *NYSDOT Region 11New York City ITS Maintenance Project*
- *City of Stamford Urban Transitway-II ITS (Prime – Inspection)*
- *Northern State Parkway INFORM/ITS, Construction Inspection*

More information on many of these projects is included in the comprehensive SF330 package developed for this effort.

APPROACH TO THE PROJECT

The RFP for this project does not provide any definition on the Inspection team that is desired for this effort. The Organization Chart included in the proposal outlines a flexible team that we believe can best meet the needs of the project. In a strict DOT inspection project, it is typically mandated that the inspection team cover every operation in the field. To accomplish this, relatively large teams would be required. For instance, the negotiated fee for the Nassau County On-Call project includes a full-time Resident and four (4) inspectors at its peak. The negotiated fee for this is $2.4 million.

Given our experience with the Fiber Optic work, which for the most part involves the lashing of new fiber optic cable to existing twisted pair along aerial lines, the work can most likely be effectively inspected with a smaller staff. However, there are sections that require underground utility coordination, which often present challenges and may require additional attention.

As indicated in the enclosed Organization Chart, ***Mr. Rubenstein*** would serve as the ***Project Manager/Resident Engineer*** for the effort. The plans for the project do not include every detail that would be required to construct, such as detailed splicing and patch panel assignments. In this regard, to effectively construct, the inspection team should include ***highly competent ITS engineers*** who are experienced in the design and integration of these systems. Mr. Rubenstein would be augmented by ***Mr. Richard Rom,*** who is a highly competent engineer who has recently completed fiber optic design projects for NYCDOT Brooklyn Bridge, NJDOT Route 18 Traffic Signals, and currently the NYSDOT Route 110 over 27 ITS work. Mr. Rom is also an Electrical Lighting Engineer who recently completed a highway lighting design for NJDOT. Mr. Rom has also provided construction support for our NJDOT On-Call ITS inspection efforts and has been providing support for the SUT project. ***Ms. Nicole Rawlins*** would serve as an Office Engineer and an "on-demand" field inspector. She has served a similar capacity for the NJDOT On call ITS projects that recently completed. ***Mr. Masood Malik*** is a highly experienced ITS Inspector who has served on numerous NYSDOT, NYS Thruway, TBTA, and NJDOT efforts. He has over ten years of experience in this capacity. Mr. Malik would be available as a supplemental inspector, during busy periods of the project. A key member would be ***Mr. Amaresh Jena.*** Mr. Jena is an intermediate level inspector and would be the full-time inspector for the project. Mr. Jena has ***over 14 years of experience working predominantly for the Connecticut DOT,*** as outlined in this resume. As such, he is highly knowledgeable ***in all aspects of Connecticut DOT inspection policies and procedures.*** Mr. Jena would handle all of the day-to-day field work as well as the routine Office Engineer assignment. Our plan would be to augment him with Mr. Masood Malik, during busy periods of the project, when a single inspector would not be able to adequately cover all of the operations. ***Ms. Rawlins and Mr. Rom would serve on an "on-call" basis to handle some of the more ITS/technical aspects of the work, such as testing and submittal reviews.*** Their participation would be "as needed". Mr. Rubenstein's role would be assumed to be not "full-time" in that we do not believe that full-time involvement would be required. M&J including Mr. Rubenstein as the Resident, Nicole Rawlins as Office Engineer/Supplemental Field Inspector, and Mr. Rom for technical support, have successfully managed the NJDOT On-Call projects, involving $10 Million in construction over a two year

period, using a similar approach. Based on this, we believe that this flexible approach would provide the City of Stamford with an optimum, cost effective solution. However, we would be prepared and fully able to staff the job with more full-time support, if the City of Stamford believes that this would be necessary or desirable.

DBE REQUIREMENTS

M&J is a certified Connecticut DBE firm and would satisfy any goals that may be established for the project.

Section 6 – References

Alexander Tergis
Commissioner

James Moran, P.E.
Deputy Commissioner/City Engineer

Scott Pickup
Deputy Commissioner/Operations

City of New Rochelle
Department of Public Works

April 29, 2015

To whom it may concern:

M&J Engineering has been design and traffic engineering support to the City of New Rochelle since 2011. The design involves the extension of our central traffic control system to approximately thirty-five additional intersections utilizing wireless communications. Work includes the design of the system, communications, TMC central upgrade, and support to the intersection design. In addition, many of the intersections will be equipped with CCTV which will allow for central monitoring from our control center. The majority of the funding is from the FHWA and NYSDOT.

Arnold D. Rubenstein, P.E., was the project and technical manager for this work.

M&J has served very well in this capacity and has helped the city in providing these services to our patrons. I would be very pleased to recommend them for future work with the Department of Defense, the Army Corps of Engineers, and with any other federal agency.

Sincerely,

Michael C. Briska, P.E., P.T.O.E
Traffic Engineer

Cc: Deputy Commissioner/City Engineer

File: 83

515 North Avenue, New Rochelle, NY 10801 • (914) 654-2136 • (914) 654-2195 (fax)

NEW YORK STATE OF OPPORTUNITY. | Department of Transportation

ANDREW M. CUOMO
Governor

JOAN McDONALD
Commissioner

SONIA A. PICHARDO, P.E.
Regional Director

April 29, 2015

To whom it may concern:

The consultant, M&J Engineering, has been supporting our ITS (Intelligent Transportation System) program throughout New York City since 2006. Under consultant agreements with the NYSDOT, M&J Engineering has provided ITS Design, Construction Inspection, Construction Support, Operations and field investigation services for our program. Two principals of the firm, Mr. Maqsood Malik, P.E. and Mr. Arnold Rubenstein, P.E., have been involved with our program since 1995 and have been major contributors to the completion of our system and to the successful operation we have today. The majority of the funding for the agreements has been from FHWA and NYSDOT programs.

M&J Engineering has always worked professionally in this capacity and in the services they provided which has benefitted the travelers in the State of New York through the successful implementation of our ITS network. These support services involved such technologies as Variable Message Signs, CCTV, HAR Transmitters, E-ZPass Readers, vehicle classification, and a wide-area fiber optic network that covers most of the major roadways in New York City. I would be very pleased to recommend them for future ITS work with federal and state agencies including the Department of Defense and the Army Corps of Engineers.

Sincerely,

Fred Lai

Fred Lai, P.E.
Regional Traffic Engineer
NYSDOT – Region 11

NEW YORK STATE OF OPPORTUNITY. | **Department of Transportation**

ANDREW M. CUOMO
Governor

JOAN McDONALD
Commissioner

SONIA A. PICHARDO, P.E.
Regional Director

April 22, 2015

To whom it may concern:

M&J Engineering provided resident engineering services on the $407 Million Alexander Hamilton Bridge and interchange ramps project connecting the Bronx to Manhattan, across the Harlem River and over two major highways and railroad tracks. This was a very complex project and the largest ever completed by NYSDOT. The construction was performed under heavy traffic, with an average volume in excess of 170,000 vehicles per day, and in six stages in order to maintain the same level of service on one of the highest travelled highways in the USA leading to and from the George Washington Bridge.

Albert Pozotrigo, P.E. was the resident engineer provided by M&J and the project duration was 5 years.

M&J Engineering played a major role in helping us overcome many challenges to deliver the project on time and on budget and was a real value added partner to our team and I would be very pleased to recommend them for future work with the Department of Defense, the Army Corps of Engineers and with any other federal agency.

If you have any questions or comments please feel free to contact me directly at 718-482-4789.

Sincerely,

Manuel J. Silva, P.E.
Regional Construction Manager, NYSDOT Region 11

New Jersey Turnpike Authority

ADMINISTRATION BUILDING - 581 MAIN STREET
P.O. BOX 5042 - WOODBRIDGE, NEW JERSEY 07095
TELEPHONE (732) 750-5300

July 28, 2015

To Whom It May Concern:

M&J Engineering is currently providing supervision of construction services for the New Jersey Turnpike Authority on the following projects:

OPS No. A3384 Supervision of Construction Services for Contracts No. A600.102D, Installation of Variable Message Signs at New & Existing Locations on the Turnpike and Parkway. Construction Cost is $28.2 Million.

OPS No. A3473 Supervision of Construction Services for Contracts No. A600.277, Guide Sign Improvements on the Turnpike and Parkway and A600.278 Sign Structure Advanced Fabrication Contract. Construction Cost is $21.6 Million and the Fabrication Cost is $6.2 Million.

OPS No. A3517 Supervision of Construction Services for Contract Nos.: T200.290, Operational Improvements at Alexander Hamilton Service Area and P600.320, Guide Sign Improvements on the Garden State Parkway, Milepost 143.2 to 172.4. Construction Cost is $27.2 Million.

M&J's construction supervision teams, led by Alexandros Constantinides, P.E., have and continue to perform their duties in a professional manner, managing the above complex and logistically challenging projects at an outstanding level. A key component attributing to this is that M&J has provided the Authority with both knowledgeable and capable staff.

M&J's personnel play a key role in the day to day managing of projects by acting as an extension of Authority staff. M&J's personnel have helped represent the Authority in various aspects of the projects, including design, fabrication, and construction management and inspection. They manage and inspect the Contractor's daily activities, coordinate with other ongoing projects and coordinate lane closure requests with the Authority's Operations Department. Given the magnitude of current ongoing work being performed along the NJ Turnpike and the Garden State Parkway, these management duties become essential to the safe and efficient movement of Authority patrons while maintaining construction schedules.

As a Project Supervisor for the New Jersey Turnpike Authority, I would recommend the services of M&J Engineering based on their performance on Authority contracts.

Sincerely,

Andrew McConnell
Project Supervisor, Construction

Section 7 – Financial Capabilities

FINANCIAL CAPABILITIES

M & J Engineering, P.C. has been providing consulting engineering services since its inception in 2004. Since our company has previously provided consulting services within the last three (3) years to the City of Stamford, we are not including our financial statements in this submission. However, our banking name and contact information is provided below.

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MELVILLE, NY 11747
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