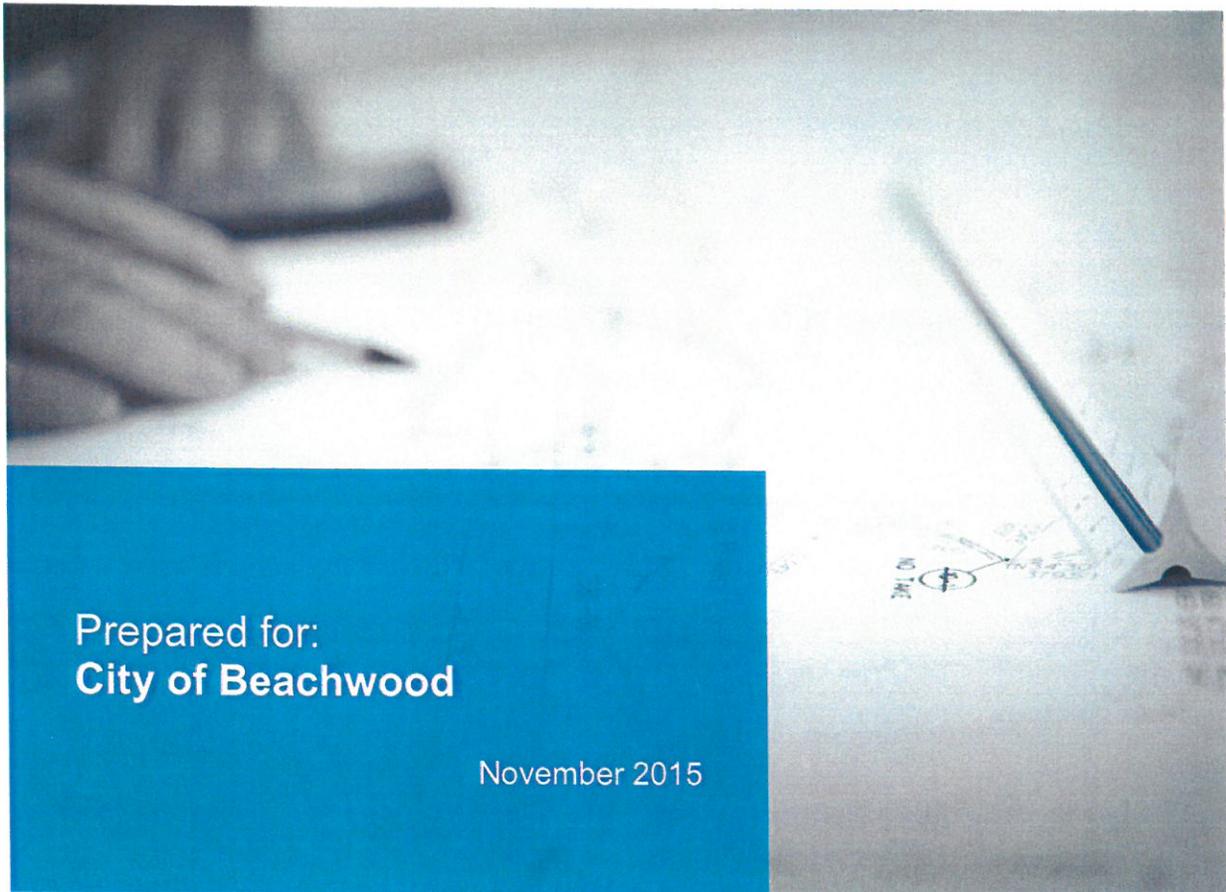




E.L. ROBINSON
ENGINEERING

CUY-Chagrin Boulevard (Contract #1)



Prepared for:
City of Beachwood

November 2015

ESTABLISHED EXPERIENCE. PROVEN PERFORMANCE.

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1468 West 9th Street, Suite 500 • Cleveland, OH 44113
T: 216-452-1890 F: 216-452.1894

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Contract #1



Pre-Qualifications & Sub-Consultants

	E.L. Robinson	WSP/Parsons Brinckerhoff	Lawhon	Barr Engineering
Complex Roadway Design	✓			
Interchange Justification/Modification Study		✓		
Level 2 Bridge Design	✓			
Limited Right of Way Plan Development	✓			
Traffic Signal System Design		✓		
Limited Highway Lighting Design		✓		
Environmental Services		✓	✓	
Geotechnical Engineering Services	✓			
Geotechnical Testing Laboratory				✓
Geotechnical Field Exploration Services				✓
Surveying Services				✓
Percent of Work to be Performed	50%	37%	5%	8%



E.L. Robinson Engineering is prequalified by ODOT in: Bicycle Facilities & Enhancement Design, Non-Complex Roadway Design, Complex Roadway Design, Interchange Justification/Modification Study, Safety Study, Right of Way Plan Development- Limited and Complex, Bridge Design- Level I and Level II, Bridge Inspection Level I, Geotechnical Engineering Services, Basic Traffic Signal Design.



WSP/Parsons Brinckerhoff is prequalified by ODOT in: Bicycle Facilities & Enhancement Design, Non-Complex Roadway Design, Complex Roadway Design, Interchange Justification/Modification Study, Safety Study, Right of Way Plan Development- Limited and Complex, Bridge Design- Level I and Level II, Bridge Inspection Level I and Level II, Geotechnical Engineering Services, Basic and System Traffic Signal Design, Limited and Complex Highway Lighting.



Barr Engineering is prequalified by ODOT in: Bicycle Facilities & Enhancement Design, Non-Complex Roadway Design, Right of Way Plan Development- Limited and Complex, Subsurface Utility Exploration, Geotechnical Engineering Services, Geotechnical Testing Laboratory, Geotechnical Field Exploration Services, Geotechnical Drilling Inspection Services.



Lawhon & Associates, Inc. Lawhon and Associates is one of only six firms, and the only DBE/EDGE firm, prequalified in all twelve ODOT environmental categories.

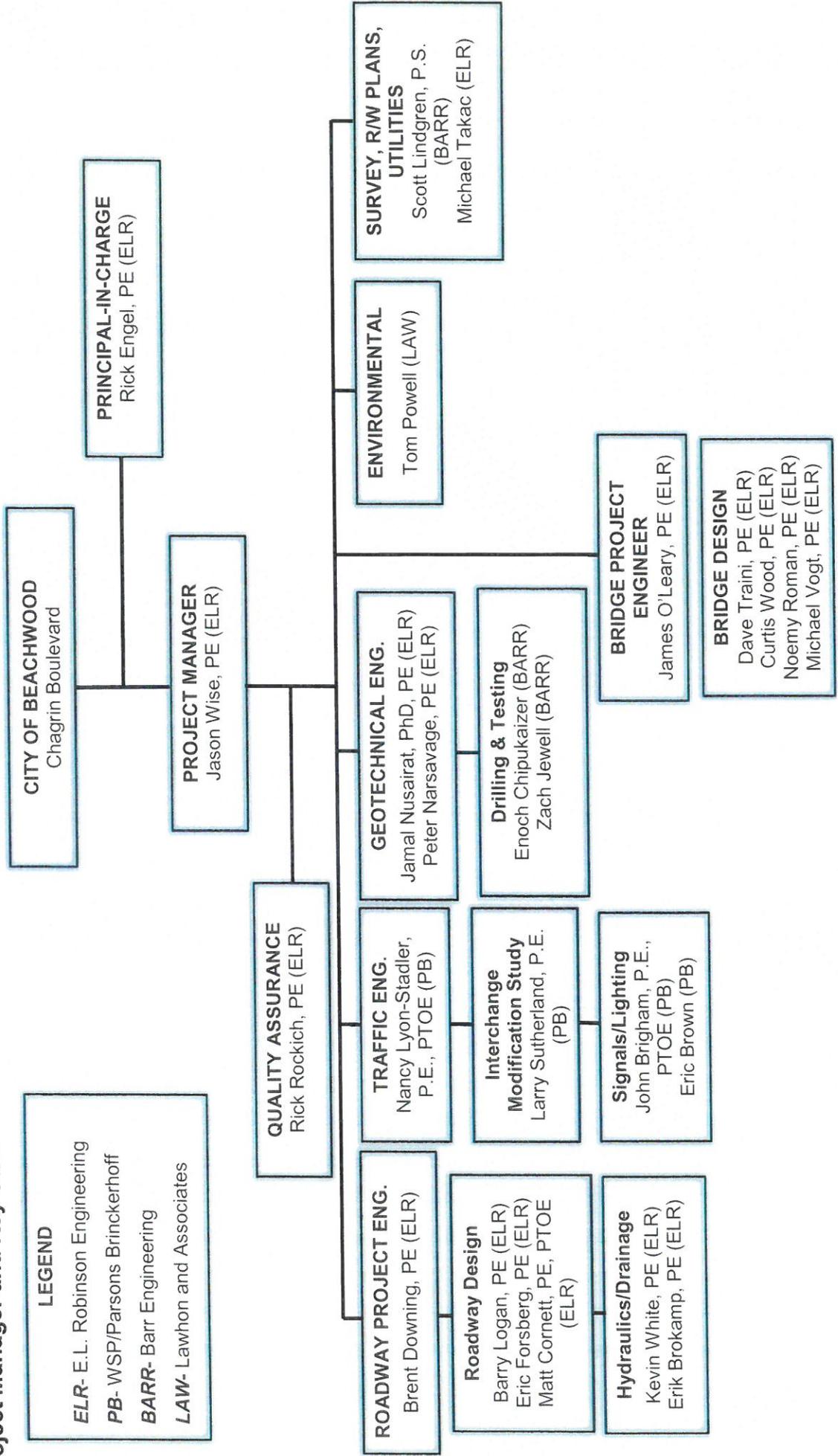
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Project Manager and Key Staff

LEGEND
ELR- E.L. Robinson Engineering
PB- WSP/Parsons Brinckerhoff
BARR- Barr Engineering
LAW- Lawhon and Associates



Project Manager & Key Staff Members

E.L. Robinson has been providing innovative engineering solutions since 1978. With more than 130 professionals, designers and support personnel, E.L. Robinson continues to build on its founding principles of quality engineering and surveying work with superior client service. ***E.L. Robinson Engineering of Ohio Co. has been in operation in Ohio for over fifteen years and has successfully completed or is involved in a broad spectrum of transportation projects. E.L. Robinson's Senior Engineers have over 200 years of collective experience on a number of projects across the State of Ohio.***



Project Manager Jason Wise, P.E. (ELR) Mr. Wise earned his BSCE from Ohio University and a MSCE from Ohio University in civil engineering and has **over 11 years** of experience in transportation and geotechnical engineering. For the last 10 years, Mr. Wise served at ODOT as the District Geotechnical Engineer in both District 10 and District 12. Over the past three years, Mr. Wise served as the Project Manager for CCG2, the EB Innerbelt Bridge Project in Cleveland Ohio, successfully managing one of ODOT's largest construction projects in history through a variety of delivery methods and schedule changes. Responsibilities included overseeing the quality program, enforcing contract documents and coordinating between the project and

stakeholders. Some areas of expertise include design-build project management, construction support, earthwork, and subgrade remediation.

Representative Projects:

Project Manager Eastbound Cleveland Innerbelt Bridge CUY-90-15.24 (Ohio DOT) Cuyahoga County, OH: The project involved the replacement of the existing IR 90 Innerbelt Bridge over the Cuyahoga River, 6 approach structures and associated ramps and city streets. The \$330 million eastbound Innerbelt Bridge project, one of the single largest transportation projects in Ohio DOT history, was originally planned as a design bid build project and upon receiving funding for Ohio Turnpike bonds was switched to a design build project. The EB Innerbelt Bridge project is a "sister" bridge to the previously completed WB Innerbelt Bridge, each will carry 5 lanes of traffic. Mr. Wise successfully transitioned the project after stage 1 plans were complete into a design build scope. Other project duties included obtaining City of Cleveland Planning Commission approval, hosting public meetings for project aesthetics approvals, overseeing the audits of the design build plans and providing technical interpretations of the project scope documents.

Project Manager ATH-124-0.90 (Ohio DOT) Athens County, OH: As a result of severe flooding along the original State Route 124 in Athens County, adjacent to the Ohio River, it was determined it was not economically feasible to repair SR 124 in place. The Ohio DOT decided to relocate 2.06 miles of SR124 onto an existing County Road alignment. The \$13 Million emergency project resulted 7 relocations, sensitive public involvement activities, extremely aggressive schedules and direct Federal Highway Administration coordination.

Project Manager CUY-90-22.60 Eddy Road Bridge (Ohio DOT) Cuyahoga County, OH: The project included the replacement of the existing 3 span structure carrying Eddy Road over IR 90 with a single span pre-cast concrete beam structure. Associated work also included replacement of the eastbound exit and entrance ramps, which were originally slab bridges on cast in place walls. Existing utilities under the ramps consisting of a 69 kV oil cooled power transmission lines and a 13.5 foot diameter combined brick sewer as well as an adjacent railroad required a net zero increase in load under the ramps resulted in the use of cellular concrete fill with a MSE wall facing.

Key Personnel

Richard Engel, P.E., Principal In Charge (ELR) Mr. Engel currently serves as Vice President and Senior Engineer for E.L. Robinson Engineering and has **more than 43 years** of project management and design experience. Mr. Engel earned his BSCE at Tri-State College and served with ODOT for over 29 years. His experience includes involvement in the design of over 4000 interstate highway, state route, county road, and city street projects. Mr. Engel has exceptional knowledge in civil design and planning, project management, and quality control. Prior to E.L. Robinson Engineering, Mr. Engel was the Assistant Administrator for the Office of Structural Engineering at ODOT. He had managing oversight of the Preliminary & Detail Design plan review process, which included a tremendously wide range of engineering projects. He also was Project Manager for 25 geotechnical research efforts. Mr. Engel was Project Manager on the HAM-75-0.30 project which included the rehabilitation of 19 mainline ramp and overhead bridges.

Rick Rockich, P.E., Quality Assurance (ELR) Mr. Rockich earned his BSCE and MSCE in Structures and Foundations from the University of Akron in 1983. Mr. Rockich has **over 37 years** of experience in structural engineering, primarily in transportation structures. He has extensive experience gained through planning, design, rehabilitation, and construction services. He has served as Lead Designer, Project Engineer, or Project Manager on vehicular, railroad, and pedestrian bridge projects, ranging from steel through-girders to steel lift trusses. Mr. Rockich is qualified as a Level 3 bridge designer. He has served as Project Manager for the advancement of over 100 bridge replacement projects from the programming stage to construction. He was the Quality Assurance Manager for the Summit County Bridge Ratings- CEAO Projects No. 3 and 4, Shaw Road, FRA-270-2.60, HAM-75-2.30, and CUY-254-4.49 projects. Most recently, Mr. Rockich led a team for the design of seven (7) bridges, 26 retaining walls, all drainage, and all geotechnical engineering for the \$200M, FRA-670/71 Design Build project in Columbus, Ohio and is currently Project Manager for the OBPP Task Order contract.

Brent Downing, P.E., Roadway Project Engineer (ELR) Mr. Downing earned his Bachelor of Science in Civil Engineering from The Ohio State University in 1993 and is a Senior Project Manager with **21 years** of management and design experience on highway and roadway projects. Mr. Downing has extensive knowledge in roadway and geometric design, including the development of various maintenance of traffic schemes, utility coordination, and pavement rehabilitation. Mr. Downing has experience in multiple project delivery methods including traditional design-bid-build, design build, and value engineering projects. Mr. Downing has worked on projects of various size and scope serving the engineering needs of state, county and city clients ranging in cost from \$50,000 to over \$200 million. Mr. Downing was also responsible for the maintenance of traffic design on the CUY-254-4.49 project which utilized a signalized closure of one-lane while maintaining access to the nine driveways within the work zone.

Barry Logan, P.E., Senior Roadway Engineer (ELR) Mr. Logan received his BSCE from the University of Illinois in 1995 and has **20 years** of experience as a transportation engineer with emphasis in geometric design. He has been the lead roadway engineer for several multi-discipline projects ranging in scope and size. Most Recently, Mr. Logan was the Lead Roadway Engineer for the LOR-2-10.46 project which involved the replacement of the SR 2 bridge over the Lorain and West Virginia Railway and the SR 2 bridge over Murray Ridge Road. He was also the Roadway Engineer responsible for roadway design and plan preparation for the MOT-35-18.57 project which included the rehabilitation of 2.90 miles of the US Route 35 expressway on the east side of Dayton, Ohio. The rehabilitation includes: addition of a third through lane in each direction, full depth removal and replacement of existing pavement, replacement-rehabilitation of five

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overpass and three underpass bridges, redesign of the Smithville Road interchange, including elimination of the flyover ramp and correction of the deficient acceleration and deceleration lane lengths, redesign of the Woodman Interchange to a Single Point Urban Interchange (SPUI), including correction of the deficient acceleration and deceleration lane lengths.

Matt Cornett, P.E., PTOE, Traffic/Roadway Engineer (ELR) Mr. Cornett earned his BSCE from The Ohio University in 2007 and has **gained over 8 years** of experience in multiple facets of roadway design. Mr. Cornett's experience includes horizontal and vertical alignment design of roadways, multi-use paths, development of maintenance of traffic and traffic control plans, traffic analysis, cost estimation, and utility coordination. Mr. Cornett has experience in multiple project delivery methods including traditional design-bid-build and design build. Mr. Cornett helped lead the design efforts of the BEL-70-7.61 Design Build project, MOT-35-19.59, and the Ridge Avenue project. His responsibilities included geometric and maintenance of traffic design. In addition, Mr. Cornett has utilized Synchro, SimTraffic, and HCS software while developing the Interchange Modification Study for the MOT-35-18.57 project on the east side of Dayton. Mr. Cornett also worked on the FRA-Dodridge Street Bridge project with responsibilities including the alignment and profile alternatives and final roadway plan preparation. Mr. Cornett also assisted with the maintenance of traffic design on the CUY-254-4.49 project which utilized a signalized closure of one-lane while maintaining access to the nine driveways within the work zone.

Kevin White, P.E., C.P.E.S.C., Hydraulic Manager (ELR) Mr. White earned his MS in Civil Engineering from Ohio University in 2011 and has **over 23 years** of experience of which 10 years were at ODOT focusing on transportation hydrology and hydraulics. Mr. White has 10 years of consulting experience acting as a project manager for public and private works projects including: highway improvement projects, storm water master planning, and construction inspection projects. Mr. White's specialties include transportation hydrology and hydraulics, project plan quality assurance, and specification preparation. Mr. White's expertise in transportation hydraulics and hydrology are recognized by McGraw-Hill publishing who invited Mr. White to author the Culverts, Drainage, and Replacement for Bridges chapter in the Highway Engineering Handbook. He was the project manager and principal investigator for NCHRP Project 20-07(264) entitled Guidance for Design and Selection of Pipe. Mr. White recently led the drainage efforts on the \$200M FRA-670/71 Design Build project (Columbus Crossroads, Project 1). He is also the drainage lead for FRA-71-17.14 (Columbus Crossroads Project 3), LOR-2-10.46, and the MAR-CR12-018 project. In the recent past, he has performed complex river hydraulic analyses in FEMA Special Flood Hazard Areas for the Dodridge Bridge over the Olentangy River and the Ridge Avenue Bridge over Stillwater River. He also provided the Hydraulic Analysis Report for the City of Avon's Recreation Lane over French Creek and Riegelsberger Road over French Creek projects as well as the Cashen Road over Arcola Creek project.

Erik Brokamp, P.E., Roadway/Hydraulic Engineer (ELR) Mr. Brokamp earned his BSCE degree from The Ohio State University in 2000 and has a solid foundation in bridge and roadway design with **over 14 years** of experience. Mr. Brokamp's experience includes bridge design/rehabilitation, roadway design, pavement rehabilitation and maintenance of traffic projects. Mr. Brokamp has experience as a Design Engineer where he designed roadway structures, including highway bridges, retaining walls, and culverts; developed preliminary studies and cost estimates; preliminary and final detail design plan coordination; quantity calculations; structural inspection and load ratings; horizontal and vertical alignment design of roadways; and hydraulic analysis of waterway of stream crossings. Mr. Brokamp's recent experience includes design engineer for the drainage on the FRA-670/71 Design Build project, which included a complex drainage system for a fully directional, multi-level interchange, design engineer for all the drainage

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on the FRA-71-17.14 project, and design engineer for the drainage on the MOT-35-18.57 project. Mr. Brokamp is also proficient in hydraulic design and analysis programs such as HEC-RAS, HY-8 and CDSS.

Jamal Nusairat, Ph.D., P.E., Geotechnical Group Manager (ELR) Dr. Nusairat received his Ph.D. from Akron University in 1999 and has **over 23 years** of experience. Dr. Nusairat has been a Project Manager for several ODOT instrumented research projects and has extensive geotechnical and structural expertise in design, testing, and long term monitoring. Areas of expertise include design of spread footings; piles and drilled shafts; bridge foundations; tieback walls and rock anchor designs; laboratory testing of soils; and analysis and design for earthquake loading, as well as preparation of soils and foundation reports. Dr. Nusairat has experience in bearing capacity analysis and design, settlement analysis, analysis and design of earth and rock fill dams, and stability analysis of slopes.

Peter Narsavage, P.E., Senior Geotechnical Engineer (ELR) Mr. Narsavage earned his BCE from the University of Detroit and his MS from The Ohio State University in geotechnical engineering and has **over 20 years** experience in geotechnical and structural design. Prior to joining ELR, Mr. Narsavage served at ODOT as the Foundation Engineering Coordinator, followed by the State Construction Geotechnical Engineer at Central Office. Some areas of expertise include earthwork, subgrades, retaining walls, and foundations. He was also the Lead teacher for two HT Academy courses on Earthwork and helped update the Bridge Design Manual for Load and Resistance Factored Design of foundations and retaining walls. Mr. Narsavage also helped update the Specification for Geotechnical Explorations. Mr. Narsavage is currently Project Manager for the City of Columbus General Engineering Services Contract.

Jim O'Leary, P.E., Bridge Project Engineer (ELR) Mr. O'Leary earned his BSCE and MSCE from Youngstown State University in 1991 and has **over 23 years** of experience in bridge design and plan preparation. His experience includes the design of rolled steel beams and steel plate girders as well as prestressed concrete beam superstructures. Mr. O'Leary has also worked on projects involving truss bridges, moveable bridges, and post-tensioned concrete structures. Mr. O'Leary recently led the design teams for the Shaw Road and Avery Road bridge replacement projects.

David Traini, P.E., Senior Bridge Engineer (ELR) Mr. Traini earned his BSCE from The Ohio State University in 1979 and has **over 36 years** of experience in managing, designing, and reviewing highway structures. He was the Assistant Administrator for Bridge Design for ODOT's Office of Structural Engineering at Central Office. Mr. Traini is qualified as a Level 3 bridge designer and has extensive knowledge in hydraulics, foundation, and all aspects of structural design. Over the past 20 years, he has gained extensive experience in the use of the Load and Resistance Factor Design (LFRD) Specification through attendance at various AASHTO Subcommittee meetings on Bridges and Structures, and Transportation Research Board (TRB) annual meetings. Most recently, Mr. Traini led the bridge design team on the Akron Peninsula Road Bridge over Robertson Run Design Build project, Summit County Bridge Ratings- CEAO Projects No. 3 and 4, HUR-Sherman Norwich Road bridge project and the Avon-Recreation Lane Bridge project.

Curtis Wood, P.E., Bridge Engineer (ELR) Mr. Wood has **over 12 years** experience in structural engineering, primarily in roadway structures. Prior to joining ELR, Mr. Wood spent over 9 years with ODOT where he focused on plan production and standards development. Mr. Wood has been involved with the design and review of bridge projects ranging from deck replacement projects, highly skewed steel plate girder projects requiring FEM, and accelerated bridge construction projects using transversely post tensioned prestressed box-beams with an integral wearing surface. While at ODOT, Mr. Wood was also

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involved in initial project scope development including bridge inspection activities. Mr. Wood also helped develop ODOT's prestressed I-beam standard drawing PSID-1-13.

Noemy Roman, P.E., Bridge Engineer/Bridge Inspector (ELR) Ms. Roman earned her BSCE from Cleveland State University in 2002 and is a lead structural engineer and bridge inspector with **over 12 years** of experience with an emphasis on bridge rehabilitation, inspection, evaluation, and alternative studies. She has served on a number of complex projects which include high level, difficult access structures, confined space, movable bridges and historic structures. She has experience with unique vertical lift bridges, bascule truss bridges, steel box pier caps, and has been the QA/QC for numerous bridge design and inspection projects. In addition, she has extensive experience in preliminary engineering, cost estimation, design, report preparation, structural analysis, plan preparation, construction specification and construction supervision. Most recently, Ms. Roman was the lead designer for the Avon- Riegelsberger Road over French Creek project and the Cashen Road over Arcola Creek project.

Nancy Lyon-Stadler, P.E., PTOE, Traffic Project Engineer (PB) Ms. Lyon-Stadler, PE, PTOE, IMS Traffic Ops is a traffic engineer and transportation planner with **over 27 years** of experience in traffic analysis and integrated transportation planning and design, incorporating traffic and roadway design, transit, active transportation (bicycle, pedestrian), greenway planning and complete streets. Her traffic operation experience includes scope development and implementation review of all traffic components for the Innerbelt Construction Contract Group 1 (CCG1); analysis of existing and proposed traffic operations for multiple projects including reconfiguration of Lorain Avenue (Cleveland), E.22nd Street (Cleveland), Warner Road and Garfield Boulevard (Garfield Heights), Cedar Road (Cleveland Heights), and others. She has designed and oversaw construction of numerous traffic signals. Most recently, she was project manager for a signal design for the Miami University-Western Campus that reconfigured traffic operations at the intersection of US 27 and SR 73 in Oxford, Ohio. Additionally, she lives in the area and regularly travels through the project area, so she brings a solid understanding of the project issues to the team.

Larry Sutherland, P.E., Senior Traffic Engineer (PB) Mr. Sutherland serves as the National Technical Director of Highways for Parsons Brinckerhoff's with **over 44 years** of experience in transportation engineering and planning, including 34 years with the Ohio Department of Transportation (ODOT). While at ODOT, he was either in charge of geometrics as ODOT's Geometrics Engineer or in charge of design for the Department as ODOT's Deputy Director of Roadway Engineering from 1998 to his retirement in 2004. During this time, he was responsible for directing the design of all interchange and freeway designs. This included working with FHWA and directing consultants in the development of the design concept for all conceptual alternatives in the planning process through final design of the preferred alternative in the detailed design process.

Mr. Sutherland has designed, led the design or reviewed and revised the design of numerous roadway projects involving interchanges, both large and small, throughout his lengthy career at ODOT and now as a consultant. Mr. Sutherland was responsible for leading the overall design concept for both the systems and service interchange on the Crossroads of America Interchange in Dayton, Ohio that included managing the development of the typical section, number of lanes and directing the layout of the geometric design. He helped design the closely space systems interchanges on I-270 with State Route 315 with a service interchange on I-270 and US Route 23 in Columbus, Ohio. He also directed and developed the design concept, lead the IJS and managed the development of typical sections that included horizontal and vertical geometry for two interstate roadways separated by a concrete median barrier running side by side with one

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interchange on one roadway and the other interchange on the other roadway for the FRA-270-40.26 project in Columbus, Ohio.

Enoch Chipukaizer, P.E., Geotechnical Drilling/Testing Manager (BARR) Mr. Chipukaizer is a firm Principal and serves as the managing partner for Barr Engineering's Geotechnical Division. He has **over 24 years** of technical and managerial experience in Geotechnical Exploration, Construction Inspection and Quality Assurance / Quality Control Testing. His project experience includes overseeing the geotechnical explorations for bridges and roadways, bikeways, airport improvements, architectural structures, waste water treatment facilities, and water and sewer lines. Mr. Chipukaizer has managed numerous large scale geotechnical drilling and testing projects completed for local clients including the Cuyahoga County Department of Public Works as well as the Ohio Department of Transportation District 12 and the NASA Glenn Research Center at Lewis Field.

Scott Lindgren, P.S., ROW Plan Development/Survey/SUE Manager (BARR) Mr. Lindgren is a **30 year veteran** of the surveying industry having spent the majority of his career providing survey and right-of-way services for Ohio consulting firms. Mr. Lindgren primarily serves as a Survey / ROW / SUE Project Manager and Reviewer for ODOT and Ohio Municipal projects. He is proficient in CADD software and automated mapping software. He is also experienced with the latest surveying techniques and equipment, including GPS, Total Stations, GIS, remote sensing, Photogrammetry, LIDAR, and bathymetric surveys. Mr. Lindgren has performed all manner of surveys, including ALTA, boundary, topographic, hydrographic, aerial control, right-of-way, and network control. He is proficient in MicroStation beginning with V7(J) through V8i(Select Series 2), Geopak Road, Geopak Survey, Trimble Geomatics Office, Trimble Business Center, various online GPS specific programs, and Street Atlas. His representative project experience includes: CUY-77-13.80 CCG6 (PID 82388); LUC-75-1.10 (PID 93594); BEL-70 Mall Road (PID 77785/89314); HAM-71-3.81 MLK (PID 77628); FRA-270-17.29 (PID 88310); Franklin Hill / Irishtown Bend Bank Stabilization (Cleveland Cuyahoga County Port Authority); and Fairhill & MLK Concept Project (NEORS). Certifications: ODOT ROW Plan Development

Michael Takacs, Right-of-Way Lead (ELR) Mr. Takacs is a Project Designer with **35 years experience** on over 150+ projects in the state of Ohio, ranging in construction costs from \$40,000 to \$100,000,000. As a Lead Roadway/Right-of-Way Designer, his responsibilities include all phases of project development including surveying, data reduction, triangular surface modeling, preliminary studies, specifications, cost estimates, detail construction plans including geometrics, pavement design, maintenance of traffic, drainage and culvert design, traffic control, right-of-way, and structural details. Mr. Takacs was the Lead Roadway/Right-of-Way Designer for the MAR-University Drive project, DEL-Sawmill Parkway Extension project, and also on the DEL-Tussic Street Road Improvement project.

Thomas Powell, CPG, Environmental Lead (Lawhon) Mr. Powell is a Senior Project Manager with **33 years** of experience, including Categorical Exclusion (CE) documents and Environmental Assessments for ODOT, FTA and the National Park Service. He manages major corridor projects and served as NEPA task manager and lead author for the recently approved CE4 for CUY-271-0.00 (PID 80418) and CE1 for BEL-40-23.38 (PID 85112). He is currently serving as project manager for the District 12 Environmental Task Order and as NEPA lead for the District 11 General Engineering Services task order.

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Reference Projects

MOT-Ridge Avenue - E.L. Robinson worked with the Montgomery County Engineer's Office to provide design services for the replacement of the Ridge Avenue Bridge over the Stillwater River. The project is located north of downtown Dayton and is situated in the historic neighborhood of Riverdale, adjacent to Triangle Park. The existing structure was replaced with a signature style bridge that includes aesthetic treatments on the bridge and connected retaining walls. The approach roadway was replaced with a new alignment to correct the deficient geometry. As a result of coordination with stakeholders and public involvement, ELR was directed to evaluate profile revisions to the Stillwater River Rec Trail as it crosses under the Ridge Avenue Bridge that will reduce flooding impacts and improve the trail pavement surface. *Contact: Stephanie Goff, Project Manager, Montgomery County Engineer's Office, (937) 496-7565.*



DEL-CR13- (TR109) - E.L. Robinson completed the analysis of intersection alternatives for the upgrading of the Worthington Road and Big Walnut Road intersection. This project is located in Genoa Township and includes two-lane roads that intersect at a four-way stop. As part of the project, a Feasibility Study was completed that included development of intersection alternatives, cost estimates, determining right of way impacts, traffic studies, turn lane development, and determining environmental impacts. Alternatives considered were curbed and uncurbed signalized intersections and roundabouts. Roundabout alternatives were designed to accommodate future widening along the Big Walnut Road corridor. The signalized intersection option at Worthington Road and Big Walnut Road was selected as the preferred alternative. Construction plans are being developed and will include a two-way left turn lane on Big Walnut Road from Worthington Road to Ketterington Lane/Satinwood Drive. Accommodations for a future multi-lane path will be included along Big Walnut Road. *Contact: Doug Reidel, Delaware County, Phone: (740) 833-2448.*

Genesis Hospital - Bethesda Drive Expansion - E.L. Robinson is currently designing an additional lane on Bethesda Drive for Genesis Hospital in Zanesville Ohio, to allow for more adequate Emergency Vehicle access into the Emergency Room which is accessed off of Bethesda Drive. The existing street is being widened and resurfaced, new storm sewer, curb and traffic control devices to accommodate the additional lane for approximately 0.16 miles. Genesis Healthcare System requested an accelerated schedule of final plans in 6 weeks or less, which we have committed to a 5 week process. Additional services being provided by E.L. Robinson include completing and acquiring all necessary permits from the City and providing construction management services, project scheduling, client updates on construction progress and managing contractor inquires.

MAR-University Drive - This project consisted of the construction of approximately 0.41 miles of a three lane urban arterial on a new alignment in Marion Township. Duties included typical section design, establishing the alignment, profile grade, maintenance of traffic design, drainage, the estimated quantity calculations, traffic control, preparing the Right-of-Way plans and descriptions, and the project cost estimate. In addition, a traffic signal was installed at the SR 310 intersection. *Contact: Philip Wright, P.E., Marion County, Phone: (740) 223-4110*

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Availability of Key Staff

Name	Role	% Available City of Beachwood
Jason Wise, P.E.	Project Manager	75%
Rick Rockich, P.E.	Quality Assurance Manager	50%
Brent Downing, P.E.	Roadway Project Engineer	50%
Barry Logan, P.E.	Roadway Designer	75%
Kevin White, P.E.	Hydraulics Engineer	75%
James O’Leary, P.E.	Bridge Project Engineer	75%
Nancy Lyon-Stadler, P.E.	Traffic Project Engineer	75%
Jamal Nusairat, P.E.	Geotechnical Manager	50%
Peter Narsavage, P.E.	Geotechnical Engineer	50%
Mike Takacs	ROW Designer	65%

E.L. Robinson has the capacity and resources to fully focus on the Chagrin Boulevard project. E.L. Robinson currently has over 40 employees (full-time and part-time) in the Columbus office and 8 in the Cleveland office. Between the Cleveland and Columbus offices, we have a **Bridge staff of 15, a Roadway staff of 10, and a Geotechnical staff of 5**. Based upon our staffing forecast, we have ample availability throughout the duration of this assignment and can perform expeditiously to complete this project.

E.L. Robinson Engineering is currently aggressively soliciting additional bridge/roadway related design projects for our staff. Five (5) of our largest projects, CUY-90-14.90 (CCG2), MOT-Ridge Ave Bridge Replacement, CUY-Avery Road Bridge Replacement, HEN-109-18.02, and STA-62 VAR Design Build are complete, further increasing our availability for this City of Beachwood project.

We have the available staff that is accustomed to meeting tight schedules. We recently completed plans for 2 Emergency Type bridge projects that required fast-acting and a quick turn-around. SUM-Shaw Road plans were prepared on a very aggressive timeline to expedite the reopening of the roadway, and LIC-CR39/York Road bridge plans were prepared in just 3 months.

The ELR Team has the resources and capability to make the Chagrin Boulevard project our number one priority.

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Project Approach

Project Understanding: The project is located in the City of Beachwood along Chagrin Boulevard from west of Richmond Road to the I-271 northbound exit ramps. The project is the result of the 2015 Safety Study (Study) prepared by the City and includes safety and operational improvements to Richmond Road, Chagrin Boulevard and portions of the I-271 ramps. The safety study proposed improvements range from eliminating the Bryden Road connection to Richmond Road and adding turn lanes to the signalized intersections at Richmond Road and the I-271 ramps. As part of the Study, improving lane continuity through the project corridor is recommended which will necessitate widening of the structure carrying Chagrin Boulevard over I-271 to accommodate 6 lanes.

Project Leadership: We have committed Mr. Jason Wise, P.E., to serve as Project Manager, utilizing his 11 years of transportation experience on assignments of all types and sizes. Mr. Wise has experience as a project manager on several large, complex projects, most recently with ODOT as the project manager for the eastbound Innerbelt Bridge Project. Ms. Nancy Lyon-Statler, P.E., PTOE will lead the Interchange Modification Study Efforts and traffic studies for the project, utilizing her 27 years of experience and local knowledge of the project corridor to provide the best fit solution for the traffic demand.

Technical Approach: On October 29, 2015, Mr. Jason Wise, P.E. of E.L. Robinson (ELR), visited the project location to perform a preliminary evaluation of the site. The intersection of Richmond Road and Chagrin Boulevard as well as the segment of Chagrin Boulevard from Richmond Road to Orange Place, have historically ranked high on ODOT's safety priority list. While traffic data collected over the last 35 years indicate a decrease in traffic volumes, crash statistics and congestion throughout the project area indicate a need to identify opportunities for significant operational improvements. For example, the southbound left turn queue on the I-271 exit ramp to Chagrin Boulevard regularly extends to I-271 during the PM peak period. The ELR team has evaluated the recommendations in the March 2015 Safety Study and has further analyzed the available traffic data to develop recommendations that meet the purpose and need of the project while minimizing impacts to environmentally sensitive areas (i.e., cemetery, gas station). Our project approach is based on this refined analysis and conversations with ODOT's traffic engineers that desire focus on addressing safety and congestions issues rather than parlaying the issues to other portions of the roadway network.

The main Study recommendations are related to congestion along Chagrin Boulevard and associated turning movements at the intersection of Richmond and Chagrin. While ELR agrees with a majority of the recommendations, we feel that further analysis is required to mitigate the potential for unnecessary work and to minimize impacts to sensitive properties. Further analysis of the suggested removal of Bryden Road is recommended. Closing this intersection will force traffic to the six legged Woodland and Richmond Road intersection to the north, which currently has capacity issues. In addition, according to the collision diagrams provided in the Study, there has only been one angle and one left turn crash. There were 15 rear end and sideswipe accidents reported, which are most commonly associated with congestion issues, related to the queue at Chagrin Blvd. Another recommendation the ELR team suggests evaluating further is the need for a dedicated lane to the I-271 northbound entrance ramp on eastbound Chagrin. While this would allow free flow east of the Park East Drive intersection, the congestion-relief benefits versus the cost of widening the Chagrin bridge over I-271 should be evaluated further. ELR will also study the feasibility of rephasing the Richmond / Chagrin intersection to remove the existing north-south split phasing with minimal changes to intersection approaches as another potential low-cost, low-impact alternative.

The Study recommends that the I-271 southbound exit ramp be widened to accommodate a triple right turn and a single left turn. Based on the traffic volumes provided in the Study and our team's observations, the triple right is not recommended. Currently, the right most lane tends to handle a majority of the volume with permitted right turns on red while the center lane (right turn) does not permit right turns on red. Additionally, a triple right turn lane would require three westbound receiving lanes on Chagrin Blvd. Based on our field observations of traffic behavior at this location and pending additional analysis, we anticipate this intersection would operate more efficiently with dual left and right turn lanes to address the observed peak hour left turn queue. ELR also recommends that further capacity analysis be conducted regarding the recommended triple left turn at the I-271 northbound exit ramp intersection. Triple turn lanes are difficult for drivers to navigate, especially across a steep intersection that falls away from the

CUY-Chagrin Boulevard

Contract #1



primary turning movement direction, and this reconfiguration would necessitate costly widening of the Chagrin Blvd. bridge over I-271.

Right of Way: If all of the recommended improvements detailed in the safety study are carried forward, approximately 9 parcels will be affected, requiring permanent strip takes. Mr. Mike Takacs of ELR will prepare the right of way plans and descriptions. ELR will make every effort to minimize right of way impacts, especially adjacent to the commercial businesses and the cemetery.

Drainage/Hydraulics: ELR will inventory and evaluate the existing drainage system throughout the project limits, noting deficiencies in the existing system and designing the new system to supplement the existing system. The proposed project area and construction impacts will be greater than 1 acre, therefore Post-Construction Best Management Practices (BMP) will be required. The City will be responsible for the maintenance of the BMPs, so ELR will evaluate potential BMP solutions and work with the City to specify BMPs they are comfortable with maintaining.

Survey/Utilities: Prior to the start of design work, ELR's subconsultant, Barr Engineering, will obtain a topographical survey for the preferred alternative. The location of existing utilities will be coordinated with the local utility companies and OUPS. ELR will coordinate all utility issues at all stages of the project by utilizing a utility tracking spreadsheet log. Early in the design, ELR will identify potential utility relocations and review the findings with the City and affected utility companies for feasibility, impact and cost.

Environmental: We anticipate the project will be cleared with a Level 2 Categorical Exclusion. The main driver behind the level of environmental document is the potential for right-of-way acquisition. If substantial right-of-way or relocations are required, the document could advance to a higher level Categorical Exclusion.

Supporting studies required for environmental approval will probably include a Level 1 Ecological Survey - mainly for the identification of potential threatened and/or endangered bat species habitat; an Environmental Site Assessment Screening - project area includes several gas stations and automobile dealers, and a Section 106 Request for Review - The "Bet Olam Cemetery" is located in the southeast quadrant of Richmond Road and Chagrin Boulevard.

Knowledge and Experience Our task leaders have over 170 years of ODOT experience; Rick Engel, Dave Traini, Kevin White, Eric Forsberg, Peter Narsavage, Curtis Wood, Mike Vogt, Jason Wise and others, are former staff members of ODOT. Not only are they familiar with all of the ODOT and AASHTO design standards and policies, they also helped develop some of the current design standards and policies. The depth of ELR's first hand ODOT experienced engineers is unmatched. ELR's highly effective team of nearly 50 Ohio-based professionals routinely attend available ODOT training sessions in order to stay on top of the latest in ODOT's policies and procedures. Additionally, we have worked on multiple projects of similar nature and complexity.

Project Costs and Cost Containment: For all of our work, we follow a Project Quality Plan (PQP) which is an essential element of our project delivery process. The PQP improves the overall level of service we provide to our client, while managing any risk factors that may arise. Mr. Rick Rockich, P.E. will be our Quality Assurance Manager for this contract and will ensure the lines of communication are maintained and that the City and ODOT requirements are fully satisfied. Mr. Rockich will also ensure that the scope is adhered to and the schedules and budgets are met. Repeat business is one of the best measures of client satisfaction with the consultant's work. ELR is continuously sought to provide engineering services on relatively complex projects, to prepare VECs, and to participate on design build projects because we take the time to do our homework, and to understand lessons learned on similar projects constructed around Ohio and the U.S. ELR's average ODOT CES score is 84 with recent scores of 89 on the JAC-35-07.83 project and 84 on the FRA-71-5.29 project.

Continuous Communication: Clear, concise, and frequent communication between Mr. Wise and the City is vital to the success of this contract. Mr. Wise will provide monthly progress reports to the City on the status of the project, as well as perform formal follow-up with the City on the project to gain valuable feedback. Prior to finalizing the scope of services, ELR recommends performing a field scope meeting with the City staff and project manager. This field review meeting will allow us to discuss project specifics and to clarify any challenges to ensure our team has a thorough understanding of the desired project outcome.



GPD GROUP
Glaus, Pyle, Schomer, Burns & DeHaven, Inc.

Cleveland Office

5595 Transportation Blvd. tel 216.518.5544
Suite 100 fax 216.518.5545
Cleveland, OH 44125 www.gpdgroup.com

The Honorable Merle S. Gorden
Mayor of the City of Beachwood
25325 Fairmount Blvd.
Beachwood, Ohio 44122

December 1, 2015
1512174.04

CUY-Chagrin Boulevard (Contract #1)

Dear Mayor Gorden,

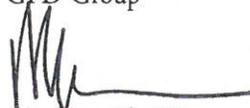
GPD Group (GPD) is pleased to submit our letter of interest to the City of Beachwood for the Chagrin Boulevard Immediate Safety Improvements and Long Term Capacity Improvements Project. GPD has been providing architectural, engineering and construction management services to municipalities, counties, the State of Ohio, and the Ohio Turnpike and Infrastructure Commission since 1961. With over 54 years of experience, GPD understands project goals, issues and constraints on your time and budget. With this understanding, our proposed team plans to deliver project success by:

- Ensuring your continued success in serving the public at the highest level, GPD has assembled an extremely qualified team of engineers to assist the City of Beachwood with safety and long term capacity improvements. Our staff offers a mix of public and private sectors experience for both design and construction. As municipal engineers for 15 communities in Ohio, GPD brings added knowledge and insight to your project.
- Committing to you Project Manager David J. Martin, PE to lead the team that is dedicated to serving your purpose. Dave is a highly skilled professional with a broad range of experience in roadway and traffic engineering.
- Organizing a team of bridge and roadway experts who regularly serve our local communities and are familiar with local, state and federal regulations. This team will include SME, for geotechnical services, So-Deep, Inc., for Subsurface Utility Engineering, and Ohio Valley Archaeology, Inc., who will perform the historical / architectural site investigations.
- Developing an approach that showcases our familiarity with your project. GPD has been involved in the study of the corridor for several years through the completion of the Chagrin Boulevard Traffic Management Master Plan and the Chagrin Boulevard Safety Study. The institutional knowledge that GPD possesses will allow for the smooth transition from the study phase of the project to the detailed design phase.
- Providing recent and relevant experience for similar projects in the City of Beachwood and surrounding communities.

GPD maintains a high rating in the Ohio Department of Transportation Consultant Evaluation System and believes this quality work extends to the various municipalities to which we provide professional services. We feel that our proven track record of successful engineering is a testament to the outstanding work that GPD will provide the City of Beachwood. We look forward to discussing our submission and approach with you in further detail. Feel free to contact us with any questions or concerns.

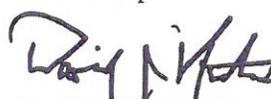
Respectfully submitted,

GPD Group



Mo Darwish, PE
Principal-In-Charge

GPD Group



David J. Martin, PE
Project Manager

IN RESPONSE TO YOUR REQUIREMENTS FOR LETTERS OF INTEREST:

GPD Group's diverse capabilities in roadway design and construction, bridge design, erection and construction and traffic engineering and planning uniquely qualify us for the City of Beachwood's Chagrin Boulevard improvement project. GPD's long history working with the City of Beachwood will ensure that we incorporate local standards and preferences into the design of the recommended improvement. Our history on this particular project, with our completion of the studies which identified the need for the proposed improvement and the previous bridge rehab CUY 271-6.04/8.13 over I-271, will allow the project to move ahead seamlessly if GPD is selected where other consultants would need to "get up to speed." Utilizing our in-house expertise along with our key subconsultants, the GPD team is positioned to deliver this challenging project on time and within budget for the City of Beachwood.

ODOT PREQUALIFICATION SERVICES

GPD is prequalified with the Ohio Department of Transportation to provide professional design services in the following categories:

- Bicycle Facilities & Enhancement Design
- Non-complex Roadway Design
- **Complex Roadway Design**
- **Interchange Justification / Modification Study**
- Safety Study
- **Right of Way Plan Development – Limited**
- Right of Way Plan Development – Complex
- Bridge Design – Level 1
- **Bridge Design – Level 2**
- Level 1 Bridge Inspection
- Basic Traffic Signal Design
- **Traffic Signal Design System**
- **Limited Highway Lighting Design**
- Complex Highway Lighting Design
- Cost Accounting System – Unlimited
- Environmental Document Preparation - EA/EIS
- **Environmental Document Preparation - CE**
- Environmental Document Preparation - Section 4(f)
- Ecological Surveys
- Stream and Wetland Mitigation
- Waterway Permits
- **ESA Screening, Phase 1 ESA and Phase II ESA**

SIGNIFICANT SUBCONSULTANTS, THEIR CURRENT PREQUALIFICATION CATEGORIES AND THE PERCENTAGE OF WORK TO BE PERFORMED

FIRM & ROLE	% OF WORK	ODOT PREQUALIFICATIONS
SME <i>Geotechnical Engineering</i>	2%	Geotechnical Engineering Services Geotechnical Testing Laboratory Geotechnical Field Exploration
So-Deep, Inc. <i>Subsurface Utility Engineering</i>	5%	Subsurface Utility Engineering (SUE)
Ohio Valley Archaeology, Inc. (OVAI) <i>Cultural Resources Investigation</i>	1%	History/Architectural Investigations

PROJECT MANAGER AND OTHER KEY STAFF MEMBERS

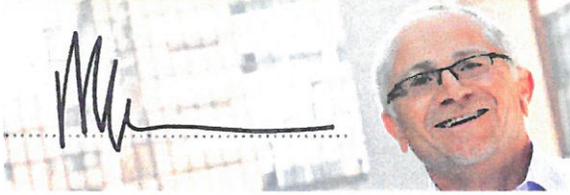
KEY STAFF	
Principal-In-Charge	Mo Darwish, PE
Project Manager	David J. Martin, PE
Lead Traffic Engineer	Ryan M. Gillespie, PE, PTOE
Traffic / MOT Engineer	Ruth A. Klee, PE
Lead Roadway Engineer	David E. Neumeyer, PE
Roadway Engineer	Joshua J. Slaga, PE
Lead Bridge Engineer	Thomas J. Washko, PE
Lighting Design	Chaz E. Arnfield, VI, LC, LEED AP BD+C
Surveyor / ROW	Travis D. McCarty, PS
Green Infrastructure / Stormwater Quality	Ivan Valentic, ASLA
Environmental Scientist	Lincoln Scott
QA / QC	Martin V. Joliat, PE
SME	Geotechnical Engineering Services
So-Deep, Inc.	Subsurface Utility Engineering (SUE)
Ohio Valley Archaeology, Inc.	Cultural Resources Investigation

Project Manager: David J. Martin, PE will serve as the Project Manager and primary point of contact for the City on this project. Dave joined GPD in 1977 and rose through the ranks to occupy his current position of Public Works Practice Leader. During his tenure, Dave accumulated an immense amount of experience that our current clients now benefit from. Having lead multi-disciplinary projects for years, Dave has mastered the coordination necessary to deliver a multi-faceted project such as the Chagrin Blvd. improvement project, especially considering the urban nature of this complicated project. Dave's experiences with major roadway widening and reconstruction projects, along with his public involvement experience on sensitive topics such as access management will be critical to the success of this project. With Dave at the helm, the City can be assured that the Chagrin Blvd. "Ship" will stay the course and be completed successfully.

Lead Roadway and Traffic Engineers: Assisting Dave Martin will be Lead Roadway Engineer Dave Neumeyer and Lead Traffic Engineer Ryan Gillespie. Both Dave and Ryan have previous City of Beachwood experience as well as experience within the Chagrin Blvd. Corridor. Ryan assisted in the preparation of the Chagrin Blvd Traffic Management Master Plan and the Chagrin Blvd Traffic Safety Study. The institutional knowledge that these two Lead engineers bring to the project will be a valuable tool in the development of the final improvement plans.

QA/QC: Mr. Marty Joliat will serve as the lead QA/QC engineer on this project for the City of Beachwood. This formal system of checks and balances reviews projects at inception and at milestone intervals to assure project objectives are being met, continuity is maintained, and that the appropriate design approach has been taken. Our quality control program addresses these key elements in meeting our clients' project requirements: cost control procedures and budget maintenance, construction feasibility, and the project schedule. GPD has an excellent reputation for finishing its design projects within the budget. This is due to our ability to estimate projects and to track and control costs effectively. Our many years of experience in this field enable us to know what it takes to complete an assignment.

YOUR PRINCIPAL-IN-CHARGE



MO DARWISH PE

PRINCIPAL-IN-CHARGE, DIRECTOR OF PLANNING

RESPONSIBILITIES

Mo Darwish joined GPD Group in 2006, bringing 21 years of professional experience to the firm. He has served as a District 4 Deputy Director for the Ohio Department of Transportation and has thorough knowledge to secure funding, process and produce a quality product delivered on schedule and within the budget. Additionally, Mo has served as the Governor's representative to the Ohio Turnpike and Infrastructure Commission, overseeing all contracts, budgets and long range planning of Ohio Turnpike highway improvements. In his current position, Mo heads the Planning Market Sector and assists clients with their long-range plans, planning and programming their projects, project finances, grants, and funding applications. He has been successful in obtaining over \$50M of funding for transportation related projects.

REPRESENTATIVE EXPERIENCE

PRINCIPAL-IN-CHARGE:

- Ohio Turnpike & Infrastructure Commission, Major Rehabilitations (Five Sections), various locations
• Lower Market Street, Rehabilitation, Youngstown, Ohio
• City-Wide Traffic Signal Repair / Reconstruction, East Cleveland, Ohio

PRIOR TO GPD:

OHIO DEPARTMENT OF TRANSPORTATION, AKRON, OHIO DISTRICT 4 DEPUTY DIRECTOR 2000 TO 2006.

- Guided the district to improve plan production rate to 100% and established an annual capital budget around \$300 million.
• Directed the overall operations of the District to include managing highway management, production, transportation planning / programs, business, and human resource.

YOUR PROJECT MANAGER



DAVID J. MARTIN PE

PROJECT MANAGER

RESPONSIBILITIES

David J. Martin, PE will serve as the Project Manager and primary point of contact for the City on this project. As the Public Works Practice Leader at GPD, Dave has served as a principal-in-charge and project manager for the design and coordination of projects involving civil and environmental engineering as well as the design of numerous roadway improvements throughout Northeast Ohio, ranging from conceptual alignment studies, NEPA format environmental studies, slope stabilization projects, transit projects, new collector roads as well as urban, rural and expressway improvements. Dave will utilize his knowledge and experience in the field to provide leadership and project oversight for this effort.

REPRESENTATIVE EXPERIENCE

PRINCIPAL-IN-CHARGE:

- Transportation Boulevard / Granger Road Interchange, Garfield Heights, Ohio
• Infrastructure and Roadway Replacement Program, Mogadore, Ohio
• High Street Interchange and Corridor Widening, Wadsworth, Ohio - ODOT LPA
• Cedar / Exchange Road Diet, Signalization and Roadway Improvements, Akron, Ohio - ODOT LPA
• SUM-SR 59, Akron Innerbelt Corridor Improvements, Akron, Ohio - ODOT LPA
• I-480 and Frost Road Interchange and Corridor Widening, Streetsboro, Ohio - ODOT LPA
• Frank Boulevard, Reconstruction, Akron, Ohio - ODOT LPA

RYAN M. GILLESPIE, PE, PTOE: LEAD TRAFFIC ENGINEER

Ryan Gillespie joined GPD in 2010, bringing five years of professional experience in traffic and transportation engineering to the firm. He is experienced in the preparation of traffic impact studies for public and private entities, traffic signal design, signal timing and coordination plans, and systems analysis. Ryan's traffic simulation capabilities include the use of both VISSIM and Synchro for modeling complex transportation networks and other non-standard traffic applications. Some of his additional experience includes parking studies, roundabout analysis, multi-modal analysis, travel time studies, and intersection delay studies.

RUTH A. KLEE, PE: TRAFFIC / MOT ENGINEER

Ruth Klee joined GPD in 2014, bringing 20 years of experience in transportation engineering design, project engineering and project management. She has worked on a variety of municipal projects including large interstate reconstruction projects, urban roadway widening / reconstruction, small city projects, bridge rehabilitation / reconstruction projects, and context sensitive design. Ruth has provided all aspects of roadway engineering design, including geometrics, maintenance of traffic, traffic control, project cost estimates, and following ODOT and/or local standards. She excels in project coordination, developing project scope and schedule, preparing fee proposals, monitoring budgets and coordinating with subconsultants.

DAVID E. NEUMEYER, PE: LEAD ROADWAY ENGINEER

Dave Neumeyer offers expertise in road reconstruction and utility projects ranging from planning and design to project closeout and final construction administration. This experience in the field gives Dave greater insight into a project's constructability and also drives his proactive approach during the design process to minimize construction-related issues. His project management and design experience includes storm and sanitary sewers, roadway geometrics, pavement design, construction inspection and administrations as well as pavement rehabilitation matrixes. A well-rounded, self-motivated engineer, Dave has a proven track record of guiding the project team, ensuring a smooth work flow, and delivering results to the client.

JOSHUA J. SLAGA, PE: ROADWAY ENGINEER

Since joining GPD in 2007, Josh Slaga uses his technical knowledge and keen understanding of roadway maintenance and operations to help area communities improve the quality of their current transportation systems. His responsibilities include roadway, storm sewer, water main and sanitary design as well as the preparation of drainage reports. Josh's skill and background in civil engineering make him a valuable asset to any team.

THOMAS J. WASHKO, PE: LEAD BRIDGE ENGINEER

Thomas Washko joined GPD in 1990 and has 23 years of experience designing, reviewing and managing highway structures and other public works structures. He qualifies as a Level 2 Bridge Engineer with the Ohio Department of Transportation and offers professional expertise in the field of structural engineering, including the design and rehabilitation of bridges, retaining walls, wastewater treatment plant structures and other unique structures. Tom is also experienced in bridge waterway hydraulic analyses and public works projects including the design and review of civil site plans, stormwater detention, and the preparation of bidding and contract documents for municipal clients.

CHAZ E. ARNFIELD, IV, LC, LEED® AP BD+C: LIGHTING DESIGN

Chaz Arnfield has 14 years of experience as a CAD Technician. Through many years as an apprentice to an electrical engineer, his commitment and dedication with electrical engineering projects has gained him the overall knowledge and experience to incur the level of electrical designer. His design responsibilities include roadway lighting design, power distribution, interior lighting and site lighting. Chaz has successfully passed the following ODOT Traffic Academy Class: Highway Lighting.

TRAVIS D. MCCARTY, PS: SURVEY / RIGHT OF WAY

Travis McCarty joined GPD in 2005 with a Bachelor of Science in Surveying and Mapping Technology from The University of Akron. He is pre-qualified with ODOT as a Right of Way Designer / Reviewer and, while at GPD, has specialized in the preparation of ODOT right of way plans. Travis is well-versed with various global positioning systems (GPS) which are used for aerial photography control, right of way determination, boundary, and topographic surveys. Having worked on an extensive number of ODOT projects, Travis has a strong understanding of the requirements of the current survey and mapping specifications along with the current ODOT CADD Standards.

IVAN VALENTIC, ASLA: GREEN INFRASTRUCTURE / STORMWATER QUALITY

Ivan Valentic delivers over 14 years of experience focused on stormwater practices and sustainable site design. He brings significant experience in planning, design, construction and operation and maintenance of stormwater control measures including Best Management Practice design, low impact development and green design technologies. Additionally, Ivan is experienced in bikeway planning and design, streetscape enhancements, and leading and coordinating the public engagement process typical of these design efforts. He offers a particular expertise in the planning, design and construction of urban green infrastructure control measures, stream restoration, sustainable site practices, and landscaping.

LINCOLN SCOTT: ENVIRONMENTAL SCIENTIST

Lincoln Scott has years of experience conducting planning studies and preparing environmental documents during the Project Development Process (PDP). He has authored various technical documents, and collected technical data for natural resources documentation. He has also managed several projects involving various levels of Categorical Exclusion (CE) clearance and assisted in writing sections of EAs and EISs. Lincoln is also familiar with the current U.S. Army Corps of Engineers and Ohio EPA regulations for Section 404 and Section 401 compliance, Ohio's isolated wetland rules, and he has direct experience implementing ODOT's newest technical guidance outlining Ecological Survey Data Collection and Reporting and the Waterway Permits process. He has prepared numerous technical ecological surveys and natural resource inventories throughout Ohio and has managed all levels and types of Environmental Site Assessments (ESA) following ASTM standards.

MARTIN V. JOLIAT, PE: QA/QC

Marty Joliat will serve as the lead QA/QC engineer on this project for GPD. Marty served as the Project Manager and Lead Roadway Design Engineer for the Richmond Road Widening project that GPD Group completed for the City of Beachwood in the late 1990's. Additionally, Marty currently oversees GPD Group's construction administration / construction inspection team. Because of Marty's construction experience, he brings a value added approach to our design plan preparation process. Marty has seen how these roadway improvements actually get built, the problems associated with construction plans in the field and what needs to be done to deal with those problems. In the role of lead QA/QC engineer, Marty's job is to value engineer our plans, to ensure the City of Beachwood is getting the most constructible and most accurate set of plans possible.

SUBCONSULTANT KEY STAFF

SO-DEEP, INC. was founded in 1981 and over the years have developed the term Subsurface Utility Engineering (SUE). So Deep is constantly improving and updating its skills and knowledge in the subsurface utility engineering profession, performing utility records research, designating, locating survey and mapping. So-Deep currently maintains a staff of eighty-three (83) employees dispersed across nine (9) offices nationwide. Due to the span of projects and locations, employees adhere to a formal system of performing field data collection, processing the collected data, as well as the reviewing and documenting the information, regardless of the project size, location or congestion of utilities. Each step is under the direct supervision of a qualified So-Deep professional engineer or surveyor. This proven procedure generates results that So-Deep is confident to deliver to the client.

DAVID R. COLE, PLS: SUE SENIOR PROJECT MANAGER

David Cole has 18 years of subsurface utility engineering experience and has several positions of increasing responsibility. His peers recognize him for his practical, realistic approach to SUE services and his timely response on all matters. Dave's experience working with the project owner, design team and stakeholders has helped So-Deep become adept to creating a partnering atmosphere which leads to innovative, timely and cost efficient solutions. As the principal-in-charge of professional services, he has successfully managed contracts with ODOT, IDOT, MODOT, TXDOT, and WSDOT and has experience with DOT / utility coordination issues. This experience has proved invaluable in determining the extent to which the proposed roadway improvements impact the existing utilities. He has extensive experience in managing multiple projects of varying natures, in addition to utility mapping and coordination. His diverse portfolio includes responsibility for operations, quality assurance, professional review and contract administration on a multitude of projects with widely varying complexity.

SME is a professional consulting engineering firm focused on providing economical and effective solutions for their client's transportation, foundation, earth structure, construction, geo environmental, and other infrastructure needs. Their team members have decades of experience and demonstrated expertise in specialized geotechnical, construction and environmental services that add value and extend the life of projects for their clients. Since their founding in 1964, SME has provided professional engineering services for over 85,000 projects and has steadily grown to a 280-plus staff in eleven office locations in Ohio (Cincinnati and Cleveland), Michigan and Indiana. SME's geotechnical and pavement engineers evaluate soil and groundwater conditions to determine their impact on proposed and existing structures.

JOHN DINGELDEIN, PE

John Dingeldein, PE has 37 years engineering experience in all areas of geotechnical engineering. He has completed numerous forensic studies in the materials area related to masonry, concrete, aggregates, recycled materials, grouts, steel, paint coatings, and building envelope issues. John manages their Cleveland Office and their their laboratory and drilling operations. John has served as project manager for Ohio Department of Transportation (ODOT) District 4 geotechnical drilling. He provided creative approaches for drilling on sites with difficult access. Projects included installing groundwater monitoring wells, pore-pressure transducers, and slope inclinometers along with other instrumentation.

OHIO VALLEY ARCHAEOLOGY, INC. (Ohio Valley Archaeological Consultants, Ltd) (OVAI) has been in operation since 1997 and provides all levels of archaeological services, including Section 106 and NEPA compliance. They handle all phases and sizes of cultural resource management projects. OVAI and its staff have successfully completed hundreds of cultural resource management projects, including archaeological surveys and site assessments in Ohio, New York, Pennsylvania, West Virginia, and Indiana; geophysical surveys in the Midwest, Mid-Atlantic, Northeast, California, and the Solomon Islands; and paleobotanical studies from sites in the Midwest and Southeast.

ALBERT M. PECORA, Ph.D., RPA

Albert Pecora established Ohio Valley Archaeological Consultants (Ohio Valley Archaeology, Inc.) in 1998 and has nearly 20 years of professional experience in archaeology. Albert started the company while enrolled in the Ph.D. program at The Ohio State University. The initial purposes of the company were to gain access to archaeological data for his dissertation research and to prepare a future career by developing a professional cultural resource management firm. In 2002, Albert earned his doctoral degree in Anthropology, which is the parent discipline of Archaeology. Today, Pecora is president of Ohio Valley Archaeological Consultants and oversees the staff of Ohio Valley Archaeology, Inc. Under the direction of Pecora, OVAI strives to provide the highest quality cultural resource management services possible.

SIMILAR PROJECT EXPERIENCE

MED-94-3.80 CORRIDOR IMPROVEMENTS, WADSWORTH, OHIO

PROJECT DESCRIPTION

To begin improvements to the highly congested, commercial heart of Wadsworth, GPD performed independent safety studies of the I-76/SR 94 interchange and 1.7 mile long arterial corridor as well as a corridor wide traffic operations study. Urban arterial safety and congestion problems were identified through these studies and GPD accepted the challenge to correct the issues by widening SR 94 (High Street) to accommodate dual left turn lanes at the most congested intersections, adding left and right turn lanes at the lesser intersections, implementing significant access management (including frontage / service roads) to over 40 commercial / retail businesses, and developing a traffic responsive signal system that interconnected eight signals to maximize the effectiveness of corridor. The signal system included preemption to improve emergency services responsive times.



The \$12M ODOT-Let project also involved the construction of a dual-use path, sidewalks, decorative median islands and commercial cross access drives and frontage roads drainage improvements including buried stormwater detention systems, intersection lighting and complete traffic control upgrades. Extensive public involvement plan that facilitated multiple commercial stakeholder and three open public meetings garnered a “teamwork” attitude between the business owners, City officials, ODOT and GPD on this complex urban project. In addition, GPD obtained a \$10M commitment in safety funds and assisted with acquiring funding from NOACA.

TRANSPORTATION BOULEVARD / GRANGER ROAD, SIGNALIZATION & ROADWAY IMPROVEMENT, GARFIELD HEIGHTS, OHIO

PROJECT DESCRIPTION



Widening of Transportation Blvd and Granger Road for the installation of dual northbound left turn lanes, including storm sewer replacement and partial water main replacement. New signal including interconnect along Granger Road. Addition of sidewalk along west side of transportation Blvd, including a large retaining wall to minimize right of way and parking lot impacts.

SUM-CLEVELAND MASSILLON ROAD (CR 17), URBAN WIDENING, NORTON, OHIO

PROJECT DESCRIPTION

This project began as a traffic study and corridor modeling study to mitigate urban congestion and high crash location in the heart of Norton over 1.75 mile long section of Cleveland Massillon Road from the I-76 interchange southward to the southern city corporation limit with Barberton. Preliminary engineering studies also included the first “Complete Streets” analysis in District 4 for the evaluation and potential implementation of multi-modal transportation facilities.

Existing roadway is predominantly a 2-lane rural section. Proposed roadway section includes the construction of a center two-way-left-turn-lane (TWLTL) throughout the entire length and conversion to a curbed urban section as well as expansion to 5-lanes near the Greenwich / Norton and Garnder intersections to provide adequate capacity. Proposed improvements include new sidewalk, storm sewer upgrades, coordinated signal systems and commercial drive access management.

CUY-SR 82-10.35, WIDENING, BROADVIEW HEIGHTS, OHIO

PROJECT DESCRIPTION



Widening of SR 82 from 3 to 5 lanes for congestion mitigation from Ledgemont Drive to Ken Mar Industrial Parkway as a widening and resurfacing project. Four existing and 1 new signal to be installed as an interconnected system to the adjacent I-77 interchange improvements. Complete replacement of storm drainage system, including bioretention cells within the sidewalk devil strip and stormwater detention basins. Other improvements include new sidewalks and shared use path; roadway and decorative lighting; street trees; and sanitary sewer lining.

I-480 INTERCHANGE & FROST ROAD CORRIDOR, STREETSBORO, OHIO

PROJECT DESCRIPTION

Safety problems associated with peak hour congestion resulted in safety funding for a two part improvement. Segment 1 focuses on the I-480 interchange and the SR 43 intersection; improvements include adding turn lanes at both off ramps; widening of the overpass bridge for dedicated left turn and right turn lanes; and widening Frost Road to a three lane section. Existing traffic signals to be upgraded at the interchange (2) and at SR 43 with a new signal at the Philipp Parkway intersection.

JEF-7-17.61, INTERSECTION IMPROVEMENTS, MAHONING COUNTY, OHIO

PROJECT DESCRIPTION

In 2000, the Brooke-Hancock-Jefferson Metropolitan Planning Commission (BHJ) and a host of stakeholders completed the Upper Ohio Valley Bridge System Study Phase I Final Report as a result of declining bridge infrastructure in the region. The study concluded that the Fort Steuben and Market Street bridges were past their design life and that the closure of one or both would constrain the overall flexibility of the transportation network in the region. The report also concluded that the newer Veterans Memorial Bridge had ample traffic capacity, but access to the bridge was negatively impacted by several existing conditions. A second study in 2003, the BHJ Regional Bridge System Study Phase II Final Report, suggested that the number one regional transportation priority was improved access to the Veterans Memorial Bridge. For this reason, the Veterans Memorial Bridge Access Study was completed in 2005 to examine existing conditions and analyze a series of alternatives to improve access to the bridge. Since the completion of these studies, the Fort Steuben Bridge has been removed, while the Market Street Bridge has undergone short-term repairs to extend its service life by several years before it is permanently closed. Other than the Veterans Memorial Bridge, the closest Ohio River crossings are at Wheeling, West Virginia (25 miles south) and East Liverpool, Ohio (25 miles north).

Utilizing information from the prior studies, GPD performed preliminary engineering and environmental studies for improvements needed at the intersection of SR 7 and University Boulevard in order to enhance access to the Veterans Memorial Bridge. Our team advanced five remaining active alternatives, ultimately resulting in the selection of a Continuous Flow Intersection (CFI) design as the preferred alternative. This alternative will include an interconnected system of four signalized intersections. In addition, we continued the stakeholder and public involvement initiated previously by ODOT District 11 and BHJ. GPD is now advancing the project through detailed design in accordance with ODOT's Project Development Process, which includes preparation of construction and right of way plans for proposed improvements as well as project cost estimates.

CAPACITY OF STAFF AND ABILITY TO PERFORM WORK

GPD is a client-oriented, full-service planning and engineering firm. We are uniquely organized in a matrix structure to better serve our clients. Specifically, this matrix type of organizational management allows for people with similar skills to be teamed to create a “best fit” for each work assignment. This flexibility ensures that the most qualified team is working on your project and simplifies the internal team organization and communication structure. To achieve the project goals, GPD assigns the most qualified personnel to the team, utilizes the latest technology in the field and office and implements an effective quality control and assurance program. Project progress is monitored by comparing progress on each task activity with the project schedule and budget. If an issue arises, the manpower allocations are adjusted to alleviate the problem and restore the project schedule. Improving or shortening the schedule is always considered as part of the monitoring system. You can be assured that we have the resources available to complete your project effectively and on-time.

STAFF	ROLE	% AVAILABLE
Mo Darwish, PE	Principal-In-Charge	As needed
David J. Martin, PE	Project Manager	20%
Ryan M. Gillespie, PE, PTOE	Lead Traffic Engineer	25%
Ruth A. Klee, PE	Traffic / MOT Engineer	40%
David E. Neumeyer, PE	Lead Roadway Engineer	20%
Joshua J. Slaga, PE	Roadway Engineer	40%
Thomas J. Washko, PE	Lead Bridge Engineer	15%
Chaz E. Arnfield, VI, LC, LEED AP BD+C	Lighting Design	35%
Travis D. McCarty, PS	Surveyor / ROW	25%
Ivan Valentic, ASLA	Green Infrastructure / Stormwater Quality	20%
Lincoln Scott	Environmental Scientist	20%
Martin V. Joliat, PE	QA / QC	As needed
SUBCONSULTANTS		
SME	Geotechnical Engineering Services	As needed
So-Deep, Inc.	Subsurface Utility Engineering (SUE)	As needed
Ohio Valley Architecture	Cultural Resources Investigation	As needed

CURRENT WORKLOAD

It is our understanding that the City of Beachwood needs to have the plans completed and ready for construction within 36 months of authorization of a consultant, assume to be in January 2016. The 36 month schedule to complete the design in 2017, 2018 fits well with our workload. The following is a representation of our current workload.

CITY OF SHAKER HEIGHTS	CITY OF BEACHWOOD	CITY OF STREETSBORO
<ul style="list-style-type: none"> 39-14-02 Pavement Reconstruction MP 160-165 Ph II CUY-Van Aken Boulevard (PID 94681) 	<ul style="list-style-type: none"> 2015 Asphalt Road Program 2015 Concrete Road Program Shaker Boulevard Resurfacing 	<ul style="list-style-type: none"> Philipp Parkway Extension
		CITY OF CLEVELAND
		<ul style="list-style-type: none"> 2015 General Engineering Consultant Services

PROJECT APPROACH

UNDERSTANDING OF THE PROJECT: Chagrin Boulevard in Beachwood is one of the busiest arterial roadway corridors in the State of Ohio, carrying approximately 49,500 vehicles per day. Not only is this traffic local to the City, but it also includes commuter traffic making the daily trip into Beachwood and the greater Cleveland area in the morning and leaving the City in the afternoon. Much of this traffic utilizes I-271 or SR 87 to enter and exit the City. The increased commuter traffic, along with an explosion of growth and development in the City of Beachwood over the last decade has led to severe traffic congestion occurring on Chagrin Blvd. and the surrounding roadway network, including Richmond Road. The frontage along Chagrin Blvd. within the project area is entirely commercial. Richmond Road has some open frontage; however, it is also heavily commercialized. The built out nature of the corridor combined with the commercial land uses will result in a premium being paid for needed right-of-way acquisition, anticipated to be limited to narrow, strip takes in nature.

In fact, traffic congestion has become such a problem throughout the project corridor, the area now is experiencing safety issues in addition to the vehicular congestion with the Chagrin / Richmond intersection, ranked as the 66th most unsafe intersection in Ohio, and the Chagrin Blvd. / Enterprise Place / Park East Drive intersection, ranked #270th on the Statewide Safety Priority List. Our challenge is to improve the operation and safety of the Chagrin Blvd. by optimizing the usage of the existing roadway already in place and determining the most cost effective, least intrusive means of adding lane capacity to the corridor.

Throughout the last several years, GPD has completed two major studies for this project. The initial study, the Chagrin Boulevard Traffic Management Master Plan, identified the traffic capacity needs for the project area based upon existing conditions and forecast development. The second study, the Chagrin Boulevard Safety and Corridor Study, focused in on the Chagrin Blvd. corridor, evaluating the impact crashes were having on the operation of the corridor and discussing mitigating factors for those crashes. These two studies have become the basis for the project currently being proposed and the expansion of the through lane and turning lanes noted in the ODOT website posting. The Safety Study recommended two general areas of improvement at the Chagrin Blvd. / Richmond Road Intersection and also at the Chagrin Blvd. / I-271 Interchange to the east.

TECHNICAL APPROACH: Chagrin Boulevard / Richmond Road Intersection - The recommended improvements include the addition of turn lanes or departure lanes on all approaches and creation of dual southbound turn lanes southbound (Richmond Road) to eastbound (Chagrin Blvd. to I-271 interchange). The specific lane assignments and improvements were identified by GPD in our previous Safety Study on behalf of the City. The construction of these improvements will result in a significant improvement in the operation of the intersection by eliminating the current split phase operation on Richmond Road (SR 175) and thereby improving traffic flow. GPD recently designed a similar signalization improvement for the City of Garfield Heights at their Transportation Blvd. / Granger Road intersection.

GPD will begin this phase of the project by completing a Feasibility Study and then staged detail design / plan development of the proposed intersection improvements. These efforts include environmental studies, surveying, basemapping, right of way resolution and plan development, drainage collection and stormwater management / water quality design, utility conflict resolution, roadway layout, maintenance of traffic (MOT), traffic control and signalization design, all completed by in-house, experienced GPD personnel. This affords the City a comprehensive and cost effective design to meet your goals.

Due to the highly developed corridor, limited setbacks to business and relatively limited existing right of way, the need for comprehensive utility coordination and integrated design becomes paramount. The need to maintain multiple lanes of traffic during construction will be coordinated with the utility design and layout, in particular the existing and proposed storm trunk sewers. Although there is apparently no history of excessive or systemic flooding within the immediate vicinity of the intersection, it will be necessary to confirm adequate pipe sizing thru a detailed drainage analysis. In order to meet the federally mandated stormwater quality criteria, GPD will evaluate the suitability of landscaped, bioretention cells within the sidewalk devil strip. If determined to be insufficient or not desired by the City, a premanufactured unit will be installed within the City right of way. Installation of water quality treatment also provides for a reduction in peak rates of runoff; our goal would be to show minimal increases in rates of runoff beyond existing conditions from the expanded pavement areas. Not net increase, if you will.

Utility coordination will include Subsurface Utility Engineering (SUE) for the project area, which confirms actual constructed locations, horizontal and then vertical, in lieu of relying on incomplete plan record information. The existing utility congestion includes 24" diameter and 16" diameter water mains on the north and south sides of Chagrin Blvd., respectively, along with an 8" diameter sanitary sewer and a 36" diameter storm trunk sewer.

Overhead power and telephone lines run both curb lines of both streets, and there is also evidence of underground duct banks along portions of the roadways. Not only do the potential utility conflicts need to be identified but also a space or corridor for the necessary utility relocations needs to be identified and the design aspects coordinated with the respective utility companies.

Due to the extremely tight right-of-way situation at the intersection (with BP on the NE Corner, a cemetery on the SE corner and the existing office building on the SW corner), it will be imperative to identify all possible conflicts early in the design process. Based upon the preliminary studies completed to date, strip right-of-way takes will be required on the NW, NE and SW quadrants. Right-of-way acquisition from the cemetery on the SE quadrant should be avoided at all costs, and in order to do so, it will be necessary to shift the Chagrin Blvd. alignment slightly to the north through the intersection area.

Chagrin Boulevard / I-271 Interchange – Recommended improvements are more involved and will require more time to study and subsequently design. The improvements include enhanced exit ramp capacity, both NB and SB. Widening of Chagrin Blvd. east of the Richmond Road intersection to as many as 7 lanes, including dedicated left turn and right turn lanes. Lastly, widening of the bridge over I-271 will provide a dedicated lane to I-271 NB from EB Chagrin Blvd.. The proposed changes to EB traffic flow will improve the utilization of lanes on Chagrin Blvd. and Richmond Road as having the dedicated lanes will allow drivers to line up in their desired lanes much earlier than they do today. With the additional capacity created by establishing the dedicated lane to I-271 NB, traffic on Chagrin Blvd. will flow much more freely.

The improvements described above will require the completion of an Interchange Modification Study (IMS), completed to ODOT and FHWA criteria. This process will take approximately nine months to complete. Additionally, as with the intersection project previously discussed, this project will require the performance of a detailed feasibility study to ensure that there are no red flags prior to proceeding into detailed design. This section does face some right of way concerns, particularly near Enterprise Parkway. However, they are much smaller in nature as the majority of the improvements are planned within the ODOT Limited Access (L/A) of I-271.

FIRM'S QUALIFICATIONS FOR THE PROJECT: Based upon our representative project experience along with our previous studies and background, GPD brings a wealth of knowledge specific to this corridor and the City.

KNOWLEDGE OF ODOT AND LOCAL PROCESS: GPD has completed numerous roadway improvement projects similar to the Chagrin Blvd. project including similar projects which required the completion of Interchange Modification Studies as well as similar projects with ODOT District 12 personnel. Our role as the consultant City Engineer for 20 years brings a wealth of institutional knowledge and understanding of local preferences and standards. With our history, background, and detailed approach to this complicated project, GPD believes we have demonstrated that we are the best suited firm to complete your project successfully, both on time and within budget.

INNOVATIVE IDEAS: While the project was initially presented as one large project, we believe that these two project areas can be separated and advanced through design and construction individually in order to create significant relief to the ongoing safety and congestion in a much quicker timeframe. Other than the anticipated R/W acquisition challenges, the intersection improvement project has independent utility and could move forward first as its own stand along project. Based upon conversations with the District 12 Safety Engineer, it is believed that this intersection project could be almost entirely funded by the ODOT Highway Safety Committee. Additionally, no other studies are required to complete this intersection improvement (unlike the improvements proposed near the I-271 interchange).

The improvements at the Chagrin / Richmond intersection will have a profound impact on the operation of the Chagrin Blvd.. corridor. As a part of the design process, GPD proposes to develop new coordinated traffic signal timing patterns for implementation during the construction project. Following completion of the improvement, GPD will perform additional traffic signal timings studies to ensure that the newly widened and improved corridor is operating as efficiently as possible.

INCREASED QUALITY / REDUCED DELIVERY TIME / REDUCED PROJECT COSTS:

Because of our previous experiences on this corridor and our extended relationship with the City of Beachwood, GPD is uniquely positioned to deliver a quality plan that meets the City's local expectations. Given our experience with Beachwood and the potential development of two integrated but separated projects, our project design and delivery process can be streamlined to reduce both the time required to design the project and to ensure that our design cost is as economical as possible.



INTRODUCTION

Who We Are: Johnson, Mirmiran & Thompson, Inc. (JMT) is a multi-disciplined design and construction management firm employing engineers, surveyors, and technicians in more than 20 strategically located offices in the U.S. Established in 1971, JMT provides consulting services throughout the Midwest to a varied client base consisting of many public and private entities. Our Ohio Offices primarily work with Ohio Municipalities and the Ohio Department of Transportation (ODOT), providing professional, transportation, engineering services from planning through construction.

In October 2014, JMT purchased a portion of Barr Engineering, Inc. dba Barr & Prevost, an Ohio-based, transportation engineering firm. JMT now employs more than 30 team members including 14 Ohio registered engineers in Cleveland, Columbus, and Cincinnati.

What We Do: JMT is a national leader in delivering transportation infrastructure improvements for local, state, and federal agencies for a wide range and scale of projects. Our trademark is the development of innovative and sustainable solutions that increase safety, mobility, and efficiency of operation for all stakeholders. We have expertise in planning, design, and construction phase services for all transportation modes. A brief listing of our relevant experience follows:

- **ODOT District 12, CUY-90-22.60 Intersection / Interchange Improvements (PID 83500), 2014:** Involved the full replacement of CUY-90-2275 and the removal of bridges CUY-90-2264W and CUY-90-2276E and the design of replacement ramps, signals, and lighting with careful planning to minimize disruption to the CSX Railroad and I-90 traffic. The CUY-90-2275 bridge replacement was designed in phases such that one lane of traffic in each direction on Eddy Road was maintained during construction. The project area is heavily traversed and therefore, lane shifts on I-90 and the closing of exit and entrance ramps in separate phases of the project were utilized. The lane shifts allowed traffic to continue on the interstate while allowing work to progress in a timely manner. In addition to the MOT at the project location, local detours and truck detours were included to provide a safe alternate route to avoid the construction area. 
- **ODOT District 6, DEL-750-5.88 Intersection Improvement (PID 95064), 2013:** Part 1 consisted of a right-turn lane widening on SR 750 and Part 2 consisted of incorporating an additional left-turn lane on US 23 SB to SR 750 EB. As the prime consultant, our team was responsible for the roadway design of US 23 and widening of SR 750 for an addition of a right-turn lane, signal design, maintenance of traffic design, and traffic control (signing and pavement markings). 
- **ODOT District 9, BRO-125-9.47 Safety Project (PID 97177), 2014:** This safety project includes improving the intersection geometry, sidewalks, curb ramps, curb and gutter, drainage, traffic control (signing and pavement markings), lighting, and traffic signal upgrades at the intersection of SR 125 and Home Street. 
- **City of Columbus, North High Street Rehabilitation, 2012:** Provided roadway, maintenance of traffic, pavement markings, signing, traffic signals, lighting, and utilities for this project of nearly a mile in length that involves widening North High Street from five to seven lanes, replacing three signals, providing new street lighting, and new pavement markings and signing. As a major arterial in the City, it was necessary to maintain two lanes of traffic in each direction and keep all of the intersections and driveways open during construction.



- **NASA Glenn Research Center at Lewis Field, NASA Main Gate Intersection Improvement (Walcott and Brookpark Road), 2011:** The project included widening Brookpark Road to accommodate a left hand turn lane onto Walcott Road, reconfiguring Walcott Road at the intersection, incorporating mast arm signals and providing new pavement markings. The design included all appropriate storm drainage, roadway markings, MOT, traffic signals, and signage. Electrical design was provided to power the controls for the new traffic signal and controlling system, to power the lighting for new signage features, and for the demolition and/or relocation of existing electrical utilities to accommodate the new layout. 
- **City of Lima, Bellefontaine Corridor Street Lighting, 2013:** JMT provided decorative lighting for this project that incorporated post-top street lighting through six distinct corridors along the mainline through the City of Lima, Ohio. The project coordinated with landscape identifiers within specific areas in the corridor and with intersection combination lighting at several intersections with traffic signals that were designed by City Personnel. Photometrics were performed utilizing the Visual lighting program for the manufacturers to determine illumination levels and uniformity of the lighting design that would be approved by the City of Lima and ODOT. Utility coordination was performed. Construction plans and Construction Phase Services were performed. 
- **City of Cincinnati, Central Riverfront Development, Phases Bid Packages 1, 9, and 11–The Banks Project, 2012:** JMT provided the lighting design that included structure-mounted post-top decorative lighting by Stresscrete King Classic Highwayman and Coachman poles and 250-watt King Luminaires. The photometric analyses were performed using the Visual lighting software to ensure that illumination levels and uniformity of the lighting design were sufficient. Multiple luminaires were specified where single luminaires were not sufficient. Both the City of Cincinnati and ODOT approved the lighting design.
- **ODOT District 11, BEL-70-14.45, 2014:** JMT served as a subconsultant and was responsible for traffic signals, lighting, signing, and pavement markings for this project which includes resurfacing a portion of I-70 and replacing and realigning several intersections on SR 331, replacing three signals, providing new street lighting, and new pavement markings and signing, including a school crossing.
- **Fairfax Wooster Pike Revitalization / Complete Streets Project, Village of Fairfax, Ohio, 2014:** JMT managed and engineered all phases of this Complete Streets projects. The project started with a review of the planning studies and interviews of stakeholders to develop the initial concept plan. Several public meetings were held with the business owners and with the residents to review the plan and gain comment. Several additional one-on-one meetings were held to gather further comments used to revise the initial concept plan and develop a final plan for construction plan development. JMT personnel wrote CMAQ and SCIP grant applications and secured the construction funding for the project. The plan provided for safe passage of pedestrian, bicycles, transit, and vehicular traffic through the corridor. A 'road diet' was developed that converted 4-10' lanes into 3-12' lanes, with a 2-1/2' curb and gutter combination. A raised stamped concrete median was constructed in the center lane to provide a visual separation between the outside lanes, and to provide a turn lane for the businesses along the corridor. A 2' tree lawn and a 5' ADA compliant sidewalk with handicap ramps were constructed along the corridor, thus providing a horizontal separation between the motorized traffic and the pedestrian traffic, where there was none before. To accommodate the Metro buses that utilize the corridor, four bus pull-offs were constructed in the corridor. **Award Winner: 2015 ASHE Project of the Year (\$5M & Under)** 



Project References:

NASA	Lewis Field Main Gate Intersection	John DeGreen	(216) 433-8812
ODOT D06	DEL-750-5.88 (PID 95064)	Fay Taylor	(740) 833-8164
Village of Fairfax	Wooster Pike Revitalization	Jenny Kaminer	(513) 527-6503

I. OHIO DEPARTMENT OF TRANSPORTATION (ODOT) PREQUALIFICATION

JMT is prequalified with ODOT in the following prequalification categories:

- Roadway - Complex & Non-Complex
- Bridge Design Level 1 & 2
- Int. Justification/Modification Studies
- ROW Plan Dev. - Complex & Limited
- History / Architectural Investigations
- Geotechnical Engineering
- Basic & Traffic Signal System Dgn.
- Highway Lighting - Complex & Limited
- Env. Doc. Prep.-CE, EA/EIS, Section 4(f)
- Noise Analysis & Abatement Dgn.
- Construction Management Firm
- Bridge Inspection Level 1 & 2
- Underwater Bridge Inspection
- Bicycle Facilities & Enhancement Dgn.
- Safety Study / SUE
- Unlimited Cost Accounting System

II. SUBCONSULTANTS

Our Team: JMT has teamed with both Barr Engineering, Inc. (BEI) and Lawhon Associates, (L&A) to provide a local team offering the combined project experience and breadth of technical expertise with ODOT District 12 as well as depth of capabilities and capacity necessary to provide responsive and reliable services for this contract. The JMT team is a collaborative effort comprised of highly experienced professionals with extensive demonstrated experience relative to safety / intersection design projects.

Lawhon & Associates (Lawhon) will provide environmental services accounting for 5% of this project. Lawhon provides full-service environmental and engineering consulting services to solve environmental issues for the public and private sector. The company was established in 1985 in Columbus, Ohio and is the only Ohio-based firm prequalified by ODOT in all twelve environmental categories. Lawhon employs more than 35 professionals and operates offices in Cleveland, Columbus, and Cincinnati.

Barr Engineering, Inc. (BEI) (formerly the Geotechnical, Survey, SUE, and Construction Testing Divisions of Barr & Prevost) will provide the geotechnical drilling and testing services accounting for 10% of the project. Established in 1992 in Columbus, Ohio, BEI is prequalified with ODOT for Geotechnical Testing Laboratory, Geotechnical Engineering, Geotechnical Field Exploration and Drilling Inspection, Complex & Limited ROW Plan Development, Subsurface Utility Engineering, Construction Management, and Unlimited Cost Accounting. BEI operates AASHTO accredited laboratories in Cleveland and Columbus, Ohio. BEI is staffed with 60 team members including 6 Ohio registered Geotechnical / Structural Engineers and Surveyors.

JMT has worked together with BEI and Lawhon personnel on numerous projects. Most recently we completed the following project together:

- **ODOT District 6, FRA-71-9.74, 2015:** JMT led the design for FRA-71-9.74 involving the major rehabilitation of IR-71 from Stringtown Road to SR-315 including pavement replacement for 5+ miles of I-71 and the rehabilitation of five, twin mainline structures. The Frank Road / Jackson Pike / IR-71 interchange was studied for improved geometrics, capacity, movement and safety with the recommended alternative leading to a safety project. Lawhon performed the ESA Screening, ecological survey, and Section 404 permit PCN for FRA-71-9.74. BEI planned and completed a total of 101 exploratory borings as well as 18 full depth pavement cores, in support of proposed improvements to the mainline. All phases of the exploration were completed and included in the laboratory testing program, including preparation of GER and soil profile sheets.



III. KEY STAFF MEMBERS

Primary Project Roles

RANDY MCCLELLAN, PE, PROJECT MANAGER (JMT)

Education: B.S., Civil Engineering, Youngstown State University, 1980

Years of Exp.: Total Years - 34; With JMT - 5

Registrations: Professional Engineer – Ohio #59124 (1995)

Traffic Acad.: Highway Lighting and Traffic Signal

Mr. McClellan has over 34 years of experience in transportation engineering, having served as Project Manager and Project Engineer on a variety of project types. His responsibilities have encompassed all aspects of project development and contract administration, including program identification, preliminary and final design, contract preparation and administration, and technical review and oversight. His experience includes the development and design of numerous projects, from obtaining conceptual approval to preparing plans, specifications and estimates for various infrastructure projects. He has been responsible for design of roadway, drainage, maintenance of traffic, signing and pavement marking, signals, lighting, and utility relocation on a multitude of projects. Representative **local and regional experience** includes:

ODOT District 12, CUY-90-14.90 Central Viaduct WB (CCG1), 2013: QA/QC Roadway Reviewer for this project in which JMT served as an extension of ODOT District 12 as part of the Independent Quality Review team. Mr. McClellan served in the ODOT District 12 project office and was responsible for ensuring that the Design-Build Team was in conformance with the scope of work, deadlines were met, and ODOT and Federal specifications were adhered to throughout the design and construction of this project. Mr. McClellan performed roadway plan review as well as design coordination and holding project meetings with the DB Team. Initially design delays were abundant due to issues with design-build plan conformance. Mr. McClellan was instrumental in ensuring that all AASHTO and ODOT standards were implemented.

ODOT District 12, CUY-90-22.60 Interchange Improvements (PID 83500), 2013: Project Manager for this project involving the full replacement of CUY-90-2275 and the removal of bridges CUY-90-2264W and CUY-90-2276E and the design of replacement ramps, signals, and lighting with careful planning to minimize disruption to the CSX Railroad and I-90 traffic. The CUY-90-2275 bridge replacement was designed in phases such that one lane of traffic in each direction on Eddy Road was maintained during construction. The project area is heavily traversed and therefore, lane shifts on I-90 and the closing of exit and entrance ramps in separate phases of the project were utilized. The lane shifts allowed traffic to continue on the interstate while allowing work to progress in a timely manner. In addition to the MOT at the project location, local detours and truck detours were included to provide a safe alternate route to avoid the construction area.

GCRTA, Euclid Corridor Transportation Project, 2004: Deputy Project Manager and Lead Roadway Engineer for the Euclid Corridor Transportation Project. This project consists of reconstruction of approximately ten miles of urban streets, including the complete reconstruction of Euclid Avenue from building face to building face, to increase efficiency of traffic operations, utilizing bus rapid transit and urban landscaping. Scope of services included public involvement, roadway design, landscape/streetscape design, station design, utility relocation, traffic signal design (54 signals in a coordinated system with bus priority), complete bus operation analysis, and design of all traffic issues. Construction of this project was completed ahead of schedule and under budget.

ODOT District 11, BEL-70-14.45, 2014: Mr. McClellan provided check and review for signals, lighting, signing, and pavement markings for this project which includes resurfacing a portion of I-70 and replacing and realigning several intersections on SR 331, replacing three signals, providing new street lighting, and new pavement markings and signing, including a school crossing.

City of Columbus, North High Street Rehabilitation, 2012: Mr. McClellan provided check and review for roadway, maintenance of traffic, pavement markings, signing, traffic signals, lighting, and utilities for this project of nearly a mile in length that involves widening North High Street from five to seven lanes, replacing three signals, providing new street lighting, and new pavement markings and signing.



VIRGINIA "GINNY" CLARKE, QA/QC MANAGER (JMT)

Education: B.S., Civil Engineering, The Ohio State University, 1989

Years of Exp.: Total Years - 23; With JMT - 4

Registrations: Professional Engineer – Ohio #58017 (1994)

Traffic Acad.: Maintenance of Traffic

Ginny Clarke serves as a QA/QC reviewer for roadway, traffic, utility, and site construction plans at JMT. Ms. Clarke brings over 23 years of experience in transportation engineering including 3 years with the Ohio Department of Transportation and 20 years of experience with Ohio transportation consultants. She has managed and/or engineered projects that include the design for major roadway improvement and new roadway projects for standard plan submittals and design-build contracts, including alignment and profile development, intersection and driveway detailing, and pavement design. In this role she has designed maintenance of traffic plans, pavement marking, right-of-way, and drainage and utility plans. She has performed culvert replacement projects including intersection realignment and improvement of sight distance problems and pavement and hydraulic calculations. As a Project Manager, she has coordinated plan development, work distribution, cost estimation, project scheduling and plan review and is familiar with writing design exceptions and project modifications. Her representative project experience includes:

ODOT District 8, CLE-125-0.40 Intersection Improvement, 2010: Ms. Clarke provided QA/QC review of the alignment for Nine-Mile Road and checked the roadside grading, traffic control and all quantities for this project involving the widening and addition of turn- and through-lanes to the intersections of SR-125 at Mt. Carmel Tobasco Road and Nine-Mile Road.

City of Columbus, North High Street Rehabilitation, 2012: QA/QC Reviewer responsible for the review of the roadway and utilities for this project of nearly a mile in length that involved widening North High Street from 5 to 7 lanes. Ms. Clarke's role involved reviewing the geometry and the maintenance of traffic plan to ensure the design was according to the most recent ODOT design standards. She also revised the pay items to the correct ODOT equivalent. Work for this project consisted of added sidewalks, ADA compliant ramps, turn lanes, curb and gutter, and drainage improvements (including storm sewers). The existing closed drainage system was upgraded to accommodate drainage from the increased pavement width. An extensive new drainage system throughout the length of the project features both open drainage ditches and a closed scheme with new inlets, catch basins and manholes. Other improvements include traffic signal upgrades with vehicle detection and interconnect systems, intersection widening and turning radius upgrades, traffic control modifications (signals, signs, and pavement markings), roadway lighting, and MOT and R/W plans.

JOSHUA CONLEY, PE, LEAD ROADWAY ENGINEER (JMT)

Education: B.S., Civil Engineering, The Ohio State University, 2009

Years of Exp.: Total Years - 11; With Barr & Prevost - 4

Registrations: Professional Engineer – Ohio #78418 (2013)

Traffic Acad.: Highway Lighting; MOT; Signing and Markings; Traffic Signal

Mr. Conley has 11 years of experience as a Transportation Engineer performing complex roadway design, traffic control design (signing and pavement markings), traffic signal design, maintenance of traffic design, shared use paths, drainage design, utility design, subdivision design, and construction estimating. His extensive transportation engineering background encompasses all phases of design, development and construction documents and design detail, CAD design, drafting and presentation rendering. With JMT, he primarily works on roadway/highway, traffic control, maintenance of traffic, and trail design projects for clients that include the Ohio Department of Transportation (ODOT) as well as Ohio Municipalities and other transportation divisions for airport, state, and federal clients. He is active in all phases of plan preparation from line, grade, and typical through field and office check and final tracing submittals. He regularly uses ODOT's Location and Design Volumes 1, 2 & 3, and Construction and Material Specifications and is thoroughly knowledgeable in using Autocad, MicroStation, GEOPAK, CDSS, Estimator, GuidSIGN, SignCAD, and AutoTURN. His representative experience includes:



ODOT District 12, CUY-90-22.60 Interchange Improvements (PID 83500), 2013: Project Engineer for this project involving the full replacement of CUY-90-2275 and the removal of bridges CUY-90-2264W and CUY-90-2276E and the design of replacement ramps, with careful planning to minimize disruption to the CSX railroad and IR-90 traffic. The CUY-90-2275 bridge replacement was designed in phases such that one lane of traffic in each direction on Eddy Road was maintained during construction. The crux of this project was to design an innovative and economic approach to replace the three sided ramp bridges with minimal construction time and impacts to CSX railroad. Mr. Conley was heavily involved in the roadway and MOT design. The project area is heavily traversed and therefore lane shifts on I-90 and the closing of exit and entrance ramps in separate phases of the project were utilized. The lane shifts allowed traffic to continue on the interstate while allowing work to progress in a timely manner. In addition to the MOT at the project location, local detours and truck detours were included to provide a safe alternate route to avoid the construction area.

ODOT District 6, DEL-750-5.88 (PID 95064), 2013: Lead Roadway Engineer. Part 1 consisted of a right turn lane widening on SR-750 and Part 2 consisted of incorporating an additional left turn lane on US-23 SB to SR-750 EB. Mr. Conley was responsible for the geometric design (horizontal/vertical – lane reconfiguration/alignment of US 23 and widening of SR 750 for an addition of a right turn lane – intersection design and drive design (horizontal/vertical)), drainage design (open channel (ditches), closed storm sewer), maintenance of traffic design, and traffic control (signing, pavement markings).

ODOT District 9, BRO-125-9.47 (PID 97177), 2014: Project Manager for this safety project that includes improving the intersection geometry, sidewalks, curb ramps, curb and gutter, drainage, traffic control (signing and pavement markings), lighting, and traffic signal upgrades at the intersection of SR 125 and Home Street in the Village of Georgetown, Ohio.

CAROLINE DUFFY, PE, LEAD TRAFFIC ENGINEER – IJMS & LIGHTING DESIGN

Education: BSCE, University of Cincinnati, 1988

Associates, Surveying, Cincinnati State & Technical College, 1999

Years of Exp.: Total Years - 30; With JMT - 10

Registrations: Professional Engineer – Ohio #58016 (1993)

Certifications: ODOT ROW Development Training; Accessible Pedestrian Signals

Traffic Acad.: Interchange Just. Studies; Highway Lighting; MOT; Signing and Markings; Traffic Signal; Safety Studies

Caroline Duffy has over 30 years of diversified experience in managing and working on traffic studies and engineering projects on the local street network for public and private clients, as well as numerous other types of transportation projects that have helped shape her ability to manage complex projects. Some of her design experience encompasses IJMS, safety studies, lighting design, pavement marking plans, maintenance of traffic plans, traffic signals, and cost estimating. Conversant with ODOT and AASHTO specifications, design standards and policies, she is proficient with several traffic engineering programs. Her representative experience includes:

ODOT District 7, MOT-75-15.82, I-75 & Wagner Ford Interchange Feasibility Analysis, 2007: Ms. Duffy coordinated and supervised the traffic collection, performed the analysis and produced the Existing Conditions Report for this project. The field data collection included intersection turning movement surveys, volume tube counts, lane configuration, lane widths, existing signal timing, existing signal phasing, queue length analysis, parking zone analysis, geometric layout, representative photographs, accident data, sight distance data, utilities and existing land use.

City of Lima, ALL-Bellefontaine/Market Corridor Project, 2013: Ms. Duffy provided the lighting design for this project to incorporate decorative street lighting and update the landscaping to develop pedestrian-traffic and enhance the visual appeal, creating a downtown identity. New lighting/landscaping was designed in accordance with ODOT design standards.

City of Lima / ODOT D1, ALL-Vine Street Railroad Grade Separation, 2009: Ms. Duffy led the lighting design along Vine Street, Union Street and Central Avenue, which included 27 light fixtures. She developed the photometric design using the Visual Lighting software and performed Voltage Drop calculations.



C. DAVID SPISAK, PE, TRAFFIC SIGNAL & LIGHTING ENGINEER

Education: BSCE, University of Cincinnati, 2008; Civil Engineering Associates Degree, University of Cincinnati, 2002; Civil Engineering

Years of Exp.: Total Years - 31; With ODOT-D08 - 32; With JMT - 1

Registrations: Professional Engineer – Ohio #79577 (2014)

Certifications: FHWA Traffic Signal Design & Operation; FHWA Signalized Intersection Guidebook Workshop; FHWA Pedestrian Safety and Accessibility Considerations at Modern Roundabouts; ODOT Sign CAD

Traffic Acad.: Interchange Justification Studies; MOT; Signing and Markings; Safety Studies; and Railroad Preempted Traffic Signal Training

C. David Spisak has over 31 years of diversified experience in the review and design of various transportation projects including projects on the local street network both in the public and private sector. Some of his design experience encompasses lighting design, traffic signals, pavement marking plans, maintenance of traffic plans, and cost estimating. His involvement has spanned from conceptual layout to design of these projects. Conversant with ODOT and AASHTO design standards and policies, he is proficient with several traffic engineering software programs. His representative experience includes:

ODOT District 11, BEL-70-14.45, 2014-2015: Lead Traffic Signal Designer for this project that will modify the Interchange at IR 70, US 40, and SR 331 to improve the traffic flow in the area. The traffic signal portion of this project consists of upgrading the traffic signals at 3 intersections by improving the signal timing, installing new strain poles and span wire, signal heads with backplates, controllers with uninterruptible power supplies, as well as advanced and stop line radar detection. Also, as part of the signals, highway lighting will be installed at each of the three intersections.

ODOT District 4, MAH-680-3.33, 2015: Lead Lighting Engineer for the bridge rehabilitations for two underpasses and four overpasses along IR 680 in Mahoning County, Ohio, within the City of Youngstown as well as underpass and interstate lighting design for two of the bridges. Specific tasks for the project included the performance of a lighting analysis and voltage drop calculations in accordance with TEM Section 1140; the development of a power circuit layout and details per TEM Section 1140; preparation of the lighting plan, schematics, and elevation details; calculation of plan quantities; and preparation of the lighting subsummary.

RONALD SOFLKANCS, PE, LEAD DRAINAGE ENGINEER

Education: BSCE, Georgia Institute of Technology, 1989

Years of Exp.: Total Years - 23; With JMT - 17

Registrations: Professional Engineer - Ohio #58949 (1994)

Certifications: ODOT Roller Compacted Concrete, Concrete Pavement Preservation, Overlays

Traffic Acad.: MOT; Signing and Markings

Mr. Soflkancs possesses 23 years of experience designing roadway improvements, advancing them from preliminary feasibility status through construction. He has been project designer for civil / roadway / utility engineering projects encompassing drainage, storm sewers, water mains, lane additions, alignment changes, grade revisions, proposed roadway layout, vertical geometrics and earthwork calculations, pavement design/details, MOT, and traffic control. He has accumulated extensive experience in municipal street design, site engineering, maintenance of traffic, and traffic control plan development. He has been project designer for several ODOT and NASA Glenn Research Center engineering projects and is thoroughly knowledgeable with all associated policies and procedures, design manuals, and specifications. His representative project experience includes:

Cuyahoga County Department of Public Works, CUY-Avery Road Bridge 1.16 over Chippewa Creek Bridge Replacement, 2015: This project consists of the major rehabilitation or total replacement of the existing bridge (originally constructed in 1940), a 3-span steel beam continuous bridge carrying two lanes of County Highway 208 over Chippewa Creek. The scope included preparation of a preliminary engineering report including the findings of an in-depth bridge inspection, testing and analysis of the existing bridge and an investigation of structure type alternatives and scopes for rehabilitation and replacement. Mr. Soflkancs



prepared the design and construction plans, notes and details for the relocation of the underground water main and sanitary sewer.

NASA Glenn Research Center at Lewis Field, NASA Main Gate Intersection Improvement (Walcott and Brookpark Road), 2011: Lead Transportation Engineer for the roadway and traffic improvements to the intersection improvement of Walcott Road and Brookpark Road at the NASA Glenn Research Center Lewis Field main gate entrance in Cleveland, Ohio. Mr. Soflkancs headed the design, which included all appropriate storm drainage, roadway markings, traffic signals, and signage. Mr. Soflkancs also provided the maintenance of traffic plans for construction on Brookpark Road. *Evaluation: The project received scores of "Very Good" for quality and timeliness and "Excellent" for price/cost.*

BRIAN RHODES, PE, LEAD BRIDGE ENGINEER

Education: BSCE, University of Cincinnati, 1999

Years of Exp.: Total Years - 15; With JMT - 2

Registrations: Professional Engineer - Ohio (2006)

Certifications: ODOT Bridge Inspection Level II, SNT-TC-1A Magnetic Particle Testing Level II, ODOT Introduction to Element Level Bridge Inspection, ODOT Bridge Project Manager Seminar

Mr. Rhodes has 15 years of experience in the design, inspection, and analysis of many types of roadway and rail structures. He is responsible for the inspection of various structure types, production of inspection reports, load rating of bridges, and the production of design calculations and finished plan sets for long and short-span bridges. He has served as project engineer on long and short span bridge design projects, as well as bridge load rating projects. He has also served as the lead inspector on long-span bridge inspection projects. Representative experience includes:

Metropolitan Sewer District of Greater Cincinnati, Lick Run Valley Conveyance System, Ongoing: Project Engineer for the design and plan preparation of five proposed bridges over the proposed Valley Conveyance. The project is located on the west side of downtown Cincinnati adjacent to the Mill Creek. The proposed bridges are prestressed box girder bridges with curved cast-in-place wingwalls and a custom designed steel crash railing.

ODOT District 7, MIA-75-1315 L/R, I-75 over County Road 25A (PID 87534), 2013: Bridge Engineer for the design of continuous steel beam bridge with composite reinforced concrete deck on semi-integral abutments on piles and cap/column piers on spread footings. The left bridge is a four span structure with two 48'-0" spans and two 60'-0" middle spans, for a total structure length of 216'-0". The right bridge is a four span structure with one 64'-0" span, one 80'-0" span, one 60'-0" span and one 48'-0" span for a total structure length of 252'-0". The bridges are designed and detailed to accommodate part width construction to allow for maintenance of traffic. The right bridge framing includes a tapered fascia beam due to ramp geometry that extends onto the bridge. Mr. Rhodes was responsible for design of the bridge deck, bridge beams, bearings, abutments, end diaphragms, piers, and geometry as well as structure load rating and plan checks.

Secondary Project Roles

STEVEN SOMMERS, PE, LEAD GEOTECHNICAL ENGINEER (JMT)

Mr. Sommers is an Ohio registered Professional Engineer and brings 30 years of experience from the Ohio Department of Transportation in geotechnical design and construction of horizontal and vertical projects. In his role with the Department, he has provided oversight and quality assurance reviews for all geotechnical processes within each of ODOT's 12 Districts and has also developed and conducted geotechnical training programs for ODOT District Geotechnical Engineers and Project Managers. He has provided the design and review of major transportation projects with regards to the geotechnical aspects of the work, including boring programs, pavement subgrades, landslides, retaining walls, bridge foundations, rock cuts, embankment construction, and geohazards. He also is intimately knowledgeable of ODOT's SGE, has assisted with the development of ODOT's Geotechnical Design Checklists, and has authored the following Geotechnical Bulletins: GB-5, Geotechnical Submission Guidelines; GB-6, Shear Strength of Proposed Embankments; and GB-9, Geotechnical Software. He is proficient with geotechnical software that includes: FoSSa, ReSSA, UA Slope, DRIVEN (APILE), LPile, and GSTABL 7.



THOMAS FARCHT, PS, SENIOR SURVEYOR / ROW PLAN DEVELOPMENT (JMT)

Mr. Farcht is an Ohio registered Professional Surveyor and has over 37 years of experience in surveys, right-of-way and SUE including deed and right-of-way research, plan and plat preparation and reviews, deed mosaic preparation, construction plan reviews, deed preparation, legal depositions, litigation surveys, survey reports, the re-establishment of large scale boundaries of 100 acres or more including conservation easements, reservation easements, and flood control easements. Other survey experience includes metes and bounds, construction stakeout, as-built, highway, aerial mapping control, GPS, cross section, topographic, and hydrographic surveys.

ENOCH CHIPUKAIZER, GEOTECHNICAL LAB & DRILLING MANAGER (BEI)

Mr. Chipukaizer is a Principal and the Director of Geotechnical Services. He has completed the FHWA-NHI 13207 Subsurface Investigation Training and ODOT Classification Course for Geotechnical Logging of Soil and Rock Stratum and possesses over 24 years of technical and managerial experience in geotechnical, QA/QC testing, and inspection services. Over the past nine years with BEI, he has primarily managed ODOT geotechnical projects and is therefore very familiar with ODOT's SGE. He has managed the geotechnical program for the following local ODOT projects: CUY-Cleveland Innerbelt-CCG3 (PID 82380); CUY-77-13.80 CCG6 (PID 82388); CUY-90-14.90 CCG2 (PID 82119).

JENNIFER GRAF, ENVIRONMENTAL DOC PREPARATION – CE (JMT)

Ms. Graf is a nationally recognized National Environmental Policy Act (NEPA) expert with over 25 years of experience leading environmental impact statements and the preliminary development process for transportation projects. She is skilled in managing large project teams consisting of planners, engineers, and technical specialists located in various offices. Her relevant, individual experience includes: ODOT Office of Environmental Services - Environmental Task Order Contract, LUC-75-1.10, and Brent Spence Bridge Replacement (HAM-71/75-0.00/0.22).

MARY ALFSON TINSMAN, CULTURAL RESOURCE MANAGER (JMT)

Ms. Tinsman has 18 years of experience in managing and preparing documents for the Section 106 process, including historic resource surveys, archaeological surveys, determination of eligibility reports, and determination of effect reports. She has prepared and participated in state-level and HABS/HAER documentation of residences, industrial buildings, bridges, and districts. Ms. Tinsman has conducted numerous architectural studies, ranging from reconnaissance-level surveys through large-scale eligibility and assessment studies throughout the United States. Ms. Tinsman is also an expert in Section 4(f) evaluations and documentation.

TREVOR BERGER, LEED AP, ESA SCREENING, PH. I & II ESA (LAWHON)

Mr. Berger has 16 years of experience, including Ohio EPA VAP Phase II Property Assessments, non-VAP Phase II projects, Bureau of Underground Storage Tank Regulations closure requirements, state and federal EPA programs and ODOT assessments. Mr. Berger completed field activities, sampling and BUSTR closure documentation for 19 tanks at seven UST sites at the Cleveland Innerbelt Bridge project on a scheduled and emergency response basis throughout the demolition and construction phase of the design/build project. His recent experience includes overseeing numerous ESA Screenings, Phase I and Phase II ESA assignments for environmental task orders in Districts 2, 4, 6, and 12, including several fast tracked assignments such as the ESA Screening for FAY-435-0.97 (PID 92438) that included BUSTR file reviews for nine sites and preparation of six ESA Screening reports covering 20 OBPP bridge locations, in less than 45 days.

CHANTIL MILAM, ENVIRONMENTAL SCIENTIST - ECOLOGICAL SURVEYS (LAWHON)

Ms. Milam has 10 years of experience, including providing ecological survey reports and categorical exclusion documents. Her field skills include wetland delineations and determinations, wetland habitat analysis, water quality monitoring, including macroinvertebrate analysis, mitigation monitoring and vegetation surveys. Her recent experience includes the BEL-70-9.52 Level 2 Ecological Survey Report (ESR); the Level 1 ESR for the TRU-Culverts FY 2015 (PID 95250); and overseeing the Level 1 ESR for the I-475/US20A interchange in Lucas County.



IV. STAFF CAPACITY

JMT subscribes to several techniques to bring projects in on time and according to budget. First, all active projects are tracked with two schedules. The first schedule is a detailed individual project schedule given to the internal design team. The second schedule is a company-wide master into which all-active projects and their associated milestone dates and allocated personnel resources are input. Tracking projects in this manner enables us to focus on critical dates for each project and predict resource needs in advance of submission dates. Another practice enforced at JMT for all active projects is a five-day period for review prior to each stage of submission to maintain quality and schedules for the client. All sets of plans are reviewed by at least one Checker and one Independent Reviewer before final submittal to the client. Our active workload as a prime consultant for the proposed personnel is as follows:

PID No.	Projects	Percentage Complete
PID 87534	MIA-75-12.90L&R/13.15L&R/13.28L&R On-going Services	50% (\$10K Contract)
PID 97541	MED-CR29/CR46-4.69/3.41 Design-Build	90% (\$95K Contract)
PID 92230	DEL-71-13.07 Ongoing Services During Construction	75% (\$19K Contract)
PID 97616	PIC-CR8/CR9-9.21/3.88 Design-Build	85% (\$99K Contract)
PID 99626	MAH-164/626-4.85/1.05	10% (1.2M Contract)

JMT is fully committed to meet schedules required for the successful execution of the CUY-Chagrin Boulevard Project. JMT is committed to working with the City of Beachwood to fulfill project goals and objectives. The specific objectives of each individual task will be carefully reviewed, and each assignment will be completed in a timely fashion, responding to the requirements of each situation. JMT will maintain a staff of qualified transportation and bridge engineers, environmental scientists, and surveyors to perform the tasks on this projects. JMT has an excellent history of completing projects on schedule and within budget for our clients. We consistently receive high client satisfaction ratings for our work. We are confident that we can meet the time and budgetary constraints of this project. As an indication of our ability to commit personnel and complete projects, please find our past performance listed below:

- **ODOT D-08 / Village of Fairfax, Wooster Pike Revitalization/Complete Streets Project, 2014**
Award Winner: 2015 ASHE Project of the Year (\$5M & Under)
Award Winner: 2015 MAASTO Award – Quality of Life/Community Development Category
- **ODOT D-06, FRA-315-2.40 (PID 24696), 2010:** Completed ahead of schedule and under budget with less than 2% in change orders. Below is a summary of the comments at the ODOT close out meeting:
 - District 6 Project Engineer and Material Manager - "Most positive project I have ever worked on."
 - District 6 Project Engineer - "Best riding project after construction I have ever seen."
 - Complete General Construction - "Safe project with zero accidents and no claims."
 - District 6 Design PM - "Less than 2% of change orders on a project this size is unbelievable."
- **ODOT D-06 / Complete General Construction Co., FRA-270-52.72 DB (PID 92610), 2014**
 - "Barr & Prevost [now JMT] has been awesome to work with. Design-build projects typically involve a lot of changes on the fly and BP [now JMT] has been quick with responses and creative solutions to all issues encountered." – Jameson George, PM, Complete General Construction Co.
- **ODOT D-06, Agreement 16135 – Includes the following three design-build projects**
 - MRW-71-3.17 Bridge & Highway Widening Constructability Review (PID 86920), 2015
 - DEL-71-11.50 Bridge & Highway Widening Constructability Review (PID 86921), 2014
 - DEL-71-13.07 Bridge Replacement / Rehabilitation (PID 92230), 2014

Received an 80% Consultant Evaluation Score under the new ODOT Scoring System
Award Winner: Part of The Golden Spike Project that won the 2015 MAASTO Award – Under Budget
- **ODOT D-07, MIA-75-12.90L&R/13.15L&R/13.28L&R Bridge Replacement/Rehabilitation, 2014**
Received a 75% Consultant Evaluation Score under the new ODOT Scoring System



V. PROJECT UNDERSTANDING & APPROACH

PROJECT UNDERSTANDING: The Chagrin Boulevard corridor Safety Study has been submitted to ODOT and the project will be funded by local, state, and federal sources. JMT personnel visited the project site on 11/24/15 to evaluate existing conditions as they relate to the scope. We have reviewed the scope of work and understand the need to improve safety by eliminating the intersection at Bryden Road and Richmond Road as well as widen Chagrin Boulevard and the approaches from Richmond Road to the I-271 NB entrance ramp.

PROJECT APPROACH: JMT will serve as the prime consultant and be responsible for the design and a portion of the environmental services for the CUY-Chagrin Boulevard corridor project. The project team has been carefully selected to provide the City of Beachwood and ODOT a high quality end product. This will be accomplished through a single project manager, Randy McClellan, PE who holds 34 years of experience managing and designing numerous ODOT and LPA projects. The primary design issues will be minimizing right-of-way impacts to the Bet Olam Cemetery and Crestmont Cadillac dealership, minimizing traffic impacts during construction, utility conflicts and relocations, and environmental impacts. Below is our approach to some of the more significant facets of the project.

MOT: The widening along the north and south sides of Chagrin Boulevard will be accomplished by sawcutting the existing pavement and placing portable barriers along the drop-off areas such that existing traffic patterns are only minimally affected. It is recommended to complete the widening portions of the project in two separate phases, north and south. The widening of Chagrin Boulevard on the south side at the I-271 SB and NB entrance ramps will require temporary pavement to allow the ramps to operate at their current capacity. This temporary pavement will be constructed in the infields of the existing ramps and I-271, minimizing any impacts to right-of-way (ROW) outside of the existing ODOT ROW. The restriping of Richmond Road will be performed during non-peak or overnight hours. We will utilize the existing traffic signals during MOT operations until the newly constructed signals are constructed and operational. Chagrin Boulevard is part of the National Highway System (NHS). The impacts to Chagrin Boulevard during MOT will be minimal as the majority of the work is widening. Our team will assist the City with the preparation of an NHS waiver to be approved by the District.

Environmental: The project will most likely be able to clear with a C2 Categorical Exclusion. The potential for ROW is the main driver behind this level of environmental document. If substantial ROW and/or relocations are required, this could advance the environmental to a D1 Categorical Exclusion. The recommended supporting studies to be conducted for environmental approval will most likely include a Level 1 Ecological Survey to identify the potential locations of trees that may support roosting of the Indiana Bat species. Also, an Environmental Site Assessment Screening will need to be performed as the project area includes several gas stations and automobile dealers. If authorized, our team will hold Public Involvement meetings to invite stakeholders, business owners, neighborhood organizations, and residential property owners to see the proposed improvements and gather comments and input from the local community.

Pavement: Sample pavement cores will be taken to verify the pavement buildup throughout the project area. A pavement design will be conducted to determine the proposed buildup of the widening, such that the proposed buildup will be at least the same thickness of the existing buildup for subsurface drainage concerns.

Drainage/Stormwater Management: The existing drainage structure and pipe location will be maintained during construction with the proposed drainage structures being a continuation from the same alignment and grade of the existing system. The primary drainage system will be a closed system with outlets determined during detailed design. The project is located in an urban setting, which is not highly suitable for Vegetation Based BMP's. Therefore, our team will investigate manufactured systems, underground detention, and infiltration as a means to treat stormwater runoff.

Structures: The existing bridge is approximately 533' in length and 66' in width on a tangent alignment. Widening the existing bridge will require the vertical clearance under the bridge to be verified with the reduction in clearance being approximately 2-1/4". The existing bridge will be inspected by our ODOT qualified bridge inspectors prior to design to confirm that the bridge is functioning as designed. Any deficiencies found will be coordinated with the engineering analysis team to ensure that the structure complies with AASHTO and ODOT design criteria. Soil borings will be taken in the locations of the abutments and piers for the design of the foundation of the widened portion of the new bridge. The decorative vandal protection fence located on the parapet along both sides of the bridge will be salvaged and reused on the new parapets.



Traffic Control/Signals/Lighting: New signing, post mounted and cantilever, will be installed where impacted by the proposed improvements as well as the pavement markings being restriped to accommodate the new lane configurations. Traffic signals will be investigated to have combination signal and lighting poles to reduce the amount of poles that will be constructed as part of the project where the signals are warranted. New photometric analysis will be performed where light poles are affected by the widening of Chagrin Boulevard to ensure the proper lighting of the travel lanes. Where the SB and NB entrance ramps will be relocated due to the widening on the south side of Chagrin Boulevard, the interchange lighting photometric will be checked during design so that the entire interchange meets ODOT interchange lighting standards.

Right-of-Way: Determining the extent of ROW acquisition combined with the environmental footprint of the project is a primary factor in the plan development of the project. During the early stages of design, our team will evaluate alternatives to reduce impacts to both ROW and environmentally sensitive areas or objects. Since ROW and environmental clearance is an extremely important aspect of not only this project, but of all projects, our experienced team of professionals know the importance of completing this information in an efficient and timely manner so the City of Beachwood can stay on track and exceed the funding commitment dates set forth by the use of federal funds.

Utilities: Utilities are another primary factor with this project. With multiple utilities along Chagrin Blvd., our team will begin coordinating early with utility relocation efforts and coordinate with the ROW plans to minimize costs and potential delays during construction and throughout the project to keep the project on schedule.

TEAM QUALIFICATIONS: JMT has assembled a highly trained, experienced team that is able to meet the requirements of the scope. The experience of JMT and our subconsultants allows our personnel to quickly investigate alternatives to identify cost saving methods that deliver an efficient and practical design within schedule. JMT personnel have completed multiple design contracts for ODOT, such as the recently constructed CUY-90-22.60 (PID 83500) involving a bridge replacement as well as an interchange and intersection improvement. Recent project awards and commendations have been provided on page 10 herein.

ODOT & LPA KNOWLEDGE & EXPERIENCE: The JMT/BEI/LA proposed team personnel have managed and delivered many LPA design and environmental services for clients such as the City of Columbus, City of Cincinnati, Franklin County Engineer's Office, and Village of Fairfax, including the Wooster Pike Revitalization project, for which JMT just received the **2015 Project of the Year by the American Society of Highway Engineers (ASHE)**. Additionally, our team members have collectively served as prime and/or subconsultant delivering design and environmental services on contracts with every ODOT District.

INNOVATIVE IDEAS: 1.) Monthly progress reports and/or meetings will be held with the City of Beachwood and ODOT officials to give a real time snapshot on project status. 2.) Interim design submissions (30% / 60% / 90%) for the City and ODOT to review throughout the project. 3.) The City and ODOT will have access to working files through a project specific FTP share point site. 4.) Conduct pre-design meetings for major design tasks (Utility Coordination, MOT, Traffic Signals, Bridge, etc.) to eliminate any discrepancies and answer any questions and concerns at the beginning of the project.

SPECIFIC QA/QC PLAN: Ginny Clarke, PE will be responsible for checking the plans at each stage submission. Randy McClellan, PE will be responsible for providing final review of the plans, ensuring that all plans are in compliance with the items necessary for that stage submission, and that all of the client's comments have been satisfactorily addressed. Randy will oversee the work to ensure that the checking and review are conducted as per outlined in the QA/QC Management Plan, and that the work is being completed on schedule. Compliance with the combined stage submittal requirements outlined in the appropriate ODOT manuals, along with constructability and feasibility of the design will be taken into consideration during the review. The ODOT checklists will serve as a record of completion of the QA/QC process at each stage of the project before final submission to the City of Beachwood. Prior to each stage submission, an independent review will be performed by a registered engineer who is not involved in the design or review. **Prior to the final tracing submittal, JMT's standard QA/QC policy is to conduct a construction review by our independent CM Division, which is staffed by senior inspectors and construction engineers.** Our staff is fully committed to providing quality, value-driven, and long-term solutions.

Reduced Project Delivery Time / Project Costs: Our practical design experience helps to deliver projects at or under budget. Also, the ability and willingness of our team to engage with the City of Beachwood and ODOT to resolve any issues early on will provide a reduced project cost and delivery time in itself.



December 1, 2015

The Honorable Merle S. Gorden
Mayor of the City of Beachwood
25325 Fairmount Blvd.
Beachwood, Ohio 44122

REFERENCE: Letter of Interest- CUY-Chagrin Boulevard
McCormick Taylor, Inc. - Federal Identification No. 23-1683759

Dear Mr. Gorden:

McCormick Taylor, Inc. is pleased to submit three copies of our Letter of Interest for the above-referenced contract for the City of Beachwood, Ohio. This contract will be managed from our Columbus, Ohio office. We fully understand the required services associated with this contract and are committed to successfully completing the assigned tasks on-time and within budget.

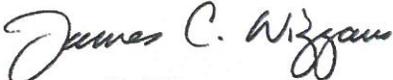
McCormick Taylor is a full service engineering firm with experienced staff and essential resources available to complete this contract. For this contract we have teamed with **Thomas Fok & Associates (TFA)** and **CTL Consultants (CTL)**. TFA will provide survey and right-of-way services, and CTL will provide soil services.

We have chosen **Mr. John Petulla, P.E., PTOE** as our Project Manager. He has over 20 years of experience and has a solid background in a variety of roadway, bridge, and traffic design projects. Mr. Petulla will work closely with our key staff members who have recent, relevant experience completing significant municipal and ODOT projects. Should we be selected, our team will provide the City of Beachwood with diligent coordination to ensure that this contract will be successful from start to finish.

Should you have any questions after reviewing our Letter of Interest, we encourage you to contact our primary point of contact, **Mr. Bruce Birch, P.E.** at **614.436.1700**. We look forward to serving the City Of Beachwood on this important contract. Thank you for the consideration of our team.

Sincerely,

McCORMICK TAYLOR, INC.


James C. Wiggans, P.E.
Chief Executive Officer

1 LETTER OF INTEREST

For nearly 70 years McCormick Taylor, Inc. has been developing projects with the community in mind. With over 490 people in 20 offices throughout Ohio, Pennsylvania, New Jersey, Delaware, Maryland, Virginia, Florida and Arizona, we have a wide range of experience and expertise at our disposal to meet the challenges of any project in a timely manner. Our diverse strengths include structural design and bridge engineering, highway engineering, traffic analysis and signal design, environmental planning and analysis, GIS systems design, public involvement, context sensitive design, and land use planning and urban design. McCormick Taylor has provided engineering, environmental, planning, communication and management services in Ohio since 1999. As a firm we have covered 41 Ohio counties. To date, we have worked with environmental and engineering personnel in 10 of the 12 Ohio Department of Transportation Districts as well as Central Office. McCormick Taylor's Columbus office serves as our headquarters for all Ohio projects. We are fully committed to providing the City of Beachwood a level of service that exceeds expectations.

McCormick Taylor, Inc.	
Firm Location:	445 Hutchinson Avenue Suite 540 Columbus, Ohio 43235 Franklin, County
Primary Point of Contact:	Bruce Birch, P.E. Senior Highway Engineer 445 Hutchinson Avenue Suite 540 Columbus, Ohio 43235 Phone:614.436.1700 Email:bsbirch@mccormicktaylor.com



PREQUALIFICATIONS

McCormick Taylor is prequalified by the Ohio Department of Transportation for the following services:

- Bicycle Facilities & Enhancement Design
- Non-Complex Roadway Design
- Complex Roadway Design
- Interchange Justification/Modification Studies
- Safety Studies
- Bridge Design (Level 1 & Level 2)
- Basic Traffic Signal Design
- Traffic Signal System Design
- Environmental Document Preparation – EA/EIS
- Environmental Document Preparation – CE
- Environmental Document Preparation – Section 4(f)
- Ecological Surveys
- Stream & Wetland Mitigation
- Air Quality Analyses
- Noise Analyses & Abatement Design
- Archaeological Investigations
- History/Architectural Investigations
- ESA Screening, Phase I & Phase II ESA
- Cost Accounting System Unlimited

SUBCONSULTANTS

McCormick Taylor has the privilege of partnering with the following highly-qualified and experienced firms: **Thomas Fok & Associates (TFA)** to provide Survey and Right-of-Way services, and **CTL Consultants (CTL)** for soil services. TFA is a certified DBE and EDGE firm, and they will perform an estimated 5% of the total work. CTL will also perform an estimated 5% of the total work.

TFA's ODOT prequalifications:

- Bicycle Facilities & Enhancement Design
- Non-Complex Roadway Design
- Complex Roadway Design
- Safety Study
- Right-of-Way Plan Development Limited
- Right-of-Way Plan Development Complex
- Bridge Design Level 1
- Bridge Inspection Level 1
- Basic Signal Design
- Highway Lighting Design Limited
- Construction Management Firm

CTL's ODOT prequalifications:

- Geotechnical Engineering Services
- Geotechnical Testing Laboratories
- Geotechnical Field Exploration Services
- Geotechnical Drilling Inspection Services
- Cost Accounting System Unlimited

KEY STAFF

McCormick Taylor is a full service engineering firm with a large staff that consists of highly trained individuals who stay current with ongoing innovations in engineering design and transportation issues. Our key staff for this contract is as follows:

John Petulla, P.E., PTOE | Contract Role: Project Manager

Mr. Petulla has over 20 years of experience and is an Associate and Group Leader of McCormick Taylor's Highway and Traffic Group. He has a solid background in a variety of roadway, bridge, and traffic design projects. His project design experience includes alternative analysis studies; needs studies; geometric development; drainage control; erosion and sedimentation control; NEPA permitting; MOT plans; cost estimates; right-of-way plans; utility coordination; development of special provisions; and preparation of final tracing packages. He has overseen the development of preliminary engineering plans as well as the preparation of final tracings. Mr. Petulla is currently managing the ODOT District 9 GES contract awarded in 2013 that included the delivery of ADA-125 roadway realignment and BRO-32-3.75 managing the delivery of the structure foundation report within 2 months of authorization. Currently, Mr. Petulla is finalizing the delivery of the SCI-73/104 Safety Study and developing LAW-217 7.8, LAW-217 9.8, and LAW-243 10.3-10.4 slide repair projects, which final tracings will be delivered in the beginning of January 2016.

John Sada, P.E., PTOE | Contract Role: Traffic & Signals

Mr. Sada is a Transportation Engineer with 15 years of experience working on diverse assignments in traffic operations analysis, traffic engineering studies, traffic safety, traffic signal design, pavement marking and signing layout and maintenance of traffic. His traffic signal design experience ranges from closed-loop systems along urban boulevards to complex diamond interchange phasing. His maintenance of traffic experience varies in complexity from minor roadway detours to multi-phase interstate projects and his traffic safety experience extends from evaluating rural intersections to urban corridors. Mr. Sada's work experience spans over the entire project development process from feasibility and preliminary engineering through final tracings and specifications. His responsibilities will include traffic related tasks such as traffic data collection, capacity analysis, work zone traffic control and traffic signal design, as well as, geometric design and construction cost estimates.

Shawn Ivanchan, P.E. | Contract Role: Roadway Engineering

Mr. Ivanchan is a Highway and Transportation Engineer with over ten years of experience in roadway design, traffic control, maintenance of traffic, pavement design, and drainage design. Mr. Ivanchan worked on the ODOT District 9 Emergency Design Services Task Order projects where he developed roadway plans including pavement design, vertical and horizontal alignments, superelevation, drainage design of culverts and ditches, erosion control, typical sections, traffic control, cross sections, and cost estimates. Mr. Ivanchan also worked on the Mink Street Reconstruction project for the City of Pataskala. This project involved providing plans, specifications and bid documents for the full depth replacement of a 2.5 mile section of roadway. Additional Ohio project experience includes: FRA-710-3.76, CUY-042-16.62, and MAH-680-2.83.

Beth Thornton, P.E. | Contract Role: Roadway Engineering

Ms. Thornton's transportation engineering experience includes over 50 projects throughout Ohio, West Virginia, and Virginia. She served as project manager and/or lead engineer on many of these projects. Her experience ranges from urban and rural roadway/intersection improvements to major freeway reconstruction and new location study and design. She has been responsible for roadway geometrics, drainage, traffic control, maintenance of traffic, cost estimating and right of way. She is currently assisting the project manager to complete MAH-680-2.83 and is serving as lead highway engineer on HAM-74-17.71 and CLE-222-26.61.

Catherine Chia-Calabria, P.E. | Contract Role: Level 2 Bridge Engineer

Ms. Chia-Calabria is an Associate and Senior Structural Engineer with 30 years of experience in the design and construction of transportation structural facilities and building facilities. Her extensive experience includes structural design of numerous steel and prestressed concrete bridges, culverts, retaining and noise walls, sign and VMS structures; load capacity ratings, seismic analysis and retrofit design; and preparation of construction cost estimates, specifications and bid packages. On several projects she has been the project engineer responsible for preparation of preliminary through final design drawings, coordinating with clients to ensure their needs are met, shop drawing reviews and post-design services to assist construction personnel with requests for information and resolving construction issues.

Melody Matter, P.E., PTOE | Contract Role: Traffic QA/QC

Ms. Matter is a Transportation Engineer with over 13 years of experience. She has an extensive background in traffic operations, and preliminary and final design that involves transportation planning analysis, traffic impact and highway access studies, context-sensitive solutions, environmental document preparation, analysis of transportation systems, traffic signal design, development of signing and pavement marking plans, and completing traffic control and detour plans. Her past projects have been comprised of traffic operations, safety, signal design, roadway design, environmental engineering, highway lighting design, interchange studies, safety studies and cost analysis.

Bruce Birch, P.E. | Contract Role: QA/QC Roadway

Mr. Birch is a Senior Highway Engineer in our Columbus office. His 30 years of experience in transportation engineering include 27 years with Ohio Department of Transportation (ODOT). At ODOT District 6, Mr. Birch was Consultant Design Manager, Consultant Contract Manager, Railroad Coordinator and District Safety Review Team (DSRT) chairman. As Consultant Design Manager he hired and trained project managers in the design and project management of complex transportation projects such as CDMS Projects and NOW Projects. He was also project manager on over 50 minor and major projects with some of the majors being FAY-71-0.00 a \$42 million 3rd lane addition and FRA-International Gateway a \$40 million interchange project in partnership with the Columbus Regional Airport Authority and the City of Columbus. As Consultant Contract Manager, his responsibilities were scoping projects, fee negotiations, contract administration and approval of consultant invoices. As DSRT chairman, he formed a team of experts to analyze and start projects at high accident locations within the district. Mr. Birch's experience as a consultant includes serving as Project Manager for ODOT D6 FRA-62-1.64 storm sewer/paving project and tasks for ODOT Districts 6 and 8 General Engineering Service Contracts, and Central Office Safety Design Task Order contracts. He also served as a sub-consultant Project Manager on FRA-70-13.10 an \$82M interstate reconstruction and MED-42-17.80 a \$29M urban widening project.

Franklin D. Snyder, Jr., PS (TFA) | Contract Role: Survey and Right-of-Way

Mr. Snyder has over 30 years of experience in field and office surveying procedures including boundaries, topographic mapping, oil & gas, geodetic control, volumetric and environmental monitoring. Serving as Survey Manager he has been responsible for development of methods utilizing advances in technology to increase efficiency for delivery of surveying projects while also ensuring safety to workers and the public in completion of surveying activities. This includes creation of field-to-finish standards for both Civil 3D and GEOPAK, reducing field and office time to contain costs. Mr. Snyder performs records research, field surveys, and reviews for right of way plans, centerline plats, and property descriptions in accordance with ODOT and County standards.

Joseph Grani, P.E. (CTL Engineering) | Contract Role: Geotechnical Project Engineer

Mr. Grani is the Manager of Geotechnical Services for CTL's Columbus office and has over 20 years of experience in the geotechnical field. He is responsible for the supervision of all subsurface exploration projects including roadways, bridges and other transportation related projects and has worked on several roadway rehabilitation projects where unsuitable soils were encountered. His innovative solutions to projects have included using geo-grid to bridge soft soils and decrease required pavement thicknesses and the use of drying agents such as cement and lime to stabilize the soils. Mr. Grani was the Project Manager for various landslide projects including a 1,590-foot long plug pile wall (HEN-110-0.66), and a 1,170-foot long plug pile wall (ADA-125-13.30). Also, Mr. Grani served as the Project Manager for the geotechnical explorations with varying level of design calculations on 19 landslides in District 9, 14 landslides in District 5, and 23 landslides in District 11. In addition to landslides, in the past 5 years, Mr. Grani has served as Geotechnical Project Manager on over 50 other transportation projects across Ohio including new highway interchanges, bridge and culvert replacements, and roadway realignments.

KEY STAFF'S EXPERIENCE AND AVAILABILITY

Key Staff	Years of Experience	Availability (hours per week)
John Petulla, P.E. Senior Highway Engineer	20	5
John Sada, P.E., PTOE Transportation Engineer	16	10
Shawn Ivanchan, P.E. Highway Engineer	10	10
Beth Thornton, P.E. Highway Engineer	15	10
Catharine Chia-Calabria Manager; Structures Group	30	10
Melody Matter, P.E., PTOE Transportation Engineer	13	5
Bruce Birch, P.E. Senior Highway Engineer	30	20
Franklin D. Snyder, Jr. PS Survey Manager	30	5
Joseph Grani, P.E. Geotechnical Engineer	20	5

At McCormick Taylor we pride ourselves on the services we provide to our clients and recognize the importance of a successful, high quality project delivered on-time, every time. The unmatched efforts and capabilities of our Ohio based staff are recognized throughout the State. McCormick Taylor has continually been rewarded by ODOT with favorable Consultant Evaluation System (CES) scores, resulting in an overall score of 86% on eight (8) contract agreements. An example of recent ODOT comments received regarding our project management, performance, quality and adherence to schedule include: "The Project Manager was on top of everything that had to do with this project"; "The McCormick Taylor team was masterful in their management of issues and review comments"; "The McCormick Taylor Team managed the development of this unique study with perfection"; and for the CUY-6-12.20 Historic/Architectural Phase II, Ohio Historic Preservation Office wrote to Paul Graham, formally with ODOT Office of Environmental Services that "this is an outstanding report...one of the best documented projects ever." As shown, McCormick Taylor's past performance with ODOT has been very well received, as evident by our rating on the CES system and exceptional feedback from our represented clients.

MCCORMICK TAYLOR'S RELEVANT OHIO PROJECT EXPERIENCE

Project Name & Location	Services Provided	Client Contact
DEL-TR144-0.00 Orange Road Roundabout, Delaware County, Ohio	Cultural Resources, Environmental	Robert Riley, P.E. 740.833.2431
ATB 534 Corridor Study, Ashtabula County, Ohio	Transportation & Land-use Study, Traffic	Joseph DeFuria, P.E. 330.786.4940
MRG 37/78 Feasibility and Safety Study, ODOT District 10	Roadway, Traffic, Public Involvement	Anthony Durm, P.E. 740.568.4307
SCI-73/104-20.21/6.37, ODOT District 09	Intersection Improvement, Safety Study	David Beekman, P.E. 740.774.8852
ADA-125-0.34, ODOT District 09	Roadway, Right-of-Way Plan Development	Christopher Pridemore, P.E. 740.774.9067
FRA-710-3.76, Cleveland Avenue over I-270, ODOT District 06	Structural, Roadway, Traffic	Brenton Bogard, P.E. 614.752.5573
CUY-42-16.62, US 42 over I-90, ODOT District 12	Structural, Roadway, Traffic	Richard Walters, P.E. 216.584.2147
SUM-76-0.00, Highway Widening and Interchange Improvements, ODOT District 04	Environmental	Robert Lang 330.786.4975

FIRM CAPACITY

Discipline	Number of Employees
Acoustical Engineers/Air Quality	6
Archaeologists	13
Bridge Inspectors	2
CADD Operators	18
Civil Engineers	10
Community Relations Specialists	17
Construction Inspectors	8
Draftsmen	4
Environmental Specialists/Planners	69
Geotechnical Engineers	2
GIS Specialists	11
Graphic Designers	7
Senior Highway Designers/Engineers	24
Highway Designers/Engineers	65
Historic Preservation Specialists	2
Hydrologists	30
Landscape Architects	1
Urban/Regional Planners	3
Structural Designers/Engineers	39
Technicians	5
Traffic Engineers	47
Transportation Engineers	18
Wetland Specialists	1
Other	96
Total	498

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Bristol, Virginia 24202
P: 276.644.3067 | F: 276.644.1494

North Shore Commons A
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Glen Allen, Virginia 23060
P: 804.762.5800 | F: 804.762.5803

111 Mill Place Parkway, Suite 105
Verona, Virginia 24482
P: 540.248.0382 | F: 540.248.0384

Florida

3030 N Rocky Point Dr., Suite 2303
Tampa, FL 33607
P: 813.618.5900 | F: 813.618.5923

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PROJECT APPROACH

PROJECT UNDERSTANDING

The City of Beachwood is seeking engineering services for the implementation of immediate safety improvements and long-term capacity improvements for the Chagrin Boulevard corridor. The scope of services calls for an evaluation of possible immediate safety improvements as well as the identification of possible long term capacity improvements. In addition to the study, the consultant is to prepare construction contract plans for the intersection improvement of Chagrin Boulevard and Richmond Road. The scope of services also includes widening the Chagrin Boulevard structure over I-271 from four (4) lanes to six (6) lanes, a cul-de-sac conversion, signal removal, multiple signal upgrades, widening and restriping.

ROADWAY OVERVIEW

Chagrin Boulevard (US Route 422) is a 4-lane, full-access highway that runs east-west through the City of Beachwood, carrying over 30,000 ADT. This corridor meets the 11-lane, limited access Outerbelt Freeway (I-271) in Beachwood with a full interchange, which also carries over 30,000 ADT. This corridor has experienced 432 crashes during the last three (3) years with the predominant type of crashes being rear end collisions.

To the west of the I-271 interchange is the intersection of Chagrin Boulevard and Richmond Road (S.R. 175). The Chagrin Boulevard approaches to this intersection each have a left, a thru and a shared thru-right lane. The Richmond Road northbound approach has a left, thru and a shared thru-right lane. The Richmond Road southbound approach has a left, shared left-thru, thru and right lane.

To the north of Chagrin Boulevard along Richmond Road is the signalized intersection with Bryden Road and the shopping center. Bryden Road provides access to the residential neighborhood to the west, while the east leg of this intersection provides access to retail, banking and restaurants.

Between Richmond Road and I-271 on Chagrin Boulevard is the signalized intersection of Chagrin Boulevard and Enterprise Place/Park East Drive. This intersection is within 300 feet of the I-271 interchange. The northbound approach of Park East Drive is a dual right-turn only, while the southbound approach of Enterprise Place has two left turn lanes and a shared thru-right lane. Both eastbound and westbound approaches of Chagrin Boulevard have an RTA bus stop near the intersection. There is also a gas station on the southeast corner which provides a driveway between the intersection and the I-271 southbound on-ramp.

ENVIRONMENTAL OVERVIEW

We anticipate minimal impacts on ecological resources based on our review of the scope of work and field review conducted on November 20, 2015. Results of the ESA Screening may trigger a Phase I ESA, but this work will be minimal (potentially 4 sites). Noise/air may need to be addressed due to additional lanes added at the I-271 interchange. Review of the State Historic Preservation Office (SHPO) cultural resource databases should also be conducted to ensure that no known significant cultural resources will be impacted.

PROJECT TEAM QUALIFICATIONS

John Petulla, P.E., PTOE will be McCormick Taylor's Project Manager, supported by **John Sada, P.E., PTOE**. Both have County and ODOT experience including numerous projects ranging from safety improvement studies to targeting safety improvements through designing geometric improvements. Their experience also includes addressing areas with deficient guiderail, pavement markings, or improved signing. Recent examples of this work include the SCI-73/104 Safety Study where McCormick Taylor developed short-term, low-cost and long-term, higher capital investment safety countermeasures. The safety improvements targeted addressing safety, geometric, and operational concerns at the intersection of SR 73 and 104 and a curve leading into the intersection on SR 73 to the south. We understand the importance of evaluating safety features adjacent to the project area to help avoid potential migration of crashes. McCormick Taylor evaluated each improvement using ODOT's ECAT system to determine benefit/ costs based upon the crashes occurring in the area.

INNOVATIVE APPROACH

We propose to tackle this project by performing in-depth analyses of existing conditions, obtaining insight and preferences from ODOT and the City of Beachwood, keeping open lines of communication between all parties while continually moving forward with improvement recommendations. We understand that there may be many obstacles and moving deadlines throughout the project, which has been one of McCormick Taylor's strong qualities while working with any client.

MCCORMICK TAYLOR'S QUALITY OF WORK

It is our belief that the combination of our highly competent and diverse project manager, experienced and efficient technical staff, and current working relationship with LPAs/ODOT will position the McCormick Taylor team to best deliver on this project ahead of schedule, under budget and with an innovative flair that will make ODOT and the City of Beachwood proud. Our proven track record and successful history of completing projects suggests that the McCormick Taylor team is highly qualified for this assignment.