CITY OF GAHANNA

DEPARTMENT OF PUBLIC SERVICE AND ENGINEERING

CREEKSIDE GARAGE FLOOD IMPACT MITIGATION

SEPTEMBER 13, 2021

fishbeck

Engineers | Architects | Scientists | Constructors

fishbeck
Engineers | Architects | Scientists | Constructors

One East Campus View Boulevard, Suite 310
Columbus, Ohio 43235

614.363.1001 | fishbeck.com

September 13, 2021

John Moorehead, PE
City Engineer
City of Gahanna
Department of Public Service and Engineering
200 South Hamilton Road
Gahanna, Ohio 43230

Request for Proposal for the Creekside Garage Flood Impact Mitigation

Dear Mr. Moorehead:

Fishbeck is pleased to submit this proposal for the Creekside Garage flood impact mitigation project. The Creekside Development offers a great blend of business and residential living experiences. The goals you have outlined for conducting a flood impact mitigation, infrastructure improvements, and park planning for the public facilities shows the City's effort to prepare this development for the future.

We appreciate the tremendous significance this project has for the City and know that the choice of the right partner is of utmost importance for the success of your project. Fishbeck offers a team ideally suited to successfully meet your specific project goals. Our parking staff have extensive experience with underground parking structures including floodplain and groundwater issues. Our geotechnical partner, SME, has also worked with our staff on flood and groundwater mitigation projects similar to the Creekside Garage.

We are excited about the possibility of partnering with the City and consider it the basis of a collaborative experience that will lead to outstanding results. In brief, there are three key elements we feel are fundamental to our collective success in this creative and challenging endeavor:

Capabilities: Our team's planning, architecture, and engineering skill set is expansive, giving us the expertise to explore a wide range of possibilities and develop the best solutions. We are dedicated to providing exceptional service to meet the City's needs and your mission is our number one priority.

Credibility and Teamwork: Our team's track record of successful parking structure projects spans nearly 25 years. We bring creative, innovative, and integrated planning and design solutions for the City of Gahanna.

Chemistry: We enjoy building strong relationships and dynamic work teams that draw on both the hearts and minds of participants and lead to creative and optimal solutions. Our shared team experience gives us the ability to hit the ground running and work collaboratively throughout your entire project.

We hope you view our submittal as the beginning of a productive dialogue in your search for a design team best suited to work with the City. We want to successfully meet the City's project needs and expectations, and we would greatly appreciate the opportunity to further discuss and demonstrate our qualifications and project approach. If you have any questions or require additional information, please contact Josh Rozeboom at: 269.544.6940 or jrozeboom@fishbeck.com.

Sincerely,

Joshua Rozeboom, PE
Project Manager – Parking and Restoration

Gregory A. Tkacz, PE, LEED AP BD+C
Senior Vice President/Principal

1. TECHNICAL APPROACH

1A. PROJECT UNDERSTANDING

The Creekside Development is a keystone of Gahanna's historic downtown, supporting strong pedestrian and vehicular connectivity. The development was constructed in the mid-2000s along Big Walnut Creek and includes multiple buildings, uses, and ownership. The three privately owned buildings were constructed with finish floor elevations at least one foot above Big Walnut Creek's 100-year flood elevation while the parking floor elevation is more than ten feet below the 100-year flood elevation. Although the buildings themselves are above the flood elevation, some of their mechanical, electrical, and plumbing systems are within the parking garage and below the flood elevation. We understand the existing flood protection measures include a perimeter slurry wall, a horizontal clay cap, temporary flood closures (stop log assemblies), some level of foundation and slab drains, and sump pumps.

In 2020, DLZ Ohio Inc. evaluated the Creekside Development's flood protection measures and the structural capacity of building elements to withstand the unique loading conditions imposed by flooding and high groundwater elevations. The evaluation report identified flood protection and structural deficiencies that need to be addressed in order to meet the National Flood Insurance Program (NFIP) requirements. The Federal Emergency Management Agency (FEMA) also completed a review of the development and concluded the existing flood protection measures are inadequate.

The primary focus of this project is to improve the Creekside Development's flood protection measures to meet NFIP standards. Options may include dry-floodproofing the below grade parking garage to FEMA standards or floodproofing to the maximum extent practical to preserve public safety. This includes mitigating flood impacts on the public parking garage, public plaza, and systems within the parking garage that support the private buildings above. Relatedly, opportunities for improving or replacing infrastructure and public plaza amenities will be studied and potentially implemented.

1B. SCOPE OF SERVICES

As outlined in the RFP document, the project will be conducted in phases with four task orders. Our understanding of the scope of services for each phase is outlined below. A more detailed breakdown of the scope items will be reviewed with City Administration prior to beginning each phase.

EXISTING CONDITIONS ANALYSIS AND REVIEW

a. Meet with the project team to confirm the project objectives/goals, requirements, and schedule.
b. Chair and document periodic project team design coordination meetings.
c. Coordinate the work of the design team to confirm conformance with project requirements.
d. Assist with developing a public relations strategy to generate interest and communicate project information and goals with stakeholders and public.
e. Review existing documentation and data related to the development's construction and the Big Walnut Creek floodplain.
f. Review the site and surrounding area to understand property boundaries and topography, and to review site conditions and adjacent properties/buildings.
g. Review the condition of the parking garage, flood protection measures, and other impacted building systems.
h. Review local, state, and national codes and ordinances including the FEMA NFIP.
i. Perform additional testing, inspections, survey, and engineering analysis required to assess the flood protection measures and to inform recommendations for improvement.
j. Explore and assist with obtaining alternative project funding sources through FEMA.
k. Report and document conclusions regarding the adequacy of the existing flood protection measures, condition of existing systems, and recommend areas for improvement.

PLANNING AND PRELIMINARY DESIGN

a. Chair and document periodic project team design coordination meetings.
b. Coordinate the work of the design team to confirm conformance with project requirements.
c. Flood mitigation preliminary design
    - Identify options and perform preliminary design for improvement of elements required to preserve public safety.
    - Identify options and perform preliminary design for improvement of elements required to achieve dry-floodproofing.
    - Evaluate the options noted above with City Administration and stakeholders using objective and subjective criteria and assist in finalizing the concept that best meets the project goals.
d. Creekside plaza planning
    - Solicit input from City Administration and stakeholders.
    - Produce up to three alternative visions for the plaza.
    - Evaluate the visions with City Administration and stakeholders using objective and subjective criteria and assist in finalizing the concept that best meets the project goals.
e. Prepare preliminary documents for the selected flood mitigation and plaza restoration option.
f. Prepare and submit a flood mitigation plan to FEMA and the Ohio Department of Natural Resources for review and approval.

FINAL DESIGN AND PERMITTING – PLAZA RESTORATION AND FLOOD MITIGATION

a. Chair and document periodic project team design coordination meetings.
b. Coordinate the work of the design team to confirm conformance with project requirements.
c. Prepare design development drawings and specifications.
d. Prepare final design drawings and specifications including all plans, details, and information necessary for construction.
e. Prepare detailed multi-year construction phasing plans based on City funding and schedule priorities with consideration for impacts on surrounding areas.
f. Submit all necessary documents and coordinate the required permit and approval processes.

CONSTRUCTION ADMINISTRATION PHASE

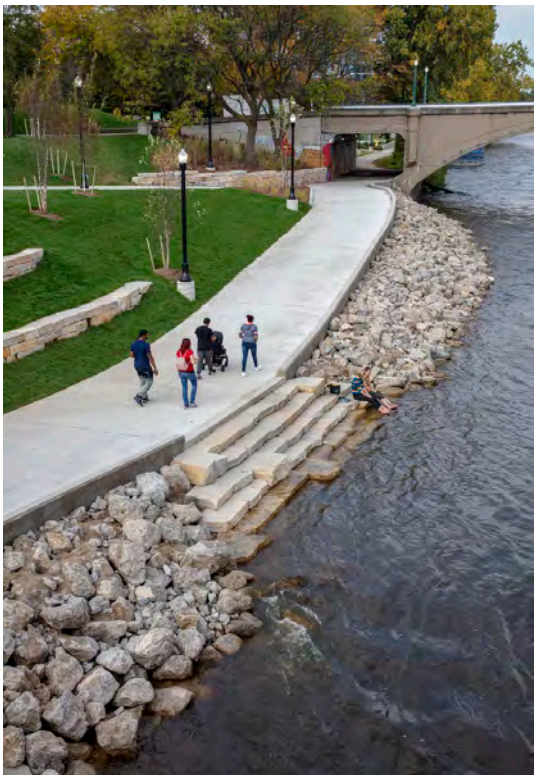
a. Consult with project team during the procurement phase, answer questions, and prepare addenda as required.
b. Attend preconstruction meeting to review specifications and design requirements with contractors.
c. Review appropriate shop drawings and submittals required by our technical specifications during the construction phase of the project. Such review will be for general conformance with the design concept of the project and general compliance with the information given in the Construction Documents.
d. Provide ongoing consultation to the team throughout the construction phase. Assist in preparing clarifications and interpretations of the contract documents and responding to contractor Requests for Information (RFIs) as required.
e. Review materials testing reports, including geotechnical, soil compaction, and concrete quality.
f. Participate in progress meetings.
g. Participate in pre-installation meetings and other meetings as necessary for communication of project expectations.
h. Conduct construction observation visits at intervals deemed appropriate for timely and proper performance of the work.
i. Assist in preparing and reviewing bulletin items to document changes in the work.
j. Assist in preparing the punch list.
k. Prepare record drawings based on documentation provided by contractors.
l. Develop a Flood Emergency Operations Plan.
m. Develop an Inspection and Maintenance Plan.

1C. TECHNICAL APPROACH

Fishbeck will schedule an initial kickoff meeting with the City of Gahanna upon receiving authorization to proceed. The purpose of this meeting is to confirm the project goals and objectives, review the project and site histories, and discuss the schedule. The project scope of services is divided into four phases and is outlined in the previous section. The initial phase is the review and analysis of existing conditions. The findings and conclusions of this phase will be the foundation for defining the scope and technical approaches for the subsequent phases of planning, design, and construction. Using available information, we will prepare a work plan for each project phase and component. Our approach for each of the project components is described below.

CREEKSIDE PLAZA RESTORATION

The Plaza at Creekside is a central gathering space for the community in the heart of Gahanna serving as an outdoor dining area, an event plaza, and a focal point in the Creekside Development. The large open entry on Mill Street leads users to the cascading fountain and ultimately to the Big Walnut Creek at Creekside Park below. While the plaza offers connectivity and an open multi-use space, it is a very open and exposed space with few furnishings, landscape, shade, or plantings. The plaza has great potential for increased population and uses.



It is anticipated that the parking garage, fountain, and plaza will likely be impacted by the flood mitigation work. These efforts afford the City of Gahanna and the Creekside Development a unique opportunity for an iconic placemaking moment. Creating an intentional identity and unique impression of Gahanna as a historic and inviting neighborhood is essential. The Plaza can become a space of vitality and community that residents will be proud of and visitors will want to return to time and time again. Plaza improvements will be aimed at retaining flexibility for activities and special events while providing opportunities for comfortable, casual, and inviting everyday uses to visitors and locals.

While the fountain is a memorable attraction at the existing plaza, opportunities to re-imagine the transition from the plaza to the Creek is something to consider. Improvements and enhancements to this transition area can be targeted at softening the hardscapes, adding natural elements, and providing a smoother, friendlier navigation for pedestrians.

Attention to details, materials, and lighting is essential to create a modern innovative plaza at the upper level while incorporating appropriate elements to acknowledge the natural Creekside landscape and woodland setting at the lower level. At completion the space will be a dynamic environment further activating the corridor and building on the great momentum of the Creekside Development District.

FLOOD MITIGATION

The 2020 evaluation report noted several areas of deficiency in the existing flood prevention measures. Some of the deficiencies noted are straightforward, such as gaps and structural capacity issues in the temporary flood closures (stop log assemblies), backflow prevention, sump pump system emergency power, and wall penetration leaks. However, deficiencies related to groundwater intrusion, such as flood slabs and below grade walls, are less straightforward and should be investigated further.

We understand that the perimeter slurry wall installed during initial construction to cutoff groundwater flow from the creek to the site may have been damaged or have installation issues as noted in the 2020 Evaluation Report. Record documents also indicate that there may be a significant gap in the slurry wall that resulted from issues encountered during construction.

Our team of geotechnical engineers, hydrogeologist, and supporting staff will compile and evaluate available construction records and geotechnical, geological, and groundwater data for the site to develop a working model of the site's groundwater flow regime to help identify data gaps and provide estimates for potential impacts (e.g. flood extents and duration) from design flood scenarios. Using this model, our understanding of the site conditions, and judgment, we would complete a focused investigation to determine the condition and effectiveness of the slurry wall and other critical geotechnical considerations.

Additional soil borings or wells (piezometers) may be warranted to evaluate the effectiveness of the slurry wall and clay cap and/or investigate geotechnical areas of concern. Methods of evaluation may include, but are not limited to, geophysical testing, subsurface exploration (e.g. borings, test pits), exploratory trenching, and cone penetration testing. In addition to conventional subsurface exploration capabilities, our team has several non-disruptive geophysical testing techniques (e.g. ground penetrating radar and electrical resistivity) that, depending on site conditions, may be appropriate to supplement a geotechnical investigation program to evaluate and identify anomalies within the slurry wall and clay cap. The results of this additional testing would be used to refine preliminary groundwater modeling and support the selection and design of flood mitigation measures.

The 2020 evaluation report notes that potential solutions to address the parking flood slab deficiencies may include filling the below grade parking garage with soil or installing a structural pressure slab to resist buoyant groundwater forces. The Fishbeck-SME team has experience with structural pressure slabs in underground parking garages, but we have also employed other solutions such as slab underdrains, pressure relief valves, and groundwater cutoff measures for new and existing below grade parking garages. Pressure slabs and alternative solutions will be investigated independently and in combination to find the most effective, practical solution.

The RFP notes several other elements that may require flood protection improvements. The existing level of protection will be assessed for each of these elements considering both of the flood mitigation options noted in the RFP. We assume that most of these elements serve the buildings above the parking garage and may only require flood protection improvements if the dry-floodproofing option is not pursued.

PHASING

Construction of the flood mitigation improvements will need to be phased over multiple years with consideration for impacts to the surrounding area, cost for each phase, and construction activity sequencing. We will utilize Fishbeck's in-house construction management team's expertise in developing a detailed construction phasing plan with phase cost estimates to meet the City's desired budget and schedule.

PERMITTING

We will coordinate and submit documents and track status to successfully acquire the required permits and approvals. The required permits and approvals may include FEMA, ODNR, Planning Commission, Building Permit, and Floodplain Use Permit. If proposed improvements include permanent grading impacts within the floodway, Fishbeck will provide the hydraulic modeling and report to verify improvements will not create harmful interference by increasing the flood stage on adjacent properties. We assume the existing hydraulic modeling that was completed for the evaluation report will be available for modeling the proposed alternatives. Proposed changes to the floodway may require that a Conditional Letter of Map Revision (CLOMR) and Letter of Map Revision (LOMR) be obtained from FEMA. These applications can be time consuming to obtain from FEMA and Fishbeck would facilitate design improvements to avoid the need for these applications, if possible.

FLOOD EMERGENCY OPERATIONS PLAN

We will develop a Flood Emergency Operations Plan per FEMA Technical Bulletin 3-93. This will also include coordinating and providing training for staff responsible for implementing the Flood Emergency Operations Plan.

INSPECTION AND MAINTENANCE PLAN

We will develop a maintenance manual that outlines inspection and maintenance recommendations per FEMA Bulletin 3-93 for the parking garage, flood protection measures, and other building components that may be impacted by a flood event.

PUBLIC RELATIONS

The Creekside Gahanna development will always hold a spot in the public interest. Nearly 20 years ago, the City involved the public in its concept and design, celebrated the grand opening in 2008, but dealt with some publicity in 2011 and 2012 when the development fell into receivership. With the combination of residents, condo owners, business owners, shoppers, spectators for public events, pedestrians, public officials at the Chamber and dispatch center, and general visitors, Creekside Gahanna has many, many interested parties in any project even remotely touching the plaza, let alone a garage reconstruction event.

A plan will begin with research of the history of the plaza, its current tenants, traffic and visitor counts, and major planned events in the plaza and the contiguous event center. A kickoff meeting with the City staff to establish goals is also necessary before a plan can be created. We need to understand the level of communication you desire to achieve with the public, what goals you may have, and our scope of work relating to public relations (PR). From there, a plan will be created for the Fishbeck team to implement, alongside the City staff, especially its communications team. It should be noted that Fishbeck can operate in one of two capacities, based on the City's preference. We have worked alongside a client to supplement their communications team on a project-specific basis. Alternatively, we have been the interface between the client and the project, usually when a project is viewed negatively by the public, and the client would prefer a buffer.

1. Goal setting

Fishbeck will work with the City to set goals for the PR plan. We will consider options such as:

- How often do we want to communicate with the public? Constant communication and construction updates, interval reports, major milestone updates, news releases to the media, etc?

- What are the best communication methods? Existing social media platform vs. a new site or group, dedicated website, blog posts, written materials such as postcards/posters, mail/email campaigns, a new hashtag, news releases, public forums, etc.
  - Understanding our target audience will help establish the method(s) for communication. Stakeholders in the project vary greatly in demographics and interest level and we will help advise on communication tools based on your audience and their habits.
- How much do you want to interact with the public? Design charette, surveys, website/social media comments, door-to-door conversations, and more can be used to collect ideas for the plaza restoration if desired for this project.
- What is the message and style for communications? Professional and direct? Neighborly and concerned?
- What is your end goal? How do you want your 'audience' to feel during and after the project?

2. Plan Creation

We will use the information gathered in the kickoff meeting/research phase to create a PR plan for the target audience containing:

- A clear restatement of goals, audience, and overall strategy.
- A step-by-step schedule of actions or events, that could start with door-to-door canvassing or website launch and end with the ribbon cutting on the restored plaza.
  - Strategy, including messaging and tone for the materials and events.
  - Materials to be created.
  - Tactics for each milestone on the schedule.
  - Resources needed for each action and define the scope of work.
  - PR will coincide with the design and construction schedule.
- Crisis media strategies must also be outlined and considered to be prepared for any criticism or issues that may arise. In this era of social media, public scrutiny is at an all-time high and will affect any PR plan.
- Pivot points will be identified in case it is determined more or less communication is necessary based on public feedback.

3. Plan Execution

We will work with the City to implement the PR plan. Our team will be conscious of budget, resources, and schedule at all times throughout the project. Wherever possible, Fishbeck will provide measurable results (social media engagement, website visitors, survey results, etc.) after each milestone event.

In summary, Fishbeck understands how important Creekside Gahanna has become to the City and its people. The neighboring park and the creek, the conflux of business uses and its patrons, and the beauty of the plaza have created an award-winning space that is unique and dynamic. This project is very necessary but will have a great impact, and we know a strong PR plan is vital to keep public opinion and love for the plaza at its already-established high.

ALTERNATIVE FUNDING

We will coordinate with the Ohio Emergency Management Agency (EMA) Mitigation Branch to identify potential grant funding opportunities through FEMA, which may include the Building Resilient Infrastructure and Communities (BRIC) and Flood Mitigation Assistance (FMA) grant programs. A key component to being eligible for these funding sources is that the project must be identified in a Hazard Mitigation Plan. We will initiate a discussion with Ohio EMA to confirm the appropriate funding opportunity for the project and if a pre-application to OHIO EMA for FEMA grant program assistance should be submitted. Fishbeck can submit a pre-application and if the project is selected, we can submit a full Hazard Mitigation Grant application to FEMA.

Our grant specialist will also research non-FEMA funding opportunities for the project.

KEY EQUIPMENT OR RESOURCES

Geotechnical Modeling – Our team will develop a working model of the site's groundwater flow regime using a variety of software programs and analysis tools (e.g., SEEP/W, SLIDE, Surfer, MODFLOW). The working model will provide estimates for potential impacts from design flood scenarios (e.g. flood extents and duration) to inform decisions regarding flood protection improvements and will be updated with additional data as it becomes available.

Drilling and Testing – Our Ohio-based drilling department leverages a variety of drilling and in-situ testing capabilities including SPT, CPT, vane shear, dilatometer, pressure meter, and heavy-weight Falling Weight Deflectometer, to provide site-specific soil, bedrock, and groundwater information for making informed decisions and managing risks. SME owns and operates seven drill rigs and two geoprobes with various configurations and capabilities to support projects with a myriad of access constraints and ground conditions. Our two Ohio drill crew leaders each have over 20 years of experience along with Subsurface Investigation Qualification (NHI-132079) and have completed the ODOT Soil Classification Course. Our Ohio drill crews have extensive experience installing monitoring wells, piezometers, inclinometer casing, and performing aquifer pumping, slug, and other tests.

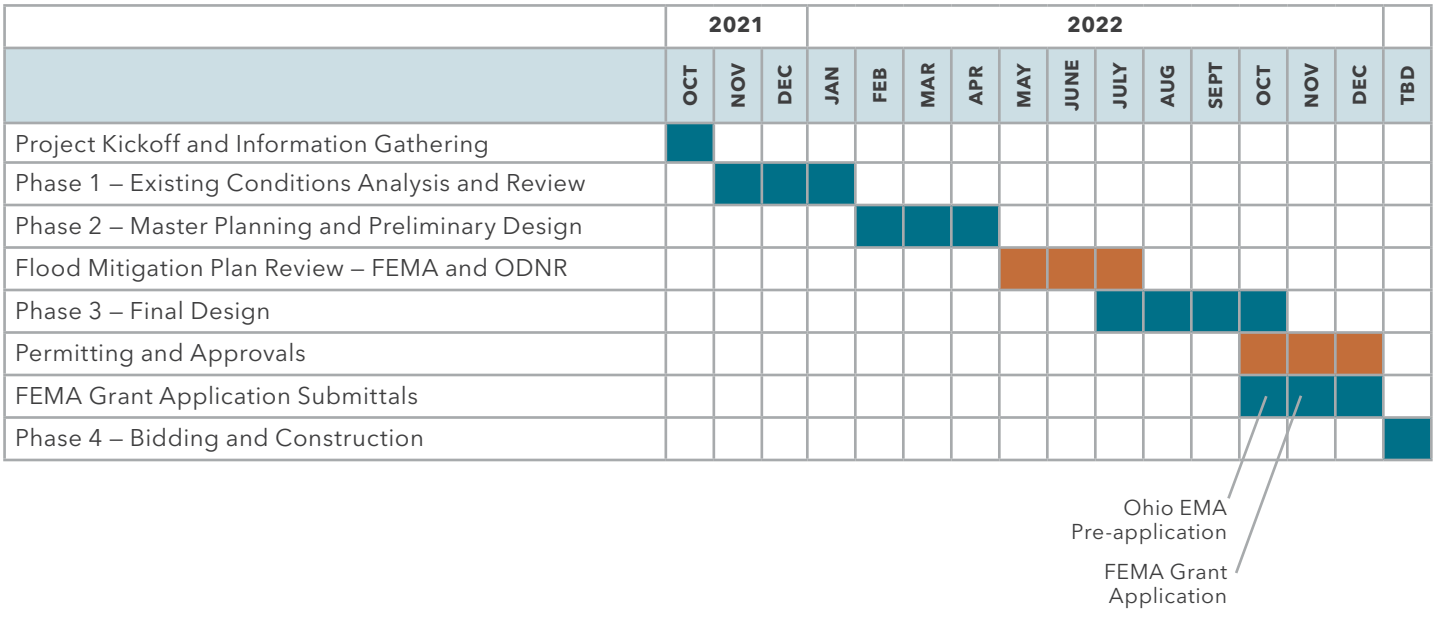
Instrumentation and Data Analytics – We have considerable expertise with the deployment and data management of a variety of sensors and instrumentation for a wide range of project applications including groundwater studies, landfill closures, high-rise excavations/shoring, dam safety, dewatering, and staged construction, to name a few. Our team is uniquely positioned to not only deploy instruments but to efficiently streamline the data and analysis using state of the art technology platforms to make data accessible, send notifications when data is out of parameter, and efficiently generate reporting documentation to facilitate quick access to data and informed decision making. We have successfully deployed sensors with real time data reporting above the Arctic Circle, which is a testament that no site is too remote. The following is a list of typical technology our in-house experts have deployed on past projects:

- Water level instruments
- Vented and non-vented pore water pressure transducers
- Vibrating wire piezometers
- Specialty applications
- Thermistor stings for permafrost
- Soil moisture (unsaturated soil mechanics)
- Water quality (pH, conductivity, temperature, TDS, etc.)
- Vibration monitoring
- Pile testing
- Modernization of antiquated systems
- Research applications
- Data collection and hosting
- Real-time data collection, data analytics, and web hosting
- Telemetry, cellular and satellite
- Regulatory report generation
- Robust power solutions and solar panels
- Displacement monitoring
- Down-hole inclinometers
- Mems accelerometers
- Sondex/magnetic extensometers settlement monitoring
- Strain gauges
- Total stations

Soil and Materials Laboratory – Our in-house, AASHTO accredited, ODOT pre-qualified laboratory is key to providing quality geotechnical engineering and construction materials services with capabilities to complete complex geotechnical testing such as permeability testing, ring shear testing, direct shear testing, and triaxial testing with state-of-the-art data acquisition systems for efficient and accurate test results. Our laboratory staff is trained, knowledgeable, and equipped to provide a full range of testing for soils, aggregates, concrete, masonry, subgrade stabilization, hot mix asphalt, and recycled asphalt pavement. Our lab participates in AMRL's proficiency testing programs for soils and concrete.

1D. SCHEDULE

Our team is prepared to start work on the Creekside Garage flood impact mitigation project immediately following notice to proceed. Based on the information available, our estimated design schedule including permits is shown below. We anticipate the project schedule will be evaluated and adjusted as the project progresses based on information gathered and decisions made.



2. PROJECT TEAM

2A. TEAM ORGANIZATION/EXPERIENCE

Fishbeck realizes the importance of having the right team. We assemble professionals appropriately qualified to work together to make certain the specific and unique needs of your project are properly understood and satisfied. Our team is made up of highly talented, motivated, and energetic people who challenge themselves to rethink their methods and roles, and bring their ingenuity to the problems they solve and the work they do.

Fishbeck values a collaborative approach – we know from experience that exceptional results can be achieved from a team of committed and talented professionals; and we regularly partner with other firms who possess the highest level of expertise in certain project types. We make certain to find partners who align with our core values and have a culture of collaboration and client-centered focus. We are extremely happy to partner with SME, MKSK, and Legat on this project.

The cultures of our firms have proven to be an excellent combination – we share many projects on which we have successfully teamed together. Our team shares a philosophy of integrated team problem solving, and our firms have a common culture of hard work, diligence, and responsibility. This skilled team is ready to support the City of Gahanna with anything that may present itself during the project.

Fishbeck is a professional civil engineering, environmental, architectural/engineering, and construction services consulting firm with over 500 people serving governmental, educational, healthcare, commercial, industrial, and private clients. Established in 1956, Fishbeck is a 100-percent employee-owned firm with 14 offices throughout Ohio, Michigan, and Indiana. Our range of services and integrated project approach provide our clients with specifically suited, innovative designs. We are committed to delivering exceptional service, outstanding technical quality, and establishing long-term client relationships. Our design specialists are committed to providing creative, value-driven services.

fishbeck

As a multi-service engineering and consulting firm, SME offers a wide range of services for every stage of the project life-cycle. SME has specialists in geotechnical engineering, environmental sciences, building materials, pavement engineering, construction engineering and monitoring, and more. Their experts bring decades of expertise, advanced technology, and strategic thinking to projects, ultimately resulting in insightful, practical solutions. Because of their deep knowledge of the ground, the environment, and building and construction materials, they are able to see beyond the surface of issues, ask the right questions, and anticipate how a service or solution will impact the specific project and overall facility or infrastructure operations.

SME

MKSK is a collective of planners, urban designers, and landscape architects, founded in 1990, who are passionate about the interaction between people and place. They work with clients to re-imagine, plan, and design dynamic environments for the betterment of all. MKSK approaches planning and design with a clear understanding that each place is unique and has economic, social, environmental, historical, and cultural influences which should be explored through thoughtful, context sensitive design. They help clients meet the challenges of changing global conditions by addressing sustainability and they share the power of strong planning and design to inspire their clients and projects.

MKSK

Legat Architects was started in 1964 and is a leading sustainable architectural and interior design practice specializing in governmental, higher education, PreK-12 education, healthcare, recreational, commercial, and hospitality facilities. Their integrated design approach incorporates a variety of interests, ideas, and goals from stakeholders, community members, and designers to develop a responsive solution that reflects the client's economic reality, vision, and purpose. Their sustainable design principles are aimed at creating economic, social, and environmental success and their designs focus on creating environments that enhance and enrich the occupant's experience and improve long-term efficiency and economic performance.

LEGAT ARCHITECTS

CITY OF GAHANNA

PROJECT MANAGER/ STRUCTURAL & PARKING
Josh Rozeboom, PE
FISHBECK | Kalamazoo

PRINCIPAL-IN-CHARGE
Greg Tkacz, PE, LEED AP BD+C
FISHBECK | Cincinnati

CIVIL
Erika Randolph, PE
FISHBECK | Toledo

FLOODPLAIN
Brian McKissen, PE
FISHBECK | Novi

SURVEY
Casey Walter, PE, PS
FISHBECK | Cincinnati

COST ESTIMATING AND PHASING
Kent Moeggenborg
FISHBECK | Grand Rapids

ARCHITECTURE
Dennis Paben, AIA
LEGAT | Columbus

MECHANICAL
Gary Louis, PE
FISHBECK | Cincinnati

ELECTRICAL
Jim Rumping, PE
FISHBECK | Cincinnati

PLUMBING
Brad Fitzsimmons, CPD
FISHBECK | Columbus

PUBLIC/MEDIA RELATIONS
Jenny Waugh
FISHBECK | Grand Rapids

GEOTECHNICAL
Christopher Kokesh, PE, P.Eng.
SME | Columbus

GEOTECHNICAL
Joel Rinkel, PE
SME | Plymouth

LANDSCAPE ARCHITECTURE
Jeffrey Pongonis, ASLA, PLA
MKSK | Columbus

LANDSCAPE ARCHITECTURE
Tony Roell, PLA
MKSK | Columbus

LANDSCAPE ARCHITECTURE
Rachael Harkleroad
MKSK | Columbus

YEARS OF EXPERIENCE
19 years — total

EDUCATION
BS in Civil Engineering,
Tri-State (Trine) University

REGISTRATIONS/ CERTIFICATIONS
Professional Engineer – Michigan, Minnesota, Oklahoma, Rhode Island, Wisconsin, Ohio (application pending)

GBCI Parksmart Advisor

MEMBERSHIPS
National Parking Association

International Parking & Mobility Institute

American Society of Civil Engineers

American Concrete Institute, Associate Member of ACI 362 Parking Structures Committee

Structural Engineers Association of Michigan

Village of Schoolcraft, Planning Commission

JOSHUA ROZEBOOM, PE

PROJECT MANAGER – PARKING AND RESTORATION

Joshua has extensive experience in parking planning design and restoration, including parking studies, site planning and feasibility, parking functional design, structural engineering, and project management. His experience encompasses all project phases for mixed-use, healthcare, higher education, airport, and municipal projects. His project roles include planner, parking designer, structural engineer, resident construction engineer, and project manager.

GRAND VALLEY STATE UNIVERSITY/SPECTRUM HEALTH | GRAND RAPIDS, MICHIGAN

SHARED PARKING RAMP | 335 MICHIGAN

Parking functional design and structural engineering for the new 1,220-space, cast-in-place post-tensioned concrete parking structure. Located on the Medical Mile, the 6-level structure includes two levels below grade and provides spaces for Spectrum Health employees and GVSU students.

PLAZA TOWERS | GRAND RAPIDS, MICHIGAN

RESTORATION AND FLOOD PREVENTION

Parking consulting, restoration engineering, and prime project management to reconstruct the basement level of the parking structure following flood damage. Flood preventative measures included slab under drains and groundwater cutoff walls.

MILLER CANFIELD BUILDING | KALAMAZOO, MICHIGAN

MIXED-USE BUILDING

Parking consulting and structural engineering for a 4-level, 142-space parking structure (three levels below grade and one above grade) which supports a 4-story office building. The office lobby is set back from the southwest corner of the site and an exterior entry plaza is located above the underground parking.

ANN ARBOR DDA, MICHIGAN

LIBRARY LANE UNDERGROUND PARKING STRUCTURE

A 4-level, 720-space parking structure which is completely underground and serves as the foundation for future high-rise development. The structure was designed to accommodate future connections to adjacent properties and horizontal expansion. The structure carries 5th Avenue and is a registered bridge with the MDOT. The foundation required one of Michigan's largest continuous concrete placements (6,000 cubic yards over 36 hours). Provided parking consulting, structural engineering, and prime project management.

THE NORDIC | MINNEAPOLIS, MINNESOTA

MIXED-USE DEVELOPMENT

A mixed-use development that includes 415 structured parking spaces. The below grade parking structure supports a 9-story residential building, an 8-story parking structure, a 10-story office building, and a public plaza. Provided parking consulting and structural engineering for the parking structures and residential building.

ACCIDENT FUND GROUP | LANSING, MICHIGAN

PARKING STRUCTURE

Parking consulting and structural engineering for a 6-story parking structure adjacent to a power plant that was renovated into an office building. The parking structure is located within a floodplain and includes flood mitigation design features.

J.W. MARRIOTT | GRAND RAPIDS, MICHIGAN

PARKING STRUCTURE

Parking consulting and structural engineering for the new parking structure to serve the adjacent hotel.

fishbeck

YEARS OF EXPERIENCE

8 years — Fishbeck
28 years — total

EDUCATION

BS in Mechanical Engineering,
The Ohio State University

REGISTRATIONS/ CERTIFICATIONS

Professional Engineer – Georgia, Kentucky, Ohio, Pennsylvania

LEED Accredited Professional Building Design + Construction

MEMBERSHIPS

American Society of Heating, Air Conditioning, and Refrigeration Engineers

American Society of Professional Engineers

GREG TKACZ, PE, LEED AP BD+C

SENIOR VICE PRESIDENT | PRINCIPAL

Greg manages the design of various HVAC, plumbing, and fire protection systems. His specific responsibilities include managing and coordinating all design phases, preparing specifications, developing budgets, and maintaining client relationships.

BEALE STREET LANDING | MEMPHIS, TENNESSEE

Performed a peer review of the MEP documents. The facility is a waterfront visitor center with assembly spaces, rest rooms, and minimal food service/retail spaces. The document review focused on code compliance, constructability, and coordination.

OHIO HISTORICAL CENTER | CINCINNATI, OHIO

Renovated for new offices for the preservation department. Existing heating and cooling plants were reused and new air handling equipment was provided. Plumbing included replacement of a portion of the existing domestic water mains.

CINCINNATI CIVIC GARDEN CENTER | CINCINNATI, OHIO

Investigated the feasibility to design and construct a self-sufficient facility relying solely on sustainable utilities without connecting to any public utilities. Designed garden center maintenance facility to LEED Platinum certification level. Gray water, geothermal, photovoltaic, and solar water heating systems were incorporated.

OHIO UNIVERSITY | ATHENS, OHIO

BAKER STUDENT CENTER

Developed all building system concepts and complete project engineering coordination. New student center contained steam to hot water converters for heating; chilled water for cooling; variable-speed air handling units; and atrium smoke exhaust system. Responsible for converting the campus steam service and associated tunnel system from low-pressure to high-pressure steam and tunnels upgraded.

GENERAL STEAM DISTRIBUTION REPAIR

Investigated and recommended repairs and improvements for various issues related to the existing steam distribution system.

PING CENTER STEAM LINE REPLACEMENT

Replaced approximately 650 feet of direct buried steam and condensate piping from a new connection at Clippinger stub tunnel to Ping Center. The new piping system was specified to be a dryable-drainable piping system and included two new vaults.

THE OHIO STATE UNIVERSITY | COLUMBUS, OHIO

OHIO UNION

A new 318,000-sf facility containing retail spaces, food service, administrative, student service spaces, lounges and social spaces, recreation areas, conference and meeting rooms, performance hall, and a ballroom. Systems included campus steam to hot water converters for heating; multiple 500-ton variable-speed centrifugal chillers for cooling; custom variable-speed AHUs zoned by space use; atrium smoke exhaust system; variable-speed kitchen hood exhaust systems; variable-speed pumping; demand control ventilation with CO_2 monitoring; occupancy sensors for energy conservation; low-flow plumbing fixtures; pulping systems to reduce solid waste; double-ended unit substations and onsite generator for reliability; and automated lighting control.

POMERENE/OXLEY HALL RENOVATION

Coordinated a phased design/renovation project including design of the complete renovation of historic Pomerene and Oxley Halls. New campus utilities extended to the building and complete new HVAC renovations. Certain areas with historic architectural features were maintained and new HVAC systems incorporated accordingly.

COLUMBUS STATE COMMUNITY COLLEGE | COLUMBUS, OHIO

CAMPUS MECHANICAL SYSTEM IMPROVEMENTS

Assessment of five campus buildings to prioritize required system and mechanical and electrical equipment updates. Recommended design elements include replacement of multiple building chillers, boilers, electrical service updates, lighting, AHU replacements, and control updates as well as supporting architectural components such as utility shafts, soffits, and ceilings.

fishbeck

YEARS OF EXPERIENCE
14 years — total

EDUCATION
BS in Civil Engineering,
The Ohio State University

REGISTRATIONS/ CERTIFICATIONS
Professional Engineer – Ohio, Michigan, Indiana, Kentucky

MEMBERSHIPS
National Council of Examiners for Engineering and Surveying

ERIKA RANDOLPH, PE

SENIOR CIVIL ENGINEER

Erika has site layout, engineering design, permitting, and plan production experience for automotive, manufacturing, healthcare, educational, commercial, and residential land development projects. Her experience includes hydrology and sanitary sewer studies and local government infrastructure improvements. Erika's core expertise includes hydraulic analysis, stormwater management, detention and water quality, sanitary sewer design, water supply design, roadway design, site planning, and permitting.

VOLKSWAGEN | CHATTANOOGA, TENNESSEE

STORM DRAINAGE STUDY/POND IMPROVEMENTS

Conducted storm drainage study of a 540-acre watershed routed through four existing retention/sedimentation basins and analyzed storage capacity for future building and parking expansions. Recommended basin modifications to meet future demand and lead design team in preparing corresponding construction documents and permits.

GENERAL MOTORS POWERTRAIN DIVISION | DEFIANCE, OHIO

STORM DRAINAGE STUDY

Conducted storm drainage study of a 480-acre watershed (116 acres of which were serviced by storm sewers) to identify flooding locations within and around the plant and recommend improvements to eliminate flooding.

MUSKINGUM COUNTY, OHIO

WILDWOOD SANITARY SEWER STUDY

Conducted sanitary sewer study evaluating feasibility of providing a gravity system, individual grinder pumps for each lot, or a combination to two subdivisions with significant elevation changes through analysis of the site topography and life-cycle costs.

THE KROGER COMPANY | OHIO, INDIANA, KENTUCKY

FUEL CENTER PROJECTS AT MULTIPLE SITES

Designed fuel center in existing parking lot within the 100-year floodplain in Marietta, Ohio. Performed conceptual layout and site design for fuel center new build and expansions requiring review of zoning and design requirements, site plan layout, grading, utilities, stormwater management, erosion control, permitting, and construction administration. Stormwater management designs ranged from storage and water quality treatment provided by aboveground detention/sediment basins with site specific outlet control structures, underground detention system with proprietary water quality structures, and some sites with water quality treatment only.

YOUNGSTOWN STATE UNIVERSITY | YOUNGSTOWN, OHIO

EXCELLENCE TRAINING CENTER

Civil/site design for a building renovation/expansion and parking lot reconstruction project for an advanced manufacturing education and workforce training facility. Performed pavement, grading, utility, stormwater management, and soil erosion and sedimentation control design services. Permitting and coordination with authorities having jurisdiction for construction approval.

CITY OF PORT CLINTON, OHIO

BUCKEYE BOULEVARD STORM SEWER IMPROVEMENTS

Drainage design and plan production for storm sewer system improvement project with multiple underground utility conflicts.

fishbeck

BRIAN MCKISSEN, PE, CFM

SENIOR CIVIL ENGINEER

Brian is a professional engineer with an expertise in stormwater and floodplain management. His expertise includes preparing stormwater management plans, developing hydrologic and hydraulic models, preparing reports and studies, and engineering design incorporating green infrastructure. Brian is able to effectively prepare a conceptual stormwater and floodplain model and translate it into a set of plans and specifications that represent a practicable, cost-effective stormwater management design.

Brian works with and has developed working relationships with multiple local, state, and federal agencies for permitting. He is a Certified Floodplain Manager through the Association of State Floodplain Managers and Chair of the Michigan Stormwater Floodplain Association.

YEARS OF EXPERIENCE

8 years — Fishbeck
22 years — total

EDUCATION

BS in Civil Engineering, Lawrence Technological University

REGISTRATIONS/ CERTIFICATIONS

Professional Engineer – Michigan

Association of State Floodplain Managers, Certified Floodplain Manager

Confined Space Entry Certified

MEMBERSHIPS

Association of State Floodplain Managers

Michigan Stormwater Floodplain Association, Chair

CITY OF IONIA, MICHIGAN

STEELE STREET CORRIDOR FLOODPLAIN STUDY

Project engineer responsible for preparing a hydraulic model of the Grand River. Evaluated proposed impacts to the floodplain due to improvements to the City of Ionia's business district along the Steele Street corridor. Developed proposed floodplain mitigation measures to meet City's master plan.

CITY OF GRAND RAPIDS, MICHIGAN

RIVER RESTORATION

Provided program management assistance to the City of Grand Rapids for flood wall impacts, FEMA study and map updates, and river restoration improvements. Improvements included construction of natural rock rapids and removal of low head weirs, riverbank restoration, and public river access improvements.

MACOMB TOWNSHIP, MICHIGAN

FLOODPLAIN MANAGEMENT PLAN REVIEW

Engineer responsible for reviewing the floodplain management plans and applications for new development projects on the community's behalf. Plans were reviewed to verify they meet local, state, and federal requirements. Applications included FEMA Letters of Map Change. Final recommendations were made to the community officials for their signature of the Letter of Map Change prior to developer's submittal to FEMA.

CITY OF FRANKENMUTH, MICHIGAN

LEVEE AND FLOOD STUDY

Evaluated and updated the Cass River floodplain study and evaluated the City's interior drainage system. Helped develop levee improvements for FEMA accreditation. Submitted CLOMR application to FEMA.

CITY OF MT. CLEMENS, MICHIGAN

FEMA HAZARD MITIGATION GRANT

Responsible for preparation and submittal of successful FEMA Hazard Mitigation Grant for remediation of street, basement, and sanitary sewer flooding.

CITY OF NOVI, MICHIGAN

FLOODPLAIN MANAGEMENT PLAN REVIEW

Engineer responsible for reviewing the floodplain management plans and applications for new development projects on the community's behalf. Plans were reviewed to verify they meet local, state, and federal requirements. Applications included FEMA Letters of Map Change. Final recommendations were made to the community officials for their signature of the Letter of Map Change prior to developer's submittal to FEMA.

CITY OF WEST BLOOMFIELD, MICHIGAN

FLOODPLAIN MANAGEMENT PLAN REVIEW

Engineer responsible for reviewing the floodplain management plans and applications for new development projects on the community's behalf. Plans were reviewed to verify they meet local, state, and federal requirements. Applications included FEMA Letters of Map Change. Final recommendations were made to the community officials for their signature of the Letter of Map Change prior to developer's submittal to FEMA.

fishbeck

YEARS OF EXPERIENCE

4 years — Fishbeck
25 years — total

EDUCATION

BS in Civil and Environmental Engineering, University of Cincinnati

Additional Surveying Coursework, Cincinnati State Technical and Community College

REGISTRATIONS/ CERTIFICATIONS

Professional Engineer – Ohio

Professional Surveyor – Ohio, Kentucky

MEMBERSHIPS

Member, Professional Land Surveyors of Ohio

CASEY WALTER, PE, PS

CIVIL ENGINEER | SURVEYOR

Casey has field surveying, construction layout and staking, construction observation, constructability review, planning, and design experience on various projects related to water/wastewater, street improvements, and land development in southwest Ohio.

CITY OF HAMILTON, OHIO

MAIN STREET ALLEY STORM SEWER

Surveyed one mile of existing alley for a proposed 54-inch storm sewer to relieve a flooding problem.

PUBLIC LIBRARY OF CINCINNATI AND HAMILTON COUNTY, OHIO

PRICE HILL LIBRARY RENOVATION AND EXPANSION

Project surveyor for construction staking. The site included a building addition to a historic Carnegie Library along with parking and associated utilities.

WALNUT HILS LIBRARY ACCESSIBILITY PROJECT

Project surveyor for construction staking. The site included a building addition to a historic Carnegie Library along with parking and associated utilities.

NORTHWEST SCHOOL DISTRICT | HAMILTON COUNTY, OHIO

MONFORT HEIGHTS ELEMENTARY SCHOOL

Project designer and draftsman for new school site improvements including parking, drainage, and utilities. Site design included traffic flow considerations. Provided services as a subconsultant to Steed, Hammond, & Paul Architects.

TAYLOR SCHOOL BUS FACILITY PARKING LOT AND MAINTENANCE GARAGE

Project designer and draftsman for facility including parking, fueling, and a maintenance garage for 100 school buses. Provided services as a subconsultant to Steed, Hammond, & Paul Architects.

VIOX AND VIOX | RICHWOOD, KENTUCKY

FIFTH THIRD BANK

Project designer for parking lot retrofit. A recently constructed parking lot did not drain and needed to be reconstructed at a new grade, but with a minimum of disturbance.

CROSSROADS CHURCH | CLERMONT COUNTY, OHIO

ROST PROPERTY SURVEY

As project land surveyor, produced boundary survey plat and legal description for property sale of 180-acre site.

GREATER CINCINNATI WATER WORKS, OHIO

KINNEY AVENUE, CONGREVE AVENUE, AND CLAREWOOD AVENUE WATER MAIN REPLACEMENT PROJECTS

Surveyor in support of approximately 33,000 lf of water main replacement in three residential areas. Performed topographical survey of existing roadway and utilities.

JOLAIN, COOPER, AND MONTGOMERY ROAD WATER MAIN

Project surveyor in support of three miles of water main construction. Performed topographical survey of existing roadway and utilities.

METROPOLITAN SEWER DISTRICT OF GREATER CINCINNATI, OHIO

STORMWATER REMOVAL PROGRAM

Performed smoke and dye testing in various neighborhoods to support the stormwater removal program.

DALY ROAD SEWER REPLACEMENT

Land surveyor in support of a project to replace one mile of sanitary interceptor sewer. Performed boundary and topographical survey of the existing site. Produced easement plats for about 70 properties, plus 4 appropriation plats with legal descriptions.

fishbeck

YEARS OF EXPERIENCE

5 years — Fishbeck
35 years — total

EDUCATION

AS in Architectural Technology, Ferris State University

MEMBERSHIPS

International Facilities Management Association

Construction Specifications Institute

American Institute of Professional Estimators

United States Marine Corps, Sergeant in Special Operations Company

KENT MOEGGENBORG

DIRECTOR, CONSTRUCTION DIVISION

Kent has many years of working in both the architectural and construction industries. His first 10 years of experience were in architecture roles including draftsman, project manager, and production manager/office manager. Since then, Kent has been primarily involved in the construction industry, serving as vice president of operations and chief operating officer.

HOLLAND CHARTER TOWNSHIP/OTTAWA COUNTY, MICHIGAN

NEW COMBINED PUBLIC SAFETY BUILDING

Construction management of a new 22,000-sf Township fire station and County Sheriff Department.

GRAND RAPIDS CHARTER TOWNSHIP, MICHIGAN

FIRE STATION/EMERGENCY RESPONSE CENTER

Construction management for the renovation of a fire station using integrated design services.

STAN DIEGO BAJA TACO KITCHEN | GRAND RAPIDS, MICHIGAN

Construction management of 16,162-sf restaurant renovation and expansion.

ZF | FOWLERVILLE, MICHIGAN

Construction management of electrical design upgrades.

MICHIGAN DEPARTMENT OF TRANSPORTATION | STATEWIDE LOCATIONS, MICHIGAN

Construction management of rest areas upgrades to ADA compliance.

PENNOCK HOSPITAL | HASTINGS, MICHIGAN

Multiple remodeling projects over five years to update the existing hospital.

GRAND RAPIDS OPHTHALMOLOGY | WESTERN AND CENTRAL MICHIGAN

Over 50 projects covering a 15-year timespan. Construction included new buildings, surgical centers, clinics, and billing centers.

ORTHOPAEDIC ASSOCIATES OF MICHIGAN | GRAND RAPIDS, MICHIGAN

Multiple projects constructed over 12 years including surgical centers, outpatient clinics, doctor's offices, X-ray centers, and administrative offices.

EAST PARIS SURGICAL CENTER | GRAND RAPIDS, MICHIGAN

New state-of-the-art surgical center designed specifically for optical surgery. Constructed in the lower level of an existing building.

VERDIER EYE CENTER | GRAND RAPIDS, MICHIGAN

Several projects over a 10-year period including a large addition and several renovations.

GRAND VALLEY SURGICAL CENTER | GRAND RAPIDS, MICHIGAN

Several projects over a 12-year period including additions and renovations.

DERMATOLOGY CENTER | GRAND RAPIDS, MICHIGAN

Addition and renovations to triple the size of an existing dermatology practice.

WELLER MANUFACTURING | GRAND RAPIDS, MICHIGAN

Over $30 million in several projects over 10 years for a truck transmission remanufacturing operation including new buildings, additions, and renovations.

FORSLUND BUILDING | GRAND RAPIDS, MICHIGAN

Emergency repairs to over 100-year-old building foundation and the stone river wall that it was built on after historic flooding.

SUPERMARKETS | MIDWESTERN UNITED STATES

Design of 36 new and renovated supermarkets for several supermarket chains.

THEATERS | MULTIPLE CHAINS AND LOCATIONS

Design and construction of numerous theaters including new buildings, additions, and renovations.

fishbeck

DENNIS PABEN, AIA, NCARB, LEED AP

Dennis has more than 20 years of experience in the A/E/C Industry as a Project Architect and Project Manager. His dedication and attention to detail has led him to manage some of Legat Architects' largest and most successful projects. Dennis enjoys the challenge of creating a work of art that must withstand local climate, respond to the owner's needs and concerns, while meeting the proposed timeline and budget.

RELEVANT PROJECT EXPERIENCE

Ohio Facility Construction Multiple Cities in Ohio
OFCC Facility Assessments

City of Upper Arlington Upper Arlington, OH
Development and Parks & Recreation Offices Renovation
Engineering Building Office Renovation
Activity Center Storeroom Renovation
Fire Station 71 Facility Assessment
Police Department Facilities Study
Municipal Center Development Office Renovation

City of Columbus Recreation & Parks Department Columbus, OH
Aquatics Capital Improvements Plan Phase 1

Columbus City Schools Columbus, OH
District-wide Master Plan
Secure Vestibules for Five Schools
Secure Vestibules for Six Schools
Secure Vestibules for Five Schools

Adena Local Schools & Ohio Facilities Construction Commission Frankfort OH
Adena K-12 Remediation

Upper Arlington City Schools Upper Arlington, OH
Graf Center, Professional Development Center Renovation and Window Replacement
Tremont Elementary School Addition and Renovation

Omnilife Columbus, OH
Storefront Renovation

Ohio University
Academic Success Center Addition and Renovation, Chillicothe, OH
Scripps Hall Ground Floor Esports Renovation 2020, Athens, OH
Stevenson Center Roof Replacement 2020, Chillicothe, OH
Bennett Hall and Stevenson Center Exterior Repairs/Improvements 2020, Chillicothe, OH

A QUICK LOOK

:: Project Architect

:: 20 Years with Legat Architects

:: Master of Architecture, University of Illinois at Urbana-Champaign

:: Bachelor of Science in Architecture, University of Illinois at Urbana-Champaign

:: Registered Architect in Ohio

:: National Council of Architectural Registration Boards Certified

:: LEED Accredited Professional

:: Member, American Institute of Architects

:: Member, Short North Rotary - Columbus

YEARS OF EXPERIENCE

9 years — Fishbeck

21 years — total

EDUCATION

BS in Mechanical Engineering, Purdue University

REGISTRATIONS/ CERTIFICATIONS

Professional Engineer – Ohio

MEMBERSHIPS

American Society of Heating, Refrigeration, and Air-Conditioning Engineers

GARY LOUIS, PE

SENIOR MECHANICAL ENGINEER

Gary has been responsible for designing various HVAC, plumbing, and fire protection systems for corporate and commercial clients. His specific responsibilities include developing design concepts, coordinating and managing all design phases, preparing specifications, developing budgets, performing energy and economical analysis, and maintaining client relationships.

OHIO UNIVERSITY | ATHENS, OHIO

BAKER STUDENT CENTER

Served as mechanical engineer on the design of HVAC systems for a new 184,000-sf student center. Systems included campus steam to hot water converters for heating; campus chilled water for cooling; variable-speed AHUs zoned by space use; atrium smoke exhaust system; variable-speed pumping; demand control ventilation with carbon dioxide monitoring; and low-flow plumbing fixtures. Also conducted energy analysis and LEED certification for mechanical, electrical, and plumbing (MEP) portions.

THE OHIO STATE UNIVERSITY | COLUMBUS, OHIO

OXLEY HALL

Served as project manager and lead mechanical engineer for the renovation of a 30,000-sf historic building. Project included installing a new DOAS system in an existing attic to improve building ventilation for a renovated fan coil space system.

POMERENE HALL

Served as lead mechanical engineer for the 90,000-sf renovation and addition to a historic building. The building is for a new data analytics college at the University. Project included routing campus chilled water and steam into the building from existing utility tunnels, utilizing vertical type steam to hot water heat exchangers with direct high pressure steam, AHUs were zoned by space use including VAV systems with terminal reheat and single zone VAV units. An atrium smoke exhaust system was required. Extensive coordination with existing building structure was required. Building design was required to meet LEED Silver requirements.

UNIVERSITY OF CINCINNATI | CINCINNATI, OHIO

CLERMONT CAMPUS AUDITS

Complete HVAC and plumbing audit of all campus buildings, consisting of providing life cycle cost analysis of different options for replacing existing equipment, including the possibility of a new campus geothermal heating and cooling plant.

PURDUE UNIVERSITY | WEST LAFAYETTE, INDIANA

KRANNERT SCHOOL OF MANAGEMENT

Studied existing HVAC systems and provided recommendations for replacing/ upgrading existing HVAC systems. Lead mechanical engineer for replacement of 13 existing air handlers while keeping the building occupied.

BIRCK NANOTECHNOLOGY CENTER

Design of HVAC, plumbing, and fire protection systems for new laboratory spaces located in the existing building. The project included downgrading an existing clean room area from ISO Class 4 to a new ISO Class 6 laboratory.

GRAND VALLEY STATE UNIVERSITY | GRAND RAPIDS, MICHIGAN

DANIEL AND PAMELLA DEVOS CENTER FOR INTERPROFESSIONAL HEALTH

Performed quality assurance/quality control review of the HVAC, plumbing, and fire protection designs for a new, 5-floor interprofessional health facility with 2.5 levels of below grade parking.

ETHICON | CINCINNATI, OHIO

CHILLED WATER PLANT UPGRADE

Installed a new 1,000-ton, variable speed centrifugal chiller to supplement the existing gas-fired absorption chillers. The existing cooling towers were reused, but the pumping arrangement was studied and modified. The existing transformer switchgear was modified. Work for Johnson Controls was completed in conjunction with the contractors for a turnkey project. This was part of an overall energy audit.

fishbeck

YEARS OF EXPERIENCE

9 years — Fishbeck
32 years — total

EDUCATION

BS in Electrical Engineering Technology, University of Cincinnati

AS in Electrical Engineering Technology, University of Cincinnati

REGISTRATIONS/ CERTIFICATIONS

Professional Engineer – Ohio

MEMBERSHIPS

National Society of Professional Engineers

Ohio Society of Professional Engineers

TRAINING

NFPA 72: National Fire Alarm and Signaling Code 3 day Seminar

Photovoltaic System Design and Installation 1 day Seminar

JIM RUMPING, PE

SENIOR ELECTRICAL ENGINEER

Jim has been responsible for designing power distribution systems, lighting, fire alarm, and communications systems. He is skilled leading mechanical, electrical, and plumbing design projects from pre-schematic design through all phases of construction administration.

OHIO UNIVERSITY | ATHENS, OHIO

BAKER UNIVERSITY CENTER

This 181,000-sf, multipurpose student center includes a kitchen/dining area, multipurpose conference area, meeting rooms, 250-seat theater, ballroom, atrium with smoke evacuation system, and space for the student run newspaper and radio station. Other spaces included a small computer lab, student career center, and college administration departments. Additionally, the building has a 2-level parking garage with 230 spaces underground and 96 spaces at grade. The parking structure is in a floodplain and was designed to allow water to flow in/out of the structure should a flood occur. The utility infrastructure component included extensions of campus chilled water distribution piping and 15kV electric service, both sized for future extension. The electrical service includes an incoming 15kV feed, multiple 15kV switches for future extension, a dry-type transformer, and 480V distribution. The emergency power includes a diesel powered standby generator with power for the building and associated fire pump.

COLLEGE OF COMMUNICATIONS

The project includes a building addition to bridge the new Schoonover Center and the Radio and Television Building into one facility for the College of Communications. Once complete, all branches of the College of Communications will be located in the new/renovated facility. New/renovated spaces will include classrooms, radio and television studios, offices, communication laboratories, and common areas. Chilled water will be extended from the campus mains to supply this facility. The existing electrical service contains multiple 15kV switches that feed other buildings.

WRIGHT STATE UNIVERSITY | FAIRBORN, OHIO

ELECTRICAL INFRASTRUCTURE UPGRADES

This project will replace a total of four unit substations within two buildings, Dunbar Library and the Medical Sciences Building. Each building has a separate 480V and 208V unit substations. At both buildings, lineups of multiple 15kV HVL switches will be replaced with a single 15kV switch lineup to provide a 15kV loop feed with radial feeds to each substation. An alternate provides a 15kV underground feeder from the University's 69kV substation to an existing sectionalized cabinet and site 15kV switch.

THE OHIO STATE UNIVERSITY | COLUMBUS, OHIO

OHIO UNION REPLACEMENT

New 318,000-sf, LEED Silver facility containing retail spaces, significant food service, administrative, student service spaces, student activities areas, lounges and social spaces, recreation areas, conference and meeting rooms, performance hall, and an 18,000-sf ballroom. Incoming electrical service incorporated a 15kV circuit selector switch that connected to two separate 15kV circuits with room for a third. This fed two separate double-ended substations within the building. Emergency power was fed from a 1,000kW diesel generator and fed Life Safety, Legally Required Standby power (including an atrium smoke evacuation system) and Optional Standby power.

OHIO UNION SOUTH PARKING GARAGE

Partial demolition and complete restoration of an existing 790-space parking garage. Garage lighting was replaced with new high efficiency fixtures. Lighting was wired to separate zones with ambient light sensors to turn off unneeded lighting near the exterior of the building.

fishbeck

YEARS OF EXPERIENCE

1 year — Fishbeck
19 years — total

EDUCATION

AS in Applied Science of Engineering Drafting/CAD, Technology Education College

REGISTRATIONS/ CERTIFICATIONS

Certified in Plumbing Design

MEMBERSHIPS

American Society of Plumbing Engineers, Central Ohio Chapter Officer and Vice President of Education

ASHRAE, Columbus Chapter

TRAINING

Carrier Technical Development
Advanced Solutions Autodesk Revit MEP

J. BRADLEY FITZSIMMONS, CPD

SENIOR MECHANICAL ENGINEERING SPECIALIST

Brad is a mechanical engineering specialist with experience in the conceptualization, creation, and development of numerous types of HVAC, plumbing, and fire protection systems, including designs from commercial office/retail spaces to highly complex, healthcare and laboratory facilities. Brad's career experience in the mechanical field as a consultant and a design-assist engineering contractor has given him a holistic approach and understanding of a project's requirements. His responsibilities include developing construction/permit drawings and the accompanying specifications of the systems, products, and materials used for the project.

TRINITY HEALTH | GROVE CITY, OHIO

MOUNT CARMEL HOSPITAL AND MEDICAL OFFICE BUILDING

Mechanical engineering for a new 504,000-sf hospital and 125,000-sf medical office building which included a 320-space, 2-tier parking garage. Responsible for assisting the engineer of record through the design phases with a guiding emphasis on constructability, reducing scheduling conflicts, minimizing cost impacts, and value engineering. BIM model and design duties were completely inherited from engineer of record at the 50% design development milestone to keep pace with condensed schedule. Led project plumbing design throughout remainder of design phase, coordination phase, and construction review.

OHIOHEALTH

MEDCENTRAL PARKING GARAGE | MANSFIELD, OHIO

240-space, 6-tier parking garage.

RIVERSIDE METHODIST HOSPITAL NEUROSCIENCE CENTER | COLUMBUS, OHIO

Mechanical engineering for a new 437,000-sf neuroscience center. Assisted the engineer of record through the design phases with a guiding emphasis on constructability, reducing scheduling conflicts, minimizing cost impacts, and value engineering. Led construction team through the BIM coordination and design phases of project. Responsible for coordination of all plumbing and mechanical systems. Systems were coordinated with each other in addition to electrical, fire protection, pneumatic tube, telecommunications, structural, etc.

GRANGE INSURANCE | COLUMBUS, OHIO

FACILITIES EXPANSION PROJECT

New, 12-story, 200,000-sf high rise building addition that included open office space, a cafeteria, kitchen, auditorium, and conference center. The expansion also included a 1,000-space, 6-tier parking garage with retail spaces. Daylight harvesting and flexible raised floor office area wiring was provided as well as standby power for essential office functions. Heating and cooling to the office space was provided by an under-floor air distribution system. Cooling for the addition is provided by a 900-ton chilled water plant consisting of two, 450-ton chillers. A new 10,000-sf, 3-tier, free-standing data center expandable to 20,000 sf was part of the design, as well as design of lightning protection system for the building addition. Data center power was a 2N system with UPS and generator system design to accept future added capacity. A separate parking garage with late night automatic light dimming was also part of the project. Design of interior HVAC revisions to restack the existing building, power new workstations, and design revisions to add conference rooms.

DSW SHOES | CHICAGO, ILLINOIS

SULLIVAN CENTER STORE #29382

Responsible for the mechanical and plumbing design of a new store in the basement of the Sullivan Center with a ground floor entrance off South State Street and a lower level showroom. The Sullivan Center is a high-rise building on the National Historic Register.

fishbeck

YEARS OF EXPERIENCE

6 years — Fishbeck
24 years — total

EDUCATION

BA in English,
Michigan State University

TRAINING

Leadership Grand Rapids 2017

MEMBERSHIPS

Commercial Real Estate for Women (CREW)

Inforum West Michigan

American Institute of Architects

JENNY WAUGH

MARKETING OPERATIONS DIRECTOR – PUBLIC/MEDIA RELATIONS

As Marketing Operations Director, Jenny Waugh oversees business development, sales and marketing, and public relations for the firm. She is responsible for brand development and management, along with strategic planning, community relations, and charitable giving. Jenny's experience is shared with her clients, too, as she often leads capital campaign efforts, media relations, and event planning for particular projects. She is passionate about sharing her talents with non-profit and academic institutions within the community, especially in support of workforce development or housing initiatives.

COMMUNITY INVOLVEMENT

ALGOMA TOWNSHIP

- Chairperson of the Commission, 2019-present
- Planning Commissioner, 2013-present
- Site Plan Review Committee, 2021-present

AMERICAN INSTITUTE OF ARCHITECTS, GRAND RAPIDS

- Board Member and Public Relations Director, 2016-present
- Annual Gala Committee Co-Chair, 2019-present

ASSOCIATED BUILDERS AND CONTRACTORS

- Board Member, 2021-present
- Construction Awards Committee, 2009-present
- Committee Chair, 2013-2015, 2017-2018

GRAND RAPIDS CHAMBER OF COMMERCE

- Leadership Programming Council, 2018-present
- Annual Fundraiser Chair, 2019-present

HABITAT FOR HUMANITY OF KENT COUNTY

- Women Build Committee Chair, 2013-2017
- Board Member, 2015-2021
- Board Development Chair, 2017-2021

AMERICAN COUNCIL OF ENGINEERING COMPANIES - OHIO CHAPTER

- Communications Committee, 2019-present
- Committee Chair, 2020-present

WOLVERINE WORLDWIDE FAMILY YMCA

- Board Member, 2013-2019
- Board Development Chair, 2016-2019

COMMUNITY MEDIA CENTER

- Board Member, 2012-2017
- Vice President of the Board, 2014-2017
- Wealthy Theatre Capital Campaign, Steering Committee, 2012-2013

NATIONAL ASSOCIATION OF WOMEN IN CONSTRUCTION

- Board Member, 2012-2014
- Membership Chair, 2012-2014

AMERICAN CANCER SOCIETY

- Annual Gala, Executive Committee Member, and Marketing Chair, 2012-2016

GRAND RAPIDS OPPORTUNITIES FOR WOMEN

- Professional Mentor/Guest Speaker, 2010-2012

WEST MICHIGAN HEALING FIELD

- Fundraising Chair, 2011

fishbeck

CHRISTOPHER KOKESH, PE, PENG

SENIOR CONSULTANT

(206) 963-4225 christopher.kokesh@sme-usa.com

- Geotechnical Engineering
- Landslide Mitigation and Design
- Earth Retention Systems
- Pile/Shaft Design and Testing
- Project Management and Technical Review

BACKGROUND

Christopher has two decades of experience planning and managing geotechnical and multi-disciplinary transportation corridor, public works, oil and gas field, mining, alternative energy, dam/levee safety, military facilities, waterfront facilities, and commercial development projects throughout the United States, Canada, Russia, and Central America. Christopher is recognized by his peers for his technical expertise and ability to analyze and find innovative design solutions for complex geotechnical problems.

His expertise includes slope stabilization, pile foundations, lateral earth support, trenchless technologies, thermal/permafrost foundation engineering, instrumentation, field and laboratory testing, seismic analysis, and risk-based analysis. Christopher has been involved in the investigation and design of hundreds of slope stabilization projects in Ohio, including many roadside projects which received FEMA funding and also projects requiring emergency landslide response, instrumentation/monitoring, rockfall mitigation, conventional retaining structures, and specialty/propriety stabilization methods.

EDUCATION

M.S., Geotechnical Engineering, The Ohio State University
B.S.C.E., Civil (Geotechnical) Engineering, The Ohio State University

REGISTRATIONS AND CERTIFICATIONS

Professional Engineer – Alaska, Ohio, Pennsylvania, Washington, West Virginia, British Columbia, Canada

AFFILIATIONS

Geo-Institute
American Society of Civil Engineers (ASCE)
American Association of State Highway and Transportation Officials (AASHTO)
ASTM International
Association of State Dam Safety Officials (ASDSO)

RELATED PROJECT EXPERIENCE

Geotechnical Engineer for the inspection and monitoring of **Wall 5 Pressure Relief Tunnel** system in Steubenville, Ohio. Field exploration included 3 drilled borings and installation of nine vibrating wire piezometers to characterized the soil and groundwater conditions to evaluate the performance of the wall and associated subsurface drainage system. [Prior to SME]

Geotechnical Engineer for the **Overlake Village South Detention Vault** in Redmond, Washington. Responsible for geotechnical engineering in support of the development of multiple large regional stormwater and collocated park facilities in the concrete paved parking lot of a commercial strip mall. Services included 12 drilled borings, laboratory soil testing, engineering analyses, earthwork recommendations, and design recommendations. [Prior to SME]

Geotechnical Engineer for a water leak investigation at **US Navy Building 940** in Bremerton, Washington. Responsible for investigating the conditions of an existing waterproofing system to identify the source of water intrusion along the shoring wall. Made design recommendations for a new drainage piping system to capture water and carry it away. [Prior to SME]

Geotechnical Engineer for the **Redmond Way Water Quality Facility** in Redmond, Washington. Responsible for geotechnical engineering in support of a proposed water quality facility (WQF) being incorporated into an expansion of the City's stormwater infrastructure. [Prior to SME]

JOEL W. RINKEL, PE

VICE PRESIDENT

(734) 260-0441 joel.rinkel@sme-usa.com

- Geotechnical Engineering
- Geo-Civil Design Services
- Pavement Engineering
- Construction Materials Services

BACKGROUND

Joel provides geotechnical engineering, construction materials services, pavement engineering, geo-civil design services, shoring design services, forensics evaluations for below-grade structures, and expert witness testimony. He is responsible for project and client management, including preparation of reports to address shallow and deep foundations, lead geotechnical and materials consultant for subsurface challenges, and lead designer for earth retention systems, dewatering systems, reinforced slopes, special ground improvement techniques and underpinning systems. Joel serves as Owner's representative for assessing subsurface conditions and their impact on the design and performance of subgrade-supported structures. He has been with SME for more than 25 years and has served as project manager on more than 1,500 geo-civil and shoring design, geotechnical, pavement, and construction materials services projects.

RELATED PROJECT EXPERIENCE

Project Manager for restoration of the **Plaza Towers** parking structure in Grand Rapids, Michigan following a significant flood event. assisted the design team with addressing subsurface drainage, design of a cut-off wall/erosion protection at the northwest corner, evaluating lateral earth pressures acting on basement walls, and providing geotechnical engineering recommendations relating to extending the below grade parking.

Geotechnical Engineer of Record for several office buildings and parking structures for the **Ford DCT Infrastructure Project** in Dearborn, Michigan. Determines and coordinates scope of services for geotechnical evaluations and develops solutions to geotechnical challenges based on subsurface findings and the contractor's methods for construction. Responsible for direct field and lab testing to determine geotechnical soil parameters, and preparing/reviewing geotechnical evaluation reports. Earth retention and tunnel shoring designer responsible for preparing plans, specifications, section, details and engineering calculations for earth retention systems up to 55 feet below grade, and tunnel shoring systems to support Manitowoc 2250 crane loading conditions.

Lead Designer for earth retention and underpinning systems to protect existing structures at **Detroit Water and Sewerage Department Southwest Water Treatment Plant SW-548**. Lead Consultant to evaluate structural integrity of existing concrete roof for a below-grade vault supported by concrete columns and drop panels. Responsible for global stability and bottom heave analyses; lateral earth pressure and surcharge load calculations; soil and concrete stress distribution modeling; bending moment, stiffness, and deflection analyses for steel and concrete beams, braces, and walers; load transfer design from existing structures to new underpinning elements; vibrations evaluations and the effects of vibrations on existing structures; construction monitoring plans and specifications; and pile load tests.

EDUCATION

B.S., Civil Engineering, Michigan Technological University
M.S., Civil Engineering, Wayne State University

REGISTRATIONS AND CERTIFICATIONS

Professional Engineer – Michigan and Iowa

JEFFREY PONGONIS, ASLA, PLA

Principal, Landscape Architect

MKSK

Jeff is committed to the implementation of a meaningful and connected environment. His process is focused and mindful of both the aesthetic details of robust social spaces as well as the greater urban strategy.

Jeff's wide range of projects express his beliefs and commitment to the design of a contextual human environment. His work includes project types ranging from master planning and mixed-use development planning, open space and park design, to academic and campus design.

Project Experience
Van Aken District
Shaker Heights, Ohio

Easton Urban District
Columbus, Ohio

Liberty Center
Liberty Township, Ohio

Crocker Park
Westlake, Ohio

Lawrenceburg Civic Park
Lawrenceburg, Indiana

Ray E. DeGraw Park
Grandview Heights, Ohio

Scioto Mile
Columbus, Ohio

Grandview Yard, Grandview Heights, Ohio -
Public Parking Garages
Nationwide Insurance Corporate Center Parking Garages

Arena District, Columbus, Ohio -
10 W. Nationwide Parking Garage Connection
McConnell Garage at Arena West
Burnham Square/Neil Avenue Garage
Parks Edge Condominiums Parking Garage
Arena Crossing Parking Garage Connection

Fenlon Square/Macy's Garage at Easton
Columbus, Ohio

Education
The Ohio State University,
Bachelor of Science Landscape Architecture, 1998

Registration
Registered Landscape Architect, State of Ohio

Boards & Commissions
Brewery District Commission, Commissioner, 2002-present
Urban Land Institute Regional Council, Urban Infill/Mixed Use Development Representative, 2014-2016
North Market Board of Directors, 2012, Vice President, 2011-2020

Professional Affiliations
American Society of Landscape Architects
Urban Land Institute (ULI)
1000 Friends of Central Ohio

TONY ROELL, PLA, LEED AP

Senior Associate, Landscape Architect

MKSK

Tony executes site design to bring finesse, elegance and sophistication to each project while he strives to provide comfortable, user-oriented spaces.

Tony is engaged on a wide range of projects in the planning, design, and documentation. His experience includes master planning, urban design, and educational facilities design among other types of projects. He is active in projects from conceptual development through documentation and implementation. His open mindedness combined with his attention to detail are what make Tony and his projects successful and of high quality.

Project Experience
Lawrenceburg Civic Park
Lawrenceburg, Indiana

Promenade Park
Toledo, Ohio

Grandview Yard, Grandview Heights, Ohio -
Public Parking Garages
Nationwide Insurance Corporate Center Parking Garages

Arena District, Columbus, Ohio -
10 W. Nationwide Parking Garage Connection
McConnell Garage at Arena West
Burnham Square/Neil Avenue Garage
Parks Edge Condominiums Parking Garage
Arena Crossing Parking Garage Connection

Nationwide Children's Hospital Green Roof/Garage
Columbus, Ohio

Miami University Quadrangle and Green Roof/Garage
Oxford, Ohio

OSU Chlois G. Ingram Spirit of Women Park
Columbus, Ohio

National Road Commons
Springfield, Ohio

The Ohio State University Wexner Medical Center
Columbus, Ohio

Education
The Ohio State University,
Bachelor of Landscape Architecture, 2005

Registration
Registered Landscape Architect, State of Ohio
LEED Accredited Professional, U.S. Green Building Council

Professional Affiliations
American Society of Landscape Architects

RACHAEL HARKLEROAD

Designer

MKSK

Powerful site design is rooted in how a person interacts with and feels in a space. Rachael's goal is to design spaces that are memorable and timeless and with a strong focus on function and aesthetic appeal, so that people feel better leaving than when they arrived.

Rachael has 22 years experience in landscape architectural planning and design. She is involved in all phases of projects from the initial planning phases through design development and documentation and has worked on many different project types, from large scale land planning to private development to residential design to small public playgrounds. Rachael is passionate about creating sustainable spaces with a focus on impactful and memorable landscapes that create places for people to enjoy for many years.

Project Experience
Lawrenceburg Civic Park
Lawrenceburg, Indiana

Columbus Main Library East Plaza Renovations
Columbus, Ohio

Columbus Museum of Art Expansion Sculpture Garden
Columbus, Ohio

Promenade Park
Toledo, Ohio

Grandview Yard
Grandview Heights, Ohio

Easton Urban District
Columbus, Ohio

Golf Village Mixed Use Development
Powell, Ohio

Bob Evans Corporate Headquarters
New Albany, Ohio

I-70/71 Interchange Enhancements Phases 2-6
Columbus, Ohio

YWCA Landscape Master Plan

Education
The Ohio State University,
Bachelor of Science in Landscape Architecture, 1999

Professional Affiliations
American Society of Landscape Architects

Boards & Commissions
YMCA Board Member
YMCA Volunteer
Former Buckeye Chapter President OCASLA

2B. SIMILAR PROJECT EXPERIENCE

Fishbeck has a full-service team with the expertise and experience to provide the City of Gahanna with the design services you need for the Creekside Garage flood impact mitigation project. In this section, you will find detailed project histories of our relevant experience.

Fishbeck is proud to announce Josh Rozeboom, PE, Greg Ehmke, PE, Justin Thomson, P.Eng., and Tim Meyer have recently joined our team. With roots dating back to Carl Walker, Inc., and together with Jon Forster, CAPP and Ray Mulvaney, they bring established parking studies, design, and restoration experience to Fishbeck and expand our parking service line.

This section includes some of their collective staff experience as it pertains to the City of Gahanna Creekside Garage, as well as some of Fishbeck's floodplain experience.

PLAZA TOWERS FLOOD RESTORATION AND PREVENTION

GRAND RAPIDS, MICHIGAN

Staff provided prime consultant, structural engineering, and parking consultant services for this **flood restoration and prevention project.** The Plaza Towers underground parking structure is adjacent to the Grand River. Flood waters breached the building's flood walls in 2013 and flooded the parking structure. The **parking floor slab was reconstructed and flood prevention measures were installed including groundwater cutoff walls and slab underdrains. Geotechnical recommendations for the flood prevention, including groundwater flow analysis, were provided by SME.** Building mechanical systems were also evaluated with deficiencies addressed.

PROJECT DATA

Number of Levels: 2
Number of Spaces: 228
Structural System: Cast-in-place, precast concrete
Completion Date: 2014

STAFF INVOLVED

Josh Rozeboom

REFERENCE

Eenhoorn, LLC
Paul Heule, President
616.530.5500 | pcheule@eenhoorn.com

JW MARRIOTT PARKING STRUCTURE

GRAND RAPIDS, MICHIGAN

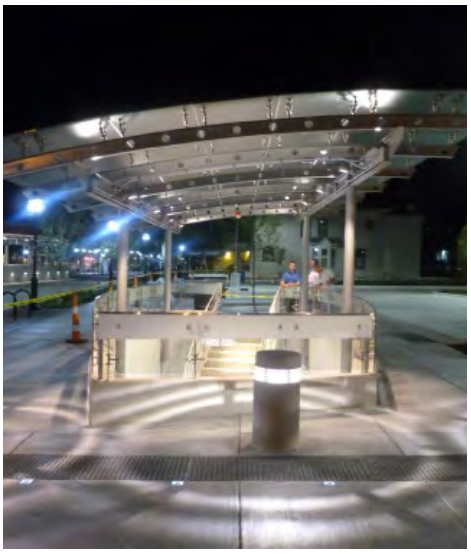
Staff provided prime consultant, parking consultant, and structural engineering design. The parking structure serves the 24-story, 340-room hotel and also supports the downtown convention center. The building design combines traditional materials and modern detailing to compliment the historical aspects of the adjacent properties and the modern aspects of the JW Marriott Hotel. **The parking structure is near the Grand River which required the basement level to be designed for high groundwater that could occur in a flood event.**

PROJECT DATA

Number of Levels: 11
Number of Spaces: 756
Structural System: Cast-in-place, post-tensioned
Completion Date: 2008
Construction Cost: $16.8 million

STAFF INVOLVED

Josh Rozeboom
Ray Mulvaney



LIBRARY LANE UNDERGROUND PARKING STRUCTURE

ANN ARBOR, MICHIGAN

Provided parking consulting, structural engineering, and prime project management for an **underground parking structure which serves as the foundation for a future high-rise development and currently supports a plaza, a surface parking lot, a mid-block street, and a main City street that requires State bridge registration and inspections.** The structure was designed to accommodate future connections to adjacent properties and horizontal expansion. The foundation required one of Michigan's largest continuous concrete placements (6,000 cubic yards over 36 hours).

PROJECT DATA

Area: 345,000 sf
Number of Levels: 4
Number of Spaces: 720
Structural System: Cast-in-place, post-tensioned
Completion Date: 2012
Construction Cost: $44.8 million

STAFF INVOLVED

Josh Rozeboom
Ray Mulvaney

REFERENCE

Ann Arbor DDA
Jada Hahlbrock, CAPP
Manager of Parking Services
734.567.8025 | jhahlbrock@a2dda.org

THE DEVELOPMENT ON TROY

FERNDALE, MICHIGAN

Staff provided structural engineering as the prime consultant for the mixed-use parking structure in downtown Ferndale. This structure replaced an existing parking lot to increase the amount of parking available to the quickly growing City. The building also added street level retail, bike house, and refuse room with office space expansion capabilities above. **The structure included one level below grade parking**, electric vehicle charging stations, car count system, pay by space, gateless entry exit, and solar panel capabilities. The project also incorporated a new curbless brick streetscape.

PROJECT DATA

Area: 160,000 sf
Number of Levels: 4
Number of Spaces: 400
Structural System: Cast-in-place, post-tensioned
Completion Date: 2019
Construction Cost: $20.3 million

STAFF INVOLVED

Josh Rozeboom
Ray Mulvaney

REFERENCE

City of Ferndale
Joseph Gacioch, City Manager
248.546.2399
jgacioch@ferndalemi.gov

THE NORDIC MIXED-USE DEVELOPMENT

MINNEAPOLIS, MINNESOTA

Provided parking consulting and structural engineering for the mixed-use development parking structures and residential building that includes 415 structured parking spaces. **The below grade parking structure supports a 9-story residential building, an 8-story parking structure, a 10-story office building, and a public plaza.**

PROJECT DATA

Number of Levels: 9
Number of Spaces: 415
Structural System: Cast-in-place, post-tensioned
Completion Date: 2019
Construction Cost: $62 million

STAFF INVOLVED

Josh Rozeboom
Ray Mulvaney

REFERENCE

LHB Corporation
Stacee Demmer, AIA,
LEED AP BD+C, WELL AP
Principal/Commercial Studio Lead
612.766.2815
stacee.demmer@lhbcorp.com

MILLER CANFIELD BUILDING

KALAMAZOO, MICHIGAN

Staff provided parking consultant and structural engineering for this mixed-use building that includes two levels of underground parking. The building also includes a grade level plaza and four levels of office space. **Groundwater and highly permeable soils were a challenge for design and construction of the underground parking structure.**

PROJECT DATA

Number of Levels: 4
Number of Spaces: 142
Structural System: Cast-in-place, conventionally reinforced concrete
Completion Date: 2009
Construction Cost: N/A

STAFF INVOLVED

Josh Rozeboom
Ray Mulvaney

REFERENCE

Catalyst Development Company
Patti Owens
Vice President & Managing Director
269.492.6810
powens@catalystdevco.com

DULUTH TRANSPORTATION CENTER INTERMODAL FACILITY

DULUTH, MINNESOTA

Staff provided parking consultant and structural engineering services for this design-build project. The Center houses eight bus loading bays, a police substation, three levels of elevated parking, **one partially below grade level of parking**, secure bicycle storage, and four separate skywalks connecting to adjacent buildings. This structure received an IPMI Award of Merit in 2017, for best design of a parking facility with less than 800 spaces. Other features include electric vehicle charging stations, solar panels, steam heated floor slabs, covered passenger waiting areas, snow melt system, and capacity for future Light Rail development.

PROJECT DATA

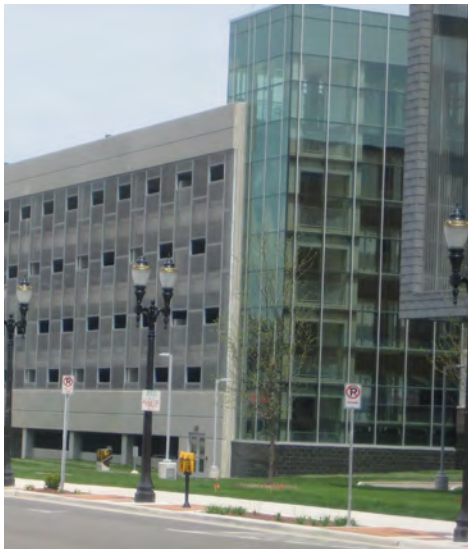
Number of Levels: 4
Number of Spaces: 416
Structural System: Cast-in-place, post-tensioned
Completion Date: 2016
Construction Cost: $30 million

STAFF INVOLVED

Josh Rozeboom
Ray Mulvaney

REFERENCE

Duluth Transportation Authority
Dennis Jensen
218.722.4426
djensen@duluthtransit.com



ACCIDENT FUND HOLDINGS, INC. PARKING STRUCTURE

LANSING, MICHIGAN

Staff provided prime consultant, parking consultant, and structural engineering services. Accident Fund relocated their national headquarters to the riverfront to utilize the historic Ottawa Street Station power plant in downtown Lansing. The parking structure was constructed adjacent to the renovated office building. **The parking structure is in a floodplain and was designed to allow water to flow in/out of the structure in a flood situation and to prevent slab on ground buoyancy.**

PROJECT DATA

Number of Levels: 6
Number of Spaces: 1,010
Structural System: Cast-in-place, post-tensioned
Completion Date: 2011
Construction Cost: $22.3 million

STAFF INVOLVED

Josh Rozeboom
Ray Mulvaney

CITY OF GRAND RAPIDS, MICHIGAN

FLOODWALLS AND RIVERFRONT RESTORATION

Fishbeck was hired by the City to raise the flood protection berms along the Grand River corridor in the downtown area as part of the overall river revitalization. At the same time, the City was interested in providing access to the river's edge in anticipation of a comprehensive river restoration master plan with landscape architect, VIRIDIS Design Group.

Along with frequent flooding, many areas of the riverfront were not safe for pedestrians due to overgrown trees and soil erosion. Design improvements included site layout and grading, ADA ramps, and new steps and retaining walls. A 15-foot-wide riverfront shared-use path was added allowing multiple people to use it at once for different functions, such as recreation, connectivity, and festivals.

Stakeholders in the project included the Grand River Band of Ottawa Indians and a special riverfront portion of Ah-Nab-Awen Park known as the "Indian Mounds." Fishbeck provided civil/site design for the cultural significant urban space for both tribal members and general public.

GRAND RIVER FLOODWALL CERTIFICATION

As a result of FEMA's flood map modernization program, the City of Grand Rapids was required to provide certifications for the system of floodwalls and levees along the Grand River in accordance with the provisions of 44 CFR 65.10 under a Provisional Accreditation of Levee agreement.

Prior to FEMA's flood map modernization program, the City completed extensive improvements to nearly 3.5 miles of concrete floodwall and 9.5 miles of earthen levees and natural streambanks. FEMA noted the flood protection system did not provide three feet of freeboard as required by 44 CFR 65.10. Extensive hydrologic, statistical, and hydraulic analysis was performed to demonstrate the 100-year flood profile for the Grand River through the City of Grand Rapids that was published in the City of Grand Rapids Flood Insurance Study was at a higher elevation than a 100-year flood profile based on an analysis of gage data for historical floods. In addition, it was demonstrated the HEC-RAS hydraulic model used by FEMA in the Flood Insurance Study did not properly account for significant flow area at several bridges with open-truss superstructures that were exposed to flood flows.

Fishbeck has worked with the City to repair/rehabilitate portions of the floodwalls, levees, and closure structures to meet a minimum 100-year flood level of protection. Fishbeck has also worked to complete various analyses and reports required for levee/floodwall certification. The City was selected as one of 25 pilot projects for FEMA's Levee Analysis and Mapping Procedures for Non-accredited Levee Systems and is currently participating in this process.

GRAND RIVER FLOODWALL IMPROVEMENTS

The Grand River, as it flows through Grand Rapids, has approximately 3.5 miles of concrete floodwall and 9.6 miles of earthen embankment. As a result of FEMA's flood map modernization program, floodplain maps and 100-year flood elevations along the river have been revised. This project was implemented to plan, design, and construct required improvements to the floodwall and embankment system. The improvements are being implemented through several contracts including backflow prevention, freeboard and embankment protection improvements, and improvement to the WWTP berms.

REFERENCE

Jeff McCaul, PE, Assistant City Engineer | 616.456.3075

fishbeck

fishbeck

SHARED PARKING RAMP | 335 MICHIGAN

GRAND VALLEY STATE UNIVERSITY | SPECTRUM HEALTH
GRAND RAPIDS, MICHIGAN

PROJECT DATA

Number of Spaces: 1,250
Area: 418,000 sf
Number of Levels: 6
4 above grade
2 below grade
Start Date: June 2018
Completion Date:
Phase 1 May 2020
Phase 2 May 2021
Construction Cost: $34.5 million
Delivery Method: CM/GMP

REFERENCE

Shannon Sullivan
GVSU Director of Construction
616.331.9075

Fishbeck was part of a design team for a **new 6-level parking ramp (4 above grade/ 2 below grade) providing 1,250 spaces** in downtown Grand Rapids. The ramp will be used by Spectrum Health employees and GVSU students in the health professions and nursing programs at the GVSU Cook-DeVos Center for Health Sciences.

The facility has entry/exit locations on Michigan Street at Prospect Avenue and Lafayette Avenue. The ramp replaced the existing surface parking lots owned by GVSU and Spectrum Health. The two institutions worked with the City of Grand Rapids and the neighborhood organization, Neighbors of Belknap Lookout, to preserve space in nearby neighborhoods by building the ramp on Michigan Street. The facility meets the parking needs of employees and students and eases the burden on residents living near the area.

A slurry wall was used to facilitate construction of the below grade parking levels.

GEOTECHNICAL SERVICES

www.sme-usa.com

- SUBSURFACE EVALUATIONS
- EARTH RETENTION
- SLOPES AND EMBANKMENTS
- GEOPHYSICAL ASSESSMENTS
- GROUND IMPROVEMENT
- GROUNDWATER MANAGEMENT
- FOUNDATIONS
- TRENCHLESS UTILITY INSTALLATION

Geotechnical services provide insight into what's happening on and beneath the earth, delivering information that can significantly reduce construction risks and expensive costs.

Our Geotechnical Services team provides extensive knowledge and experience to help owners understand the subsurface soil and groundwater conditions at their project site. Our expertise helps establish the viability of your project, anticipate and resolve construction problems, and generate significant savings on site development, foundation and earth retention related construction costs.

SME's longtime clients come to us with their most challenging projects because they know what is in the ground presents the biggest challenges when constructing solid buildings and infrastructure. We routinely provide construction and design recommendations that save the project team significant time and money.

Our experienced drillers, laboratory technicians and geotechnical engineers rely on the latest tools and techniques for evaluating soil and groundwater conditions and determining their impact on proposed or existing facilities and infrastructure. Beyond test results and hard data, our professionals deliver a level of expertise that is unique in our market. We bring valuable knowledge and insightful thinking to support the success of your project while reducing overall construction cost, time and risk.

Beginning with due diligence and site acquisition, SME's Geotechnical engineers work with owners, developers and their project teams, including architects, engineers and contractors, to evaluate and anticipate subsurface conditions and determine how the soil will respond to proposed structural loadings. We anticipate potential construction problems to help you effectively assess project risks and costs, and evaluate if and how a proposed site can support the planned project.

Based on the results of subsurface evaluations, SME's Geotechnical experts provide detailed recommendations for site development, foundations, floor slabs, pavements, utilities, earth retention systems, retaining walls, slopes and other site features.

Passionate People Building and Revitalizing Our World

GEOTECHNICAL SERVICES CONT.

Our experience leads to practical yet innovative engineering solutions that help reduce construction time and costs and improve overall performance.

During construction, our engineers provide field observation and testing to facilitate effective installation of foundations, specialized embankments and earth retention systems. We address problems as they arise to help keep your project on budget and on schedule.

From site acquisition through project completion, SME's Geotechnical engineers help you understand and effectively address what's under the earth, so you can build with confidence and success.

SUBSURFACE EVALUATIONS

SME offers decades of expertise, drilling equipment, specialized solutions, and laboratory facilities to handle your subsurface and soil evaluation needs from end to end.

EARTH RETENTION

For safety during and after construction, our Geotechnical Services team designs temporary and permanent earth retention systems including those that support underground facilities. We work with owners, project teams and contractors to understand project challenges.

SLOPES AND EMBANKMENTS

Our Geotechnical engineers have significant and unique experience with addressing slopes and slope failures. We can evaluate the stability of slopes and embankments, recommend designs for stabilization of existing and proposed slopes, and create repair plans for failed slopes.

GEOPHYSICAL ASSESSMENTS

SME's geophysical assessment capabilities include surveys for evaluating soil and rock conditions across large surface areas, as well as geodynamic vibration studies that ensure structural stability and compliance with applicable building codes. We have decades of experience with vibration sensitive installations such as equipment foundations.

GROUND IMPROVEMENT

Our experts are well versed in the most effective techniques for improving ground conditions, ultimately enabling more economical site development and foundation design. From wick drains and surcharging to various surface compaction techniques and other methods, our ground improvement strategies support your building objectives. SME has decades of relevant experience with many of these methods.

GROUNDWATER MANAGEMENT

SME's Geotechnical engineers and geologists can help evaluate the location and condition of groundwater on your site and provide effective solutions for management during excavation, construction, and beyond. Additionally, SME's experts include environmental specialists who can help our engineers coordinate solutions when groundwater is impacted, which is becoming more common every day.

FOUNDATIONS

SME's experienced Geotechnical engineers deliver practical and effective foundation recommendations. Our clients trust us to provide construction reviews that result in significant savings on their foundation projects.

TRENCHLESS UTILITY INSTALLATION

SME's team of Geotechnical engineers is highly experienced with the installation of utilities using trenchless methods such as horizontal directional drilling (HDD), horizontal auger boring (HAB), microtunneling, and others. By using tools such as soil borings, rock coring, muck probing, and a wide range of laboratory testing, our team can help predict and mitigate construction risks before they become problems during installation.

GEOTECHNICAL - GROUNDWATER MANAGEMENT

www.sme-usa.com

- **GROUNDWATER MANAGEMENT SERVICES**
- **DEWATERING PLANS**
- **PUMPING TEST**
- **OBSERVATION WELLS**
- **INFILTRATION TESTING**

Don't let groundwater issues wash your project out.

SME has developed a comprehensive understanding of critical groundwater management issues related to testing, design, excavation, construction and operation of commercial, industrial, agricultural and transportation projects.

Groundwater exists at most sites, especially in the Great Lakes region. Identification, evaluation and management of groundwater is critical to the success of many projects and has been an integral part of SME's Geotechnical services offerings for decades. SME's engineers have tested, evaluated, designed and implemented groundwater management programs across the United States, ranging from small urban properties to entire watersheds. Our onsite field investigations have focused on groundwater geology, groundwater occurrence and movement, and groundwater quality.

SME's development of groundwater management programs has required detailed studies of yield and quality, conjunctive use of surface water and groundwater, clear understanding of basin hydrology, and balancing of municipal and agricultural requirements for quality, reliability and quantity. Our groundwater services include:

GROUNDWATER RESOURCES
- Water supply investigation, evaluation and design
- Diversion impact assessments
- Stormwater control projects
- Surface water management

DISCHARGE TO GROUNDWATER
- Hydraulic mounding analysis
- Discharge to groundwater permits
- Dilution modeling

AQUIFER INVESTIGATIONS
- Groundwater observation wells
- Pumping test design and analysis
- Simulation of groundwater flow

CONSTRUCTION DEWATERING
- Planning dewatering systems
- Sumps and pumps
- Well and wellpoints
- Drawdown analysis
- Design of dewatering systems
- Specifications
- Monitoring

Passionate People Building and Revitalizing Our World

GEOTECHNICAL - GROUNDWATER MANAGEMENT CONT.

DEWATERING PLANS

SME's Geotechnical engineers have extensive experience in developing dewatering plans. When a project needs to excavate below the groundwater, a dewatering system will extract the groundwater through a single or network of wells to lower the water level when recovering groundwater for short-term remediation. SME uses a system that stores it in tankers for treatment at a disposal facility or coupled with specialized treatment systems to discharge into a nearby stormwater receptacle under an EPA National Pollutant Discharge Elimination System (NPDES) permit.

PUMPING TEST

Pumping tests are an important part of the investigation for dewatering of construction sites. Supported by other types of groundwater investigations and groundwater monitoring, they can provide valuable information during the planning and design of construction projects. Consisting of a test well and a series of observation wells, water is pumped into or out of the test well at a uniform rate until the water levels in the test well and the observation wells remain stationary. SME's Geotechnical engineers routinely use pumping tests to:

- Obtain permeability values for groundwater control and geotechnical design
- Investigate water quality on potentially contaminated sites and as part of groundwater remediation
- Assess the performance of new water supply wells
- Assess the need for, and results of, water well rehabilitation

OBSERVATION WELLS

Observation wells are small diameter drilled wells which can be installed at the same time and with the same drilling equipment used for conventional soil borings. These wells can be used to monitor changes in water levels with over time, estimate the soil permeability, and for sampling for water quality testing. Data from the observation wells can them be used in the planning and design for various groundwater management issues.

INFILTRATION TESTING

SME performs field infiltration testing to determine the potential water infiltration rates for stormwater management and control. The results of the field tests are used to properly size and locate proposed stormwater management facilities and systems. Infiltration testing is typically conducted early in the planning and design process to determine if an infiltration-based design is suitable for a specific site and at what locations within the site. Testing also helps to evaluate the subsurface conditions below existing surfaces including pavements, and identifies existing soil horizons (layers), as well as any limiting features, historic conditions, etc.

RELEVANT EXPERIENCE

MKSK

CIVIC SPACES & PLAZAS

LAWRENCEBURG CIVIC PARK, LAWRENCEBURG, IN

CLIENT/OWNER: CITY OF LAWRENCEBURG

MKSK led an effort to deliver a scope from concept to construction and worked to develop a responsive program and engaging urban space. The conceptual design of this urban plaza integrates the surrounding cityscape into a catalytic destination for the community. Informed by a comprehensive community engagement process, the park serves the needs of the public and envisions redevelopment opportunities. Amenities include a pavilion, a series of water features that transition from a sheeting table of water to a band of interactive pop up jets, perimeter cafes for dining and observing, playscape, food truck alley, event/accent lighting, and sculpted planters with integrated seat walls. The park is expected to fill a critical need in the city's existing public open space and become a regional destination as an outdoor entertainment venue.

VAN AKEN DISTRICT, SHAKER HEIGHTS, OH

CLIENT/OWNER: RMS DEVELOPMENT & CITY OF SHAKER HEIGHTS

The Van Aken District is a vertically mixed use, transitoriented redevelopment consisting of residential, retail, and office in the heart of Shaker Heights, Ohio. The project has transformed an existing underutilized strip shopping center into a dense and vibrant neighborhood. The heart of the development, the centrally located "Living Room", provides an internal park element that is supportive of adjacent uses and provides space for seasonal community special events. Hardscape elements within the space celebrate the cultural history of Shaker Square, while the landscape character is designed to fit comfortably within the context of the community as a whole. MKSK provided full design services from concept design through implementation as part of a multidisciplinary team assisting the City. Award: 2020 ICSC Global Awards North America - Mixed Use Gold

SCIOTO MILE, COLUMBUS, OH

CLIENT/OWNER: COLUMBUS DOWNTOWN DEVELOPMENT CORPORATION

Located in the heart of downtown Columbus, the Scioto Mile project reclaims the riverfront and plays an essential role in the revitalization of downtown by offering a vibrant public destination. Green infrastructure components have contributed to the success of the Scioto Mile. The historic Bicentennial Park space renovation features a restaurant, amphitheater, rose garden, and signature dynamic fountain, which offers numerous water play experiences. By removing 1,000-linear-feet of concrete revetment and deteriorating floodwall, three acres of parkland were recovered and 600-linear-feet of bio-retention were installed to improve water quality and enhance river edge restoration. Award: 2012 International Downtown Association Pinnacle Award for Public Space

RAY E. DEGRAW PARK, GRANDVIEW HEIGHTS, OH

CLIENT/OWNER: NATIONWIDE REALTY INVESTORS

As part of the mixed-use Grandview Yard development, MKSK designed a 1 acre plaza and 2 acres of open space community park that ties into the historic neighborhood of Grandview Heights. The new open space provides a flexible performance space for functions small and large, from picnics and small kickball games to large scale events including community festivals, food trucks, and street fairs Construction was complete in 2016 and features 25,000 square feet of decorative custom plaza paving, custom seating elements with elliptical stone planters, a unifying granite cobble street, and more than 100 mature trees that extend the mature streetscape of the adjacent neighborhood into the new development.

ON-STRUCTURE / PARKING GARAGES

DORRIAN GREEN, COLUMBUS, OH

CLIENT/OWNER: COLUMBUS DOWNTOWN DEVELOPMENT CORPORATION

Dorrian Green is an interactive outdoor extension of the Center of Science and Industry (COSI), with gardens and spaces that extend the educational mission of COSI and compliment other investments made in the Franklinton neighborhood and along the downtown riverfront. The park is built over a 630-car parking garage that serves visitors to COSI and the Veterans Memorial and Museum. MKSK was the Landscape Architect on the multi-disciplinary Design-Build team. In addition to play areas for children and adults, amenities include a number of themed gardens consisting of plants native to central Ohio. The Fountain Plaza is anchored by an interactive fountain and flanked by two open-air pavilions and flowering cherry tree groves.

NATIONWIDE INSURANCE HQ PLAZA RENOVATIONS, COLUMBUS, OH

CLIENT/OWNER: NATIONWIDE INSURANCE CORPORATION

The Nationwide Insurance Corporate Headquarters campus was built in 1977 and contains multiple plazas spaces. MKSK provided full design services from schematic through documentation and CA for renovations and upgrades to main entry plazas to provide updated site amenities and more direct access to buildings. Two-thirds of the plaza is constructed over underground parking. The mortared-in-place brick paving system was in need of repair along with installation of a horizontal drainage system between the walking surface and the garage structure to protect these improvements. Large expanses of pavement were redesigned with planters and new lawn areas to 'scale down' the spaces and provide added green space for employees and visitors. Large granite blocks and additional seating were incorporated carefully following the existing patterns and edges of the original design. The High Street plaza also provides a more direct pedestrian route to the Plaza III entrance with a new stairway and paving that fits seamlessly with the existing plaza.

BURNHAM SQUARE, ARENA DISTRICT, COLUMBUS, OH

CLIENT/OWNER: NATIONWIDE REALTY INVESTORS

One hundred condominiums wrap around a grand, linear urban courtyard to create Burnham Square, an exciting urban neighborhood adjacent to the Arena District. Tightly woven into the fabric of the city, the courtyard provides an oasis within this active mixed-use district of residential, office, and retail uses. With both street-level townhouses and urban flats, all residential units provide views of the private courtyard or a view of the McFerson Commons public park. The courtyard and urban piazza shape a green roof that covers a corridor between two underground parking facilities. In addition, the site design hides an above-grade parking structure which is fully screened by the western building. Materials include reclaimed clay brick pavers for streets and plazas and an elegant English Oak tree alley.

LEGATARCHITECTS

MUNICIPAL CLIENTS

"The Village of Barrington, Public Works Department thanks you and your team for working with us on the critical and sensitive Facilities Study. You and your staff's experience and working knowledge of Public Works Facilities opened the door for us in multiple ways. The biggest lesson we learned is that a project of this size with a limited budget can become a reality. Communication with you and your staff made dealing with this project comfortable for all involved. Questions and answers were addressed professionally and timely, and our staff was always treated with respect throughout the entire process. It was a motivating experience working with a group of people focused and dedicated to insuring we meet our goals. I would recommend Legat Architects for any future Village of Barrington facility projects, and any other municipalities requiring an accomplished reliable Architect."

- Mark Werksman, Retired Director of Public Works, Village of Barrington

As a planning, architecture, and interior design firm, Legat has worked with over 30 municipalities across the Midwest. Projects range from planning and studies to new construction, additions, and renovations for facilities including public works, public safety, transportation, city/village halls, and community/recreation. A select list of experience follows.

Buffalo Grove Park District
- Community Arts Center Master Plan and Retrofit
- Emmerich Park Community Center Addition and Renovation
- Willow Stream Bath House and Pool Renovation

City of Berwyn
- Public Safety Center

City of Davenport, Iowa
- City Hall Renovation

City of Elmhurst
- Feasibility Study and Space Needs Analysis
- Public Works/Vehicle Storage and Maintenance Facility

City of McHenry
- Municipal Center and Police Station

City of Moline
- Moline Multimodal Station

City of Rockford/Rockford Mass Transit District
- Rockford Multimodal Transportation Center

City of Rolling Meadows
- Municipal Center Renovation

City of Upper Arlington, Ohio
- Municipal Services Assessment and Master Plan
- Police Department Renovation
- City Department Offices Renovation

City of Waukegan
- Public Works Center
- City Hall Space Needs Analysis
- New City Hall

City of Woodstock
- Public Works Department Facility Assessment/ Space Needs Analysis

City of Zion
- Public Works Facility - Phase I

Dorr Township
- Township Office/Highway Garage Prereferendum Services

Illinois Department of Transportation
- Carlinville High-Speed Rail Station
- Dwight High-Speed Rail Station
- Pontiac Train Station

Illinois Tollway
- Task Order Planning and Design Services (Ongoing)

McHenry County
- Government Center Addition and Renovation

Metra
- 59th and 60th Street Station Renewal, Chicago
- 80th Avenue Train Station, Tinley Park
- Hazel Crest Station Rehabilitation
- Oak Park Avenue Train Station
- Prairie Crossing Train Station Warming House
- Ravinia Historic Station Renovation
- Waukegan Station Rehabilitation
- Wheaton Train Station Expansion and Renovation

Naperville Park District
- Central Maintenance Facility

Pace Suburban Bus Service
- Fox Valley Division Maintenance and Storage Facility, North Aurora

Riverside Pubic Works
- Public Works/Vehicle Storage Maintenance Facility

Village of Addison
- Feasibility Study and Space Needs Analysis
- Public Works/Vehicle Storage and Maintenance Facility

Village of Algonquin
- Public Works Facility Space Needs Analysis
- Public Works/Vehicle Storage and Maintenance Facility

Village of Arlington Heights
- Public Works Facility Space Needs Analysis
- Public Works Facility Expansion and Renovation
- Arlington Heights Police Station

Village of Barrington
- Public Works Facility Feasibility Study

Village of Burr Ridge
- Public Works Facility Needs Assessment (Ongoing)

Village of Cary
- Public Works Department Space Needs Analysis
- Public Works Facility

Village of Clarendon Hills
- Clarendon Hills Train Station

Village of Deerfield
- Public Works Facility

Village of Hoffman Estates
- Public Works Center
- Vehicle Maintenance Facility

Village of Huntley
- Municipal Complex (Public Works, Village Hall, and Police Station)

Village of LaGrange
- Stone Avenue Station Restoration

Village of LaGrange Park
- Public Works Department Grant Application Study
- Public Works Department Cost Estimate

Village of Libertyville
- Public Works Facility Addition and Alterations

Village of Lisle
- Public Works Facility Feasibility Study

Village of Mahomet
- Public Works Facility Space Needs Analysis
- Public Works Facility Adaptive Reuse

Village of North Aurora
- Public Works Feasibility Study

Village of Northbrook
- Village Facilities Assessment

Village of Oswego
- Public Works Vehicle Storage and Maintenance Facility

Village of Riverside
- Public Works Facility Assessment/ Space Needs Verification
- Public Works/Vehicle Storage and Maintenance Facility

3. PAST PERFORMANCE

3A. QUALITY CONTROL

Quality assurance/quality control (QA/QC) is the responsibility of every Fishbeck team member. We constantly monitor and evaluate project aspects to ensure industry standards are met and ensure quality plans and specifications.

Fishbeck uses a robust internal QA/QC process during a project. Our project manager, Josh Rozeboom, has extensive experience managing large/complex, multi-discipline projects. Josh is responsible for scheduling, coordinating, and documenting the QA/QC review process. He will:

- Generate a schedule for QA/QC activities and milestones in the preliminary engineering/study phase.
- Select a suitable constructability reviewer and ensure a budget has been set.
- Schedule production and distribution of progress sets to the design team at the 95 percent completion level of each phase. This step ensures all disciplines are coordinating before formal QA/QC reviews.
- Ensure reviews are in accordance with the project schedule.
- Review, coordinate, and discuss comments generated from the reviews.

Fishbeck also uses our staff to form peer reviews of all critical decisions. A group of discipline-specific senior staff, who have not had involvement in the project, review documents with fresh eyes to ensure overall design product quality and consistency relative to project goals, constraints, and industry standards.

Our QA/QC process allows us to anticipate issues before they turn into problems, and discuss them with you, ensuring any project we work on together stays on track and on budget.

3B. COST AND SCHEDULE CONTROL MEASURES

Our firm uses a computer-based project control system. This system helps us track the progress and schedule of a project allowing us to know exactly, at any given time, from preliminary design to construction documents, the manpower associated with a project and the critical path needed for completion. This system aids the project manager in providing proper staffing in sufficient quantity to maintain a project on schedule and within budget. Programmed into the specific tasks are allowances for critical checks and quality control reviews. It is the project manager's responsibility to continually maintain the project control system and ensure the client a quality design. Our schedule and construction cost monitoring experience on previous projects is demonstrated as follows:

PROJECT NAME	TEAM ESTIMATE	PROJECT COST	SCHEDULE
City of Ann Arbor Parking Structure Repairs (6 structures)	$1,190,155	$1,166,038	On Time
Toledo-Lucas County Port Authority Parking Structure Repairs (2 structures)	$391,690	$361,637	On Time
City of Plymouth Central Parking Structure Repairs	$144,360	$156,962	On Time
The Ohio State University Ohio Union (MEP)	$26,992,760	$26,170,720	On Time
The Ohio State University Canfield Residence Hall	$1,700,000	$1,500,000	On Time
University of Cincinnati French West Hall HVAC Upgrade	$5,674,000	$5,100,000	On Time
Xavier University Buenger Hall	$2,575,000	$2,700,000	On Time

3C. COMMUNICATION SKILLS

Communication is Key – It is the primary tool Fishbeck will use to deliver your project on schedule and within budget.

Fishbeck provides an atmosphere supportive of open communication between project managers and clients to ensure excellent service. Our project managers provide overall project direction and act as the primary contact for our clients. They participate in periodic meetings with clients to discuss work progress and related items to ensure concerns are addressed early on and they provide updated schedules and work plans if external factors impact the project.

Our ability to commit our project manager and other key staff is crucial to your project's success. It encourages clarity of communications among the entire team and helps ensure the design intent is properly understood and implemented into the finished documents and ultimately construction. Our firm's capacity allows us to ensure your project will receive the necessary technical support staff to meet project specific schedules and deadlines.

Our experience has shown mutual communication results in client participation and leads to successful projects. Both our project manager, Josh Rozeboom, and our public/media relations specialist, Jenny Waugh, are excellent communicators and have developed positive relationships with the clients and agencies they serve.

3d. References

Our team is committed to delivering exceptional service, outstanding technical quality, and establishing long-term client relationships. **Repeat services to our clients is our ultimate measurement of client satisfaction and quality of our work – approximately 90 percent of our annual revenue is derived from repeat clients.** We encourage you to contact the below clients or any of the references listed within our project histories for their impressions of our services.

REFERENCE #1

AGENCY / CITY NAME:	City of Grand Rapids
DEPARTMENT:	Engineering
CONTACT PERSON:	Tim Burkman, PE
TELEPHONE:	616.456.3060
EMAIL ADDRESS:	tburkman@grand-rapids.mi.us
DOLLAR VALUE OF AGREEMENT:	n/a
DATE RANGE OF AGREEMENT:	2020-2023
NATURE OF WORK PERFORMED:	Architectural, engineering, and inspection services including parking structures, as-needed for three years.

REFERENCE #2

AGENCY / CITY NAME:	Gerald R. Ford International Airport Authority
DEPARTMENT:	Engineering
CONTACT PERSON:	Casey Ries, PE
TELEPHONE:	616.233.6040
EMAIL ADDRESS:	cries@grr.org
DOLLAR VALUE OF AGREEMENT:	$4.7 million
DATE RANGE OF AGREEMENT:	2019-present
NATURE OF WORK PERFORMED:	Planing and design of public parking and rental car facilities.

REFERENCE #3

AGENCY / CITY NAME:	City of Columbus, Ohio
DEPARTMENT:	Recreation and Parks
CONTACT PERSON:	James Miller, PE
TELEPHONE:	614.645.8941
EMAIL ADDRESS:	jcmiller@columbus.gov
DOLLAR VALUE OF AGREEMENT:	$40,000
DATE RANGE OF AGREEMENT:	Current
NATURE OF WORK PERFORMED:	Overall assessment and integration of controls for Recreation and Parks facilities (42 buildings)