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DESIGN

Request for Proposals (RFP) Cover Page

Issue Date: September 1, 2020

Title: **#2020-014 Architecture and Engineering Services for the Chestnut Street Multimodal Station & Shared Services Facility & City of Oxford Passenger Rail Platform**

Issuing & Using Agency:

Multimodal Station & Shared Service Facility:	Passenger Rail Platform:
Butler County Regional Transit Authority Attn: Procurement 3045 Moser Court Hamilton, OH 45011	City of Oxford Attn: Michael Dreisbach 15 S. College Ave. Oxford, OH 45056

Proposals for Furnishing the Product(s)/Service(s) Described Herein Will Be Received Until:

October 19, 2020 3:00 PM (EST)

All Inquiries for Information should be directed to address listed above or purchasing@butlercountyrta.com

IF PROPOSALS ARE MAILED OR HAND DELIVERED,

SEND DIRECTLY TO:

BCRTA Procurement, 3045 Moser Court., Hamilton, OH 45011

The Reference Number, Date and Time of proposal submission deadline, as reflected above, must clearly appear on the face of the returned proposal package.

In Compliance With This Request for Proposals And To All Terms, Conditions, and Requirements Imposed Therein and Hereby Incorporated By Reference, The Undersigned Offers And Agrees To Furnish The Goods/Services Described Herein In Accordance With The Attached Signed Proposal Or As Mutually Agreed Upon By Subsequent Negotiation.

Name and Address of Firm:

emersion DESIGN, LLC.

310 Culvert Street, Suite 100

Cincinnati, OH Zip Code: *45202*

Telephone: (*513*) *841-9100*

Fax Number: (*513*) *841-9222*

Date: *10/19/2020*

By: _____
(Signature in Ink)

Name: *Timothy M. Wiley, RA, NCARB, LEED AP*

Title: *Project Manager*
(Please Print)

FEI/FIN Number: *26-0495991*

E-Mail Address:

tim.wiley@emersiondesign.com

DISADVANTAGED BUSINESS ENTERPRISE (DBE): ( ) YES (*X*) NO

#2020-014 Architecture and Engineering Services for the Chestnut Street Multimodal Shared Services Facility & City of Oxford Passenger Rail Platform

19 October 2020

emersion DESIGN

Butler County RTA
Attn: Procurement
3045 Moser Court
Hamilton, Ohio 45011

City of Oxford
Attn: Michael Dreisbach
15 S. College Ave
Oxford, Ohio 45056

RE: Statement of Qualifications for the Multimodal Station & Shared Service Facility, and Passenger Rail Platform

Dear Mr. Dreisbach, et al:

For the Butler County Regional Transit Authority and the City of Oxford, emersion DESIGN and IBI Group have teamed up to provide you with the best of both worlds – **National Transit Design Expertise** as well as a **Local Presence** for the execution of your multimodal station project. We hope that the expertise and innovation you'll see within this package reinforces that expertise, and convinces you, and the all the stakeholders, that we are the perfect team to execute this project. Our combined team brings a unique **leading-design and sustainability-focused** skillset, typically not seen in the public transit market. This unique skillset sets us apart for the delivery of the **highest performing, best value** for Butler County and the City of Oxford.

While you review our qualifications please consider the following regarding our team's expertise:

- We understand the importance of having a cohesive design and an experienced skillful team. emersion DESIGN and IBI Group have collectively partnered with hundreds of Government entities all over the country, and IBI Group specifically has a portfolio of **well over 100 transit stations for more than 40 different clients** .
- Most design firms try to beat energy code minimums by 20%, but **our projects outperform the average vacant building by 20%**. This expertise will set the foundation for your multimodal station to perform at the highest level. For energy efficiency, it all starts with the appropriate site selection and building orientation. For example, we guided the City of Cincinnati through the site selection process of their District 3 HQ and with our strategic building orientation and design, the facility is now tracking **energy net-positive**. The Station is a fully operational 24/7/365 facility. **Energy Efficiency and Sustainable Design is our team's proven expertise.**
- Healthy environments are critical in 21st Century design, especially for when it comes to public transit and maintenance facilities. Our team has a deep understanding of what this means and will bring that expertise to your multimodal station. **We will incorporate specific design criteria to mitigate potential hazardous health issues.** Criteria like air locks, transition zones and strategic positive/negative pressure zones, etc. will ensure your most critical assets - your citizens - remain healthy. We are also credentialed in healthy building design by employing WELL APs on staff which is the **nation's foremost authority on healthy building environments**.

Thank you for the opportunity to bring our extensive value and stewardship to both the City and County. The emersion DESIGN / IBI Group team looks forward to discussing this exciting project in more depth with you and your team.

Sincerely,

Tim Wiley, RA, LEED AP
Project Manager | emersion DESIGN
tim.wiley@emersiondesign.com
513.841.3919
***emersion* DESIGN** LLC | 310 Culvert Street Suite 100 | Cincinnati, OH 45202

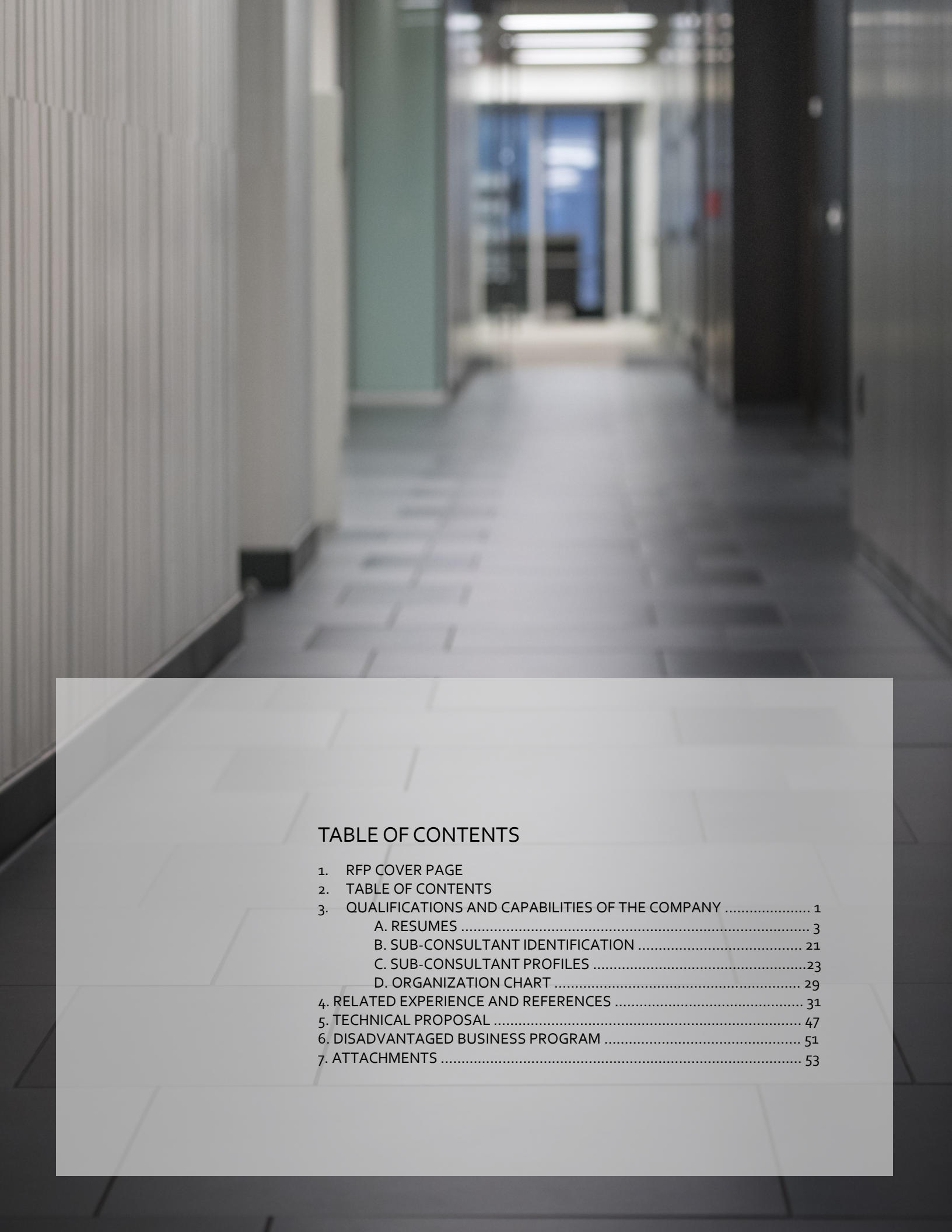


TABLE OF CONTENTS

3. Qualifications & Capabilities of Company

FIRM INTRODUCTION: emersion DESIGN and IBI Group

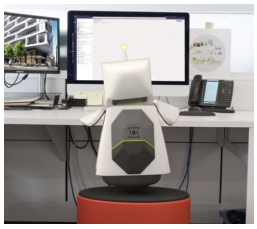
We *Advance Clients Who Advance Society*. Our firm has 37 professionals providing design services to local, regional and national clients that contribute to their local community through their mission, people and the work they do. emersion DESIGN, founded in 2007 in Cincinnati, OH, is an architecture, structural engineering, interior design and planning services company known for leadership in thoughtful design & sustainable, healthy, cost effective solutions. Our strength in delivering successful results for challenging projects is founded on a team that is organized and managed utilizing an integrated design approach focused on early goals, objectives and issue identification.

We believe that building aesthetics should be beautiful in a way that embraces an efficient, functional building with a positive reflection of who our client is and the community context. We work with our clients in an engaging interactive experience to explore opportunities with a highly sustainable, thoughtful design that reinforces our clients' strategic purpose. Our goal is to leverage benefit for our clients and their constituents through an interactive, integrative design process that is value solution oriented. **We recognize the importance of being a steward of your time and money.**

Our project experience has been primarily focused on work throughout the eastern half of the United States. Individual projects include a broad variety of building types with **special emphasis on complex projects. Individual projects range in size from under $100,000 to $65 million.**

CONTACT: Address: 310 Culvert Street, Cincinnati, OH 45202 | Tim Wiley | (513) 254-9821 | Project Manager & Main Point of Contact

IBI Group Inc. is defining the cities of tomorrow



From high-rises to industrial buildings, schools to state-of-the-art hospitals, transit stations to highways, airports to toll systems, bike lanes to parks, we design every aspect of truly integrated cities.

Our collaborative approach focuses on future-forward solutions. *We're bridging the gap between design and technology, unlocking new potential in data-driven environments*.

We believe in cities built upon intelligent systems, sustainable buildings, efficient infrastructure, and the human touch.

CONTACT: Address: 23 Triangle Park Drive, Cincinnati OH 45246 | Mike Murray | (513) 942-3141 | Associate Director

EXECUTIVE SUMMARY

As mentioned in the Cover Letter, we believe there are 3 overarching concerns with this project that need to be addressed to lower the team's risk in time, money, staff/ public perception.

Throughout this package, you will see a range of examples and our leadership/ expertise in the following areas:

+ **Cohesive design / Skillful team**
+ **Incorporating Sustainability Measures**
+ **21st Century Solutions**

If done right, these 3 themes reinforce and support each other. An Early Design Phase will establish a thorough Owner-driven set of Project Requirements which become the framework for the rest of the design and construction phases. This helps mitigate risks and limits unknowns, while setting the expectations and budget. It also helps the design team establish a game plan.

Our staff and subconsultant partner selection was predicated on delivering on these 3 themes. Our process and fee structure is developed to get the most for you, this project and the tax payers.

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Tim Wiley, RA, NCARB, LEED AP

Project Manager: *Tim's 18 years of experience in architecture includes an emphasis on designing and managing municipal facilities. Tim has managed projects ranging from $3M to over $50M. He is a registered architect (RA) and a LEED Accredited Professional committed to thoughtful sustainable design practices.*

Tim leads our Civic Market group and has managed a wide range of municipal project types—administration buildings, fire stations, fire training facilities, police stations, and maintenance facilities. His experience ranges from leading small renovations to major new construction projects. His attention to detail and communication with his project team, clients and community result in successful projects that are thoughtful, resilient, and energy efficient.

Role: *Tim will be the project manager and will be your Primary Point Of Contact. He will ensure that your project stays on schedule and on budget.*

RELEVANT PROJECTS

WEST CHESTER TOWNSHIP | CINCINNATI, OH
Fire Station 73
MIAMI TOWNSHIP | MIAMISBURG, OH
Police Station & Administrative Building Renovation
COLERAIN TOWNSHIP | COLERAIN, OH
DEA Strike Force Renovation Study
WRIGHT-PATTERSON AIR FORCE BASE
Gate 26A Relocation
Fire Crash Rescue Station
CITY OF TRENTON
Trenton Fire Station Review
ROANOKE, VA*
Fire Training Center Master Plan
Police Academy Addition
TOWN OF PLAINFELD*
Fire Territory Headquarters
Fire Station 121 & 122
911 Dispatch Center
Police Station Renovation & Relocation
CITY OF WESTWOOD, MA*
Police Station
OSHTEMO TOWNSHIP*
Fire & Police Station Renovation/Master Plan

CREDENTIALS AND QUALIFICATIONS

+ Registered Architect | OH
+ National Council of Architectural Registration Boards
+ LEED Accredited Professional

EDUCATIONAL BACKGROUND

+ Masters of Architecture, Clemson University
+ Bachelor of Fine Arts/Architecture, Miami University Oxford

SELECT ENERGY EFFICIENT PROJECTS

+ Miami University Western Residence Hall*
+ Princeton Middle & High School*
+ Miami University Northern Residence Hall*
+ Enquirer Building Redevelopment*
+ DeSales Plaza Apartments*

* Project is referenced only for the purpose of demonstrating prior individual professional experience. emersion DESIGN LLC takes no credit for this project as work having been performed by emersion DESIGN LLC.

Plainfield Fire Station #122

Plainfield Fire Station Apparatus Bay

IBI GROUP

RESUME

J. Ola Ferm, NCARB

Design Director: *Ola has over 26 years of industry experience managing projects in positions of Lead Architect, Principle-in-Charge and Project Director. He has a diverse background with a wide array of project experience with a niche in Vehicular/Transit Maintenance and Operational facilities. He was the Lead Architect/ Principal –in-Charge of the GoRaleigh Transit Operations Center which received a LEED Platinum rating and also received the APWA Project of the year recognition as well as the Sir Walter Raleigh Award for Community Appearance.*

Role: *As Senior Project Manager, Ola will oversee and assist with the project management. He will monitor the project to ensure policies, processes and best practices are in place and followed closely. He will work closely with the Project Manager to coordinate the programming effort, direct the design effort, help establish the design schedule, and ensure the project is designed within the approved budget.*

RELEVANT PROJECTS

GORALEIGH TRANSIT OPERATIONS CENTER, RALEIGH, NC | New Transit Operations Center CNG Facility Upgrades | Electric Bus Charging Infrastructure

ORANGE COUNTY TRANSIT AUTHORITY, ORANGE, CA | hydrogen (fuel cell) bus fleet and required changes in building infrastructure

VALLEY TRANSPORTATION AUTHORITY, SAN JOSE, CA | Three separate Bus Transit Operation and Maintenance Centers, and one Light Rail Operations and Maintenance Center

ANAHEIM TRANSIT NETWORK & ANAHEIM TRANSIT NETWORK | ANAHEIM, CA | Administration and Maintenance and Operations Center

GRAND RIVER TRANSIT, WATERLOO, ON | New Transit Operations and Maintenance Facility

CITY OF HAMILTON, HAMILTON, ON | Transit Maintenance storage facility

INFRASTRUCTURE ONTARIO, TORONTO, ON | Yonge North Subway Extension

WAKE COUNTY PUBLIC SCHOOLS, CARY, NC | Piney Plains Bus Transportation Facility Assessment | Middle Creek Bus Transportation Facility Assessment

METROPOLITAN TULSA TRANSIT AUTHORITY, TULSA, OK | On Call Planning Technology & Management Analysis Services

CREDENTIALS AND QUALIFICATIONS

+ National Council Architectural Registration Boards (NCARB)

EDUCATIONAL BACKGROUND

+ Bachelor of Architecture, North Carolina State University, 2002
+ Bachelor of Environmental Studies, Environmental Design in Architecture, North Carolina State University, 1994

EMPLOYMENT HISTORY

+ 4 years with IBI Group
+ 26 total years experience

GoRaleigh Transit Operations Center, Raleigh, NC

Ola hosting a design Charette

IBI GROUP

RESUME

Randy J. Knapick, AICP

Transportation Planner: *Randy helps communities and transit agencies address the opportunities and challenges of our evolving mobility environment through technology, infrastructure, and operational strategies. Randy brings a perspective that spans IBI Group's three core disciplines—Infrastructure, Buildings, and Intelligence—to develop integrated approaches to Bus Rapid Transit. Randy has a proven ability to work with multiple disciplines on complex and inter-related technical, policy, and design issues to maximize agency and customer benefits. Randy brings experience with multi-modal transit planning, transit centers, Amtrak/passenger rail, pupil transportation, community outreach, and transit operations.*

Role: *Randy brings multi-modal transit, Amtrak passenger rail, park and ride, and facilities experience to develop an integrated design solution that meets customer, agency, and railroad expectations. Randy will work alongside the architectural and engineering team to ensure that functional, operational, and capacity needs are considered throughout the design process*

RELEVANT PROJECTS

PROSPER PORTLAND, PORTLAND, OR | Portland Union Station Revitalization and Multi-Modal Transportation Assessment

SPOKANE TRANSIT AUTHORITY, SPOKANE, WA | Moran Station Park & Ride Design and Battery-Electric Bus Charging

PIONEER VALLEY TRANSIT AUTHORITY, HOLYOKE, MA | Holyoke Historic Multimodal Transportation Center Feasibility Study and Master Plan

MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION, MONTGOMERY COUNTY, MD | MD355 BRT Comprehensive Design and Operations Review

WEST LINN-WILSONVILLE SCHOOL DISTRICT, OR | Student Bus Transportation Performance Review

SYRACUSE METROPOLITAN TRANSPORTATION COUNCIL, SYRACUSE, NY | SMART1 Bus Rapid Transit Alternatives Analysis and Implementation Strategy

REGIONAL TRANSIT SERVICE, ROCHESTER, NY | Reimagine RTS – Community Mobility Zone Strategy

DEPARTMENT OF CITY PLANNING, PITTSBURGH, PA | City of Pittsburgh Master Bicycle Plan,

SOUND TRANSIT | Sound Transit Central/East Corridor High Capacity Transit Study, Seattle, WA | Sound Transit I-405/SR522 Battery-Electric Bus Rapid Transit Technology and Operations

BANGOR AREA COMPREHENSIVE TRANSPORTATION SYSTEM (BACTS), ORONO, ME | University of Maine Transportation Study

SPOKANE TRANSIT AUTHORITY, SPOKANE, WA | Spokane Central City Line Battery-Electric BRT Implementation

CAPITAL DISTRICT TRANSPORTATION AUTHORITY, ALBANY, NY | Washington/Western and River Corridors Bus Rapid Transit Projects

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY, BOSTON, MA | MBTA Silver Line Phase BRT Technology, Operations, and Design Services

CREDENTIALS AND QUALIFICATIONS

+ American Institute of Certified Planners (AICP), Certificate #018598

EDUCATIONAL BACKGROUND

+ M.S. Transportation, Massachusetts Institute of Technology (USDOT Fellowship Recipient)
+ B.S. (Civil and Environmental Engineering/ Certificate in Transportation), University of Pittsburgh
+ B.A. (B.Phil. Urban Planning and Design), University of Pittsburgh

EMPLOYMENT HISTORY

+ 21 years with IBI Group
+ 22 total years experience

Portland Union Station, Portland, OR

IBI GROUP

RESUME

Mike Murray, PE

Civil Engineer: ***Mike has a strong background in design, engineering and construction project management of roadway, highway, and bridge replacement plans for state, county and city projects. He is knowledgeable in preparing and coordinating plans with DOT and other municipalities, as well as preparing scopes and project budgets. For two years Mr. Murray served as the Assistant City Engineer for the City of Centerville. During this time he was appointed to the position of City Engineer.***

Mike's responsibilities have included design, design review, bid document preparation, project management and construction administration for a variety of roadway and bridge improvement projects. Numerous projects have included new roadway design, roadway widening and resurfacing, ADA compliance upgrades, bikeway design, bridge replacement & rehabilitation, pavement markings, design of new curbs, gutters, sidewalks, storm drainage, utility relocations and extensions, traffic signal upgrades, culvert extensions, ditches, grading, design of median barriers and lighting design

Role: *Mike's main responsibilities include all phases of the site development process including site layout, grading design, utility design and plan/specification preparation.*

RELEVANT PROJECTS

Construction Administration & Inspection

CITY OF CLAYTON | City Engineer

CITY OF TIPP CITY | City Engineer

CITY OF BELLBROOK | City Engineer

CITY OF MORAINE | MOT-741-8.66

LIBERTY COMMUNITY AUTHORITY | Liberty Center Development

HAMILTON COUNTY TID | Anderson Township Park-n-Ride | Rybolt Road Improvements

BUTLER COUNTY TID | BUT-747-4.25 Widening | BUT-TR21-0.37

Roadway/Structures

CITY OF DUBLIN | Hyland Croy - Riviera Improvements

CITY OF MASON | Snider Road Phase

CITY OF LEBANON | Orchard Avenue Improvements | East Warren Street Improvements

CITY OF CINCINNATI | Red Bank Road 2A | Madison Road Widening |HAM-Northside Arterial

BUTLER COUNTY ENGINEER | BUT-747-3.10 Widening | Beckett Road Improvements | Tylersville Road Phase I-III Improvements

BUTLER COUNTY TID | S.R. 4 Bypass Widening

CITY OF KETTERING | East Dorothy Lane (MOT-CR 37-1.34) and Woodman Drive Improvements | Wilmington Pike Reconstruction | Far Hills Avenue Improvements

ROSS COUNTY ENGINEER | U.S. 50 Connector

HAMILTON COUNTY ENGINEER | John Gray Road Bridge Improvements

WARREN COUNTY ENGINEER | Mason Road Improvements

ODOT DISTRICT 7 | General Engineering Services Contract

J. FERGUS, INC.| Advance Auto Parts, 2 Locations

CREDENTIALS AND QUALIFICATIONS

+ Professional Engineer:

  State of Ohio - #65118
  State of Wisconsin - #40844-6
  State of Indiana - #10200416
  State of Michigan - #6201057067
  Commonwealth of Kentucky - #24933
  State of Minnesota - #48095
  State of Georgia - #043594
  State of South Carolina - #36172
  State of Tennessee - #122346
  State of Texas - #136271
  State of Florida - #85848
  State of North Carolina - #47265
  State of Arkansas - #19741

EDUCATIONAL BACKGROUND

+ Bachelor of Science. Civil Engineering, Ohio Northern University, 1995

+ Other Education/Training:

  ODOT:
    Maintenance of Traffic
    Signing & Markings
    Training Seminar for Summer Employees
    PSMJ: Project Management Boot Camp

  4 Hour Course in Construction Observation from Columbus State Community College

  8 Hour Course in Construction Administration from Columbus State Community College

EMPLOYMENT HISTORY

+ 19 years with IBI Group

+ 25 total years experience

Amy Green, NCIDQ

Interior Designer: *Amy's design experience includes corporate office, non-profit, laboratory, hospitality, K-12, and government facilities. She's working on several projects at the Cincinnati Art Museum, Bethany School's new 3-8 building, and Muntz Hall renovation at UC Blue Ash. A few of her prestigious completed projects as lead interior designer: the Longworth Wing at Cincinnati Art Museum, the City of Cincinnati District 3 Police Headquarters, the Cincinnati Art Museum Lobby Renovation, Cincinnati Art Museum Rosenthal Education Center, St. Timothy Episcopal Church renovation, and the Living Arrangements for the Developmentally Disabled (LADD) administrative building addition. Amy is also enrolled in a whole body alignment certification program, her field of study emphasizes designing for whole body health and increased movement. These experiences have led to a deep understanding of the quality of space at a wide range of scale and economy.*

RELEVANT PROJECTS

CITY OF CINCINNATI, OH
Cincinnati District 3 Police Station
Centennial II and City Hall Utilization Study
WEST CHESTER TOWNSHIP | CINCINNATI, OH
Fire Station 73
WRIGHT-PATTERSON AIR FORCE BASE | DAYTON, OH
Fire Crash Rescue Station
Security Forces Headquarters
Gate 26A Relocation
CINCINNATI ART MUSEUM | CINCINNATI, OH
Longworth Hall
Schmiddlapp Gallery
BETHANY SCHOOLS | CINCINNATI, OH
New Net Zero Energy School Building
CHATFIELD COLLEGE | CINCINNATI, OH
Over-the-Rhine Campus Renovation
AMERICAN RED CROSS | CINCINNATI, OH
Cincinnati Chapter Headquarters
LADD | CINCINNATI OHIO
Building Renovation

Role: *Amy will be active in the program verification phase and key aspects of the design process. She will bridge between the design and the technical aspects of the interior design, including space planning, material selections, healthy building design, FFE selections and graphics.*

CREDENTIALS AND QUALIFICATIONS

+ National Council for Interior Design Qualification

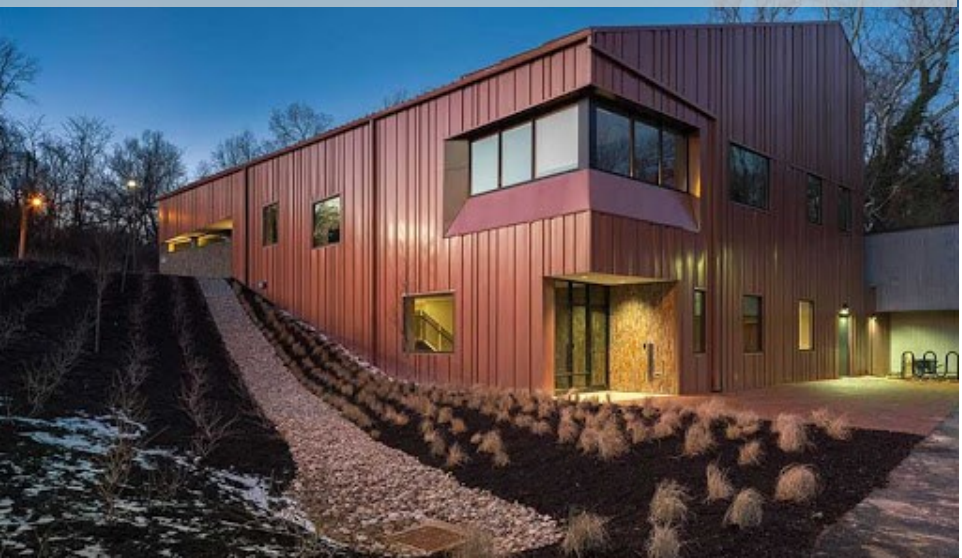
EDUCATIONAL BACKGROUND

+ Bachelor of Interior Design, University of Cincinnati

EMPLOYMENT HISTORY

+ 11 years with emersion DESIGN
+ 11 total years experience

LADD Cincinnati



Cincinnati Police District 3 Headquarters

Rick Fussner, RA

Architect: *Rick has over 17 years of professional experience as an architectural designer. His professional experience has involved the design and project documentation across several markets including, residential, retail, civic, federal and commercial project types. He received his Master of Architecture and Master of Urban Design from the University of Colorado. His great attention to detail and desire to constantly improve himself demonstrate that he is a consistent and valuable team member.*

Role: *Rick will be responsible for assisting program validation, and designing a facility to help those goals be realized. Rick will be actively engaged from site analysis through the various design phases.*

RELEVANT PROJECTS

WEST CHESTER TOWNSHIP | CINCINNATI, OH

Fire Station 73

US ARMY RESERVES | BELLEFONTE, PA

ARC Vehicle Maintenance Shop

CITY OF PLAINFIELD | PLAINFIELD, IN*

Fire Station #122, #121 & HQ

WRIGHT-PATTERSON AFB | DAYTON, OH

Fire–Crash Rescue Station

Renovate Survival Equipment Shop, Building 34035

Hangar 6 Repair & Modernization

B-1238 Reroof

Exterior Building Renovations & Repairs

445th Survival Equip B-35 Renovation

EDUCATIONAL BACKGROUND

+ Masters of Architecture, University of Colorado
+ Masters of Urban Design, University of Colorado
+ Bachelor of Fine Arts/Architecture, Miami University Oxford

EMPLOYMENT HISTORY

+ 2018-Present emersion DESIGN
+ 2011-2018 CR architecture + design
+ 2010 Mason Architecture & Design
+ 2005-2009 Bothwell Davis George Architects

* Project is referenced only for the purpose of demonstrating prior individual professional experience. emersion DESIGN LLC takes no credit for this project as work having been performed by emersion DESIGN LLC.

Plainfield Fire Station #122

Plainfield Fire Station & Headquarters Campus

Steve Ricci, PE, LEED AP

Structural Engineer: *Steve has over 12 years experience as a Structural Designer/Engineer and has done projects across the United States. He has worked on projects including government, retail, schools, hospitals, and restoration of existing structures. The complexity of his projects has ranged from typical, box warehouses, to two-story office buildings, and even the design of a 20 ton missile base. With his concentrated experience on government projects, Steve has gained vast knowledge of strict agency requirements, such as the AT/FP criteria for such groups as the US Army Corps of Engineers and US Navy. Additionally, Steve is a member of numerous structural engineering organizations, which allows for continued education and knowledge, in order to provide the required analysis/ design of projects for the future.*

Role: *Steve will provide structural engineering services and will work with the design team to ensure cost effective solutions.*

RELEVANT PROJECTS

CITY OF CINCINNATI
Cincinnati District 3 Police Station
Fire Station #29 Renovation
WEST CHESTER TOWNSHIP | CINCINNATI, OH
Fire Station 73
WRIGHT-PATTERSON AIR FORCE BASE
Advanced Power & Thermal Research Laboratory
Student Activity Center
Information Technology Complex
INVENT Research Facility
Optics Laboratory Renovation
AMERICAN RED CROSS
Cincinnati Chapter Headquarters
OHIO VETERANS HOME
Safety Renovation
Multi-purpose Addition

CREDENTIALS AND QUALIFICATIONS

+ Registered Professional Engineer in 3 States, including Ohio
+ LEED Accredited Professional
+ American Institute of Steel Construction Member
+ American Concrete Institute Member
+ American Institute of Civil Engineers Member

EDUCATIONAL BACKGROUND

+ Master of Structural Engineering, University of Cincinnati
+ Bachelor of Civil Engineering, University of Cincinnati

EMPLOYMENT HISTORY

+ 10 years with emersion DESIGN
+ 13 total years experience

District 3 Police Station

District 3 Police Station

Chad Edwards, RA, NCARB, LEED AP BD+C

Urban Planner & Sustainability Consultant:

Chad is an architect, urban designer and eco-consultant. As a lead designer and sustainability consultant, Chad focuses on client-specific designs that become strategic assets for the client and end users. His work has garnered design awards from the AIA, IIDA, SEGD and the USGBC. Chad is an adjunct professor at Cincinnati State and the University of Cincinnati, where he also volunteers as a guest design critic. Chad has worked on 10 Net Zero Energy and 9 Net Zero Energy Ready projects. his active promotion of urban and sustainable principles has garnered speaking engagements at symposia such as the Cities Alive National Conference, GreenBuild and The International Education Summit. Chad has been invited to speak to the Governor's office and the US House and Senate on environmental issues.

Role: Chad will collaborate with the client and design team to develop client-centric sustainability goals. He will work with the design team to ensure goal implementation.

RELEVANT PROJECTS

CITY OF CINCINNATI
Cincinnati District 3 Police Station
CINCINNATI STATE TECHNICAL & COMMUNITY COLLEGE
Sustainability Master Plan
Building Assessments
Grant Application
Campus Concept
METROPOLITAN SEWER DISTRICT
Lick Run Master Plan w/ HumanNature
AMERICAN RED CROSS
Cincinnati Chapter Headquarters
MELINK CORPORATION
Net-Zero Energy Renovations
Roof Study
Battery Storage Facility
CHATFELD COLLEGE
Over-the-Rhine Campus Renovation
Rendering & Energy Models
Historic Tax Credit Application

CREDENTIALS AND QUALIFICATIONS

+ Registered Architect | OH
+ LEED Accredited Professional, Building Design and Construction
+ Over 25 years of professional experience

EDUCATIONAL BACKGROUND

+ Bachelor of Architecture, University of Cincinnati

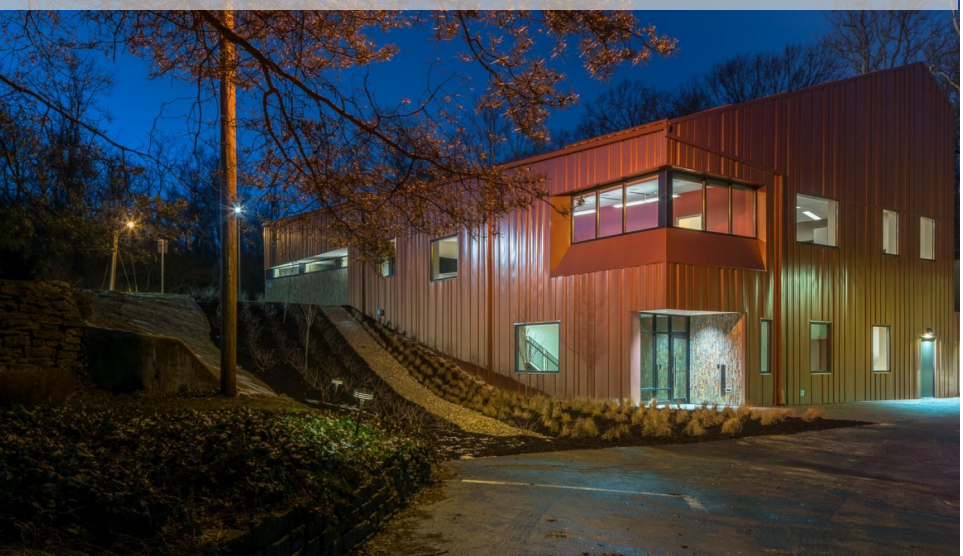
EMPLOYMENT HISTORY

+ 12 years with emersion DESIGN
+ 26 total years experience

SELECT COMMUNITY ENGAGEMENT

+ Co-Creator, Advisory Committee: Cincinnati 2030 District
+ Past President: US Green Building Council SW Ohio
+ Trustee, Past President: Green Umbrella
+ Board Member: Green Business Council

LADD Cincinnati



Bethany Schools Net Zero Building

emersion DESIGN

Yasha Ogg, LEED AP BD+C, ID+C, Fitwel Ambassador, WELL AP

Sustainability & Wellness Designer: *Yasha will provide sustainability and health oversight, to make sure that your new building is a safe place to work, as well as cost effective and sustainable .*

RELEVANT PROJECTS

WEST CHESTER TOWNSHIP FIRE STATION 73 | CINCINNATI, OH

Sustainability Consultant: This project involves the assessment of their current firehouse and design of the future station. We are helping them determine if a 5,000 sf addition is the best path forward, or building an entirely new 10,000 sf facility. The design of the $3.5M facility is taking place in 2019 with construction anticipated in 2020.

WPAFB FIRE CRASH RESCUE STATION | DAYTON, OH

Sustainability Consultant: emersion DESIGN developed a Design/Build for a new Fire/Crash rescue station at Wright-Patterson Air Force Base, Ohio. The new Fire/Crash rescue Station serves as a satellite station in support of the existing WPAFB Fire Department Station #1 (HQ) and Station #2. An adequately sized fire/crash rescue station was required to reduce current response times to the south end of the runway and to correct all deficiencies in Fire Station 2.

Resumes

CREDENTIALS AND QUALIFICATIONS

+ Registered Professional Engineer in 3 States, including Ohio
+ LEED Accredited Professional
+ Fitwel Ambassador
+ WELL Accredited Professional

EDUCATIONAL BACKGROUND

+ Bachelor of Arts in Interior Design – Ball State University 2015

EMPLOYMENT HISTORY

+ 1 year with emersion DESIGN
+ 4 total years experience

PROJECT REFERENCES

WEST CHESTER TOWNSHIP FIRE STATION 73

+ Rick Prinz, 513.759.7241

ENRICHING SPACES

+ Dawn Schwartzman, 513.851.0933

BETHANY SCHOOL

+ David Gould, 513.771.7462 ext. 102

WPAFB Fire Crash Rescue Station

Cincinnati Police Station District 3

Shannon Duffy, RA, NCARB, LEED AP

Quality Control Reviewer: *Shannon has over 40 years of experience in designing and managing projects including housing, public safety, office, retail, theater, research and hospitality. Her recent focus has been on higher education. She managed over $320M in projects at Miami University since 2013. Her university experience has included significant new construction, major renovations, small academic remodeling projects, and design standards development - always focused on serving the client and the users. Shannon has been a LEED AP since 2004 and seeks to bring sustainable solutions to every project she has worked on.*

RELEVANT PROJECTS

WEST CHESTER TOWNSHIP | CINCINNATI, OH
Fire Station 73
CINCINNATI PUBLIC RADIO | CINCINNATI, OH
Civic Campus
SUFFOLK ARMY RESERVE CENTER | SUFFOLK, VA
Vehicle Maintenance Building
CITY OF CINCINNATI
Fire Station #7*
Hamilton County Emergency Operations/911 Center*
COLERAIN TOWNSHIP
Fire Station 109*
GREENDALE, IN
Fire Station, Minor Training Components*
WILLISTON, VT
Police Station*
COLUMBUS, OH
Fire Training Center*

Quality Control Reviewer: *Shannon will provide quality control by reviewing all documents for discrepancies or errors.*

EDUCATIONAL BACKGROUND

+ Bachelor of Environmental Design, Miami University

EMPLOYMENT HISTORY

+ 1 year with emersion DESIGN
+ 40 total years experience

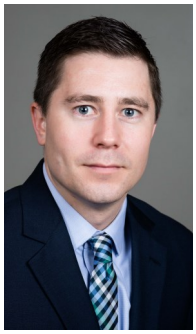
CREDENTIALS AND QUALIFICATIONS

+ Registered Architect | OH, IL
+ National Council of Architectural Registration Boards
+ LEED AP

* Project is referenced only for the purpose of demonstrating prior individual professional experience. emersion DESIGN LLC takes no credit for this project as work having been performed by emersion DESIGN LLC.

Fire Station #7 Cincinnati

Fire Station #109 Colerain Township



Colin Todd, PE, LEED AP, CEM

Mechanical Engineer: *Colin is one of AEC's Mechanical Engineers. He has more than 14 years of experience designing mechanical systems. His experience includes design of mechanical and plumbing systems for both renovation and new consultation projects. His extensive design experience also includes assisting with mechanical studies and assessments.*

MECHANICAL ENGINEER: Colin will lead the mechanical design team from a technical perspective. Using his years of experience designing mechanical systems for transportation facilities, he will help manage the consultant engineers to produce a coordinated set of construction documents.

RELEVANT PROJECTS

CENTRAL OHIO TRANSIT AUTHORITY | COLUMBUS, OH
Fields Avenue Bus Maintenance Facility
Easton Transit Center Renovations
Reynoldsburg Park and Ride
Spring Street Restroom Renovation
33 N High St 4th and 8th Floor Renovations *(COTA Headquarters)*

THE OHIO STATE UNIVERSITY | COLUMBUS, OH
Service Annex Building Study
Transportation and Traffic Management / Facilities Operations and Development Joint Facility—Service Annex Building Renovation
Stores and Receiving Renovation

COLUMBUS REGIONAL AIRPORT AUTHORITY | COLUMBUS, OH
Building Assessments

CITY OF COLUMBUS | COLUMBUS, OH
Facilities Assessment
Fire Station 16
North Market Roof Replacement
City Hall HVAC Renovation and Electrical Studies

MIFFLIN TOWNSHIP | COLUMBUS, OH
Government Center Renovation

OHIO ADJUTANT GENERAL | STATEWIDE, OH
Lima, Middletown, and Piqua Armory HVAC Renovation
Walbridge Armory HVAC Renovation

CITY OF VERMILION | VERMILION, OH
New Fire Station

CINCINNATI ART MUSEUM RENOVATIONS | CINCINNATI, OH
Cincinnati Art Museum Front Entrance

CREDENTIALS AND QUALIFICATIONS

+ Professional Engineer – Ohio
+ LEED AP
+ Certified Energy Manager

EDUCATIONAL BACKGROUND

+ Bachelor of Science, Mechanical Engineering – Virginia Tech 2005

EMPLOYMENT HISTORY

+ 10 with AEC
+ 14 total

Fields Avenue Bus Maintenance Facility, COTA, Columbus, OH

Easton Transit Center Renovation, COTA, Columbus, OH

Gavin Lim, PE, LEED AP BD+C, LC

Electrical Engineer: *Gavin has accumulated more than 13 years of experience designing a wide variety of electrical, lighting, and telecommunications systems. He is experienced in fire alarm, power, lighting, systems design, lighting calculations and analysis, design of primary and emergency power distribution systems, preparing construction documents and construction administration.*

ELECTRICAL ENGINEER: Gavin will lead the electrical design team from a technical perspective. Using his years of experience designing electrical systems for transportation facilities, he will help manage the consultant engineers to produce a coordinated set of construction documents.

RELEVANT PROJECTS

SOUTHWEST OHIO REGIONAL TRANSIT AUTHORITY | CINCINNATI, OH
Facility Assessments

CENTRAL OHIO TRANSIT AUTHORITY | COLUMBUS, OH
Essex Avenue Maintenance Facility Renovation and Addition
Easton Transit Center Renovations
Reynoldsburg Park and Ride
Mobility CNG Study
CNG Fueling Station
Spring Street Restroom Renovation
33 N High St 4th and 8th Floor Renovations *(COTA Headquarters)*

THE OHIO STATE UNIVERSITY | COLUMBUS, OH
Service Annex Building Study
Transportation and Traffic Management / Facilities Operations and Development Joint Facility—Service Annex Building Renovation
Stores and Receiving Renovation

COLUMBUS REGIONAL AIRPORT AUTHORITY | COLUMBUS, OH
Building Assessments

CITY OF COLUMBUS | COLUMBUS, OH
Facilities Assessment
Fire Station 16
Fire Station 2
Fire Station 3
Fire Station 35
North Market Roof Replacement

MIFFLIN TOWNSHIP | COLUMBUS, OH
Government Center Renovation

CINCINNATI ART MUSEUM RENOVATIONS | CINCINNATI, OH
Cincinnati Art Museum Front Entrance

CREDENTIALS AND QUALIFICATIONS

+ Professional Engineer – Ohio
+ LEED AP BD+C
+ Certified Lighting Designer (National Council on Qualifications for the Lighting Professions)

EDUCATIONAL BACKGROUND

+ Bachelor of Science, Electrical Engineering – The Ohio State University 2006

EMPLOYMENT HISTORY

+ 10 with AEC
+ 13 total

SORTA Facility Assessments, SORTA, Cincinnati, OH

Easton Transit Center Renovation, COTA, Columbus, OH

Jack Lee, PE, FPE, LEED AP

Plumbing/Fire Protection Engineer: *As a State of Ohio registered Fire Protection Engineer, Jack is uniquely qualified for this role. He has over 30 years of experience with the management and design of a wide variety of mechanical, plumbing, and fire protection systems, including for transportation facilities.*

RELEVANT PROJECTS

CENTRAL OHIO TRANSIT AUTHORITY | COLUMBUS, OH
Fields Avenue Bus Maintenance Facility
Essex Avenue Maintenance Facility Renovation and Addition
Bus Lift Replacement—McKinley Avenue
On-Call A/E Services Contract Subconsultant
33 N High St Renovations *(COTA Headquarters)*
COLUMBUS REGIONAL AIRPORT AUTHORITY | COLUMBUS, OH
Building Assessments
CITY OF COLUMBUS | COLUMBUS, OH
Facilities Assessment
Fire Station 10
Fire Station 18
North Market Roof Replacement
Central Safety Building Plumbing Renovation
City Hall HVAC Renovation and Electrical Studies
OHIO DEPT. OF TRANSPORTATION | STATEWIDE, OH
Aviation Hangar Fire Suppression Study and Design
On-Call A/E Services Contract
OHIO ADJUTANT GENERAL | STATEWIDE, OH
Walbridge Armory HVAC Renovation
Newark Armory HVAC Renovation
US AIR FORCE | COUNTRY WIDE
Repair Fire Safety Deficiencies—Fire Suppression—Grand Forks Air Force Base
Repair Fire Suppression in Hangar 600—Grand Forks Air Force Base
Hangar 206 Fire Suppression—Wright-Patterson Air Force Base
CINCINNATI ART MUSEUM RENOVATIONS | CINCINNATI, OH
Cincinnati Art Museum Front Entrance

Fields Avenue Bus Maintenance Facility, COTA, Columbus, OH

PLUMBING/FIRE PROTECTION ENGINEER: Jack will lead the plumbing and fire protection design team from a technical perspective. Using his years of experience designing plumbing and fire protection systems, he will help manage the consultant engineers to produce a coordinated set of construction documents.

CREDENTIALS AND QUALIFICATIONS

+ Professional Engineer – Ohio
+ Registered Fire Protection Engineer
+ LEED AP

EDUCATIONAL BACKGROUND

+ Master of Science, Mechanical Engineering—University of Akron 1994
+ Bachelor of Science, Mechanical Engineering – Chongqing Institute (China) 1982

EMPLOYMENT HISTORY

+ 18 with AEC
+ 30 total

Hangar 206 Fire Suppression—Wright-Patterson Air Force Base

Joseph A. Tussey, CHMM

Hazardous Materials Manager: *Joe is responsible for managing hazardous building material projects. He is a Terracon Authorized Project Reviewer with the responsibilities of providing internal senior quality review which involves risk management, mentorship, and the review project proposals and reports. Joe has over 25 years of experience evaluating properties for environmental conditions and hazardous materials, evaluating employee exposure to hazardous materials, and managing hazardous materials in buildings. He has successfully managed and overseen projects totaling over $12 million. Joe has performed building inspections for asbestos-containing materials and has designed and managed/overseen hundreds of asbestos abatement projects. He has also performed numerous inspections, assessments, and clearance examinations for lead-based paint hazards, inspections for other hazardous materials including PCB and mercury-containing equipment, laboratory safety audits, personal exposure assessments, biological/ mold assessments, indoor air quality assessments, and has conducted various industrial hygiene monitoring/sampling procedures and developed numerous asbestos O&M plans.*

Role: *Joe will be responsible for managing the hazardous materials testing on the project. He will review all test results and will provide recommendations for materials remediation.*

RELEVANT PROJECTS

CINCINNATI/NORTHERN KENTUCKY INTERNATIONAL AIRPORT (CVG) | HEBRON, KY
Design-related tasks have included reviewing existing asbestos survey data, providing project-specific pre-renovation asbestos surveys, providing asbestos abatement project estimates, developing asbestos abatement design specifications and plans, and providing asbestos abatement oversight and air monitoring services.

DAYTON INTERNATIONAL AIRPORT| DAYTON, OH
Completed an environmental evaluation/hazardous materials assessment of numerous houses in preparation for demolition. Evaluations included identification of environmental hazards associated with prior site use, underground storage tanks, wells/cisterns, asbestos-containing materials, and hazardous waste.

U.S. DEPARTMENT OF VETERANS AFFAIRS | CHILLICOTHE, OH
Provided design phase support to various A/E firms with respect to numerous renovation project at the Chillicothe V.A. Medical Center removal of all unneeded, unwanted, and un-useable materials.

CREDENTIALS AND QUALIFICATIONS

+ Certified Hazardous Materials Manager (CHMM) (Institute of Hazardous Materials Management)
+ Ohio Asbestos Hazardous Abatement Project Designer
+ Ohio Asbestos Hazard Evaluation Specialist
+ EPA AHERA Asbestos Hazard Abatement Supervisor

EDUCATIONAL BACKGROUND

+ Master of Business Administration, Baker College
+ Bachelor of Science, Environmental Science, Morehead State University

EMPLOYMENT HISTORY

+ 17 years with Terracon Consultants, Inc.
+ 27 total years experience

Cincinnati/Northern Kentucky International Airport, Hebron, KY

Dayton International Airport, Dayton, OH

Rajan Viswanathan, P.E.

Senior Geotechnical Engineer: *Rajan manages geotechnical investigations that include site reconnaissance, engineering analyses, developing recommendations for design and construction of shallow and deep foundations, retaining walls, temporary and permanent retention systems, floor slabs, flexible and rigid pavements, slope stability analyses, and general site development. Rajan's experience includes designing and installing geotechnical instrumentation programs for performance monitoring of structures during and after construction. He has field instrumentation expertise including the installation, automation, and data processing of vibrating wire settlement systems, piezometers, strain gauges, earth pressure cells, inclinometers and extensometers. He also has extensive experience with automated data collection and processing using discrete data collection readouts .*

Role: *Rajan will be responsible for managing the geotechnical investigation that will include the site reconnaissance, field exploration, laboratory testing, engineering analysis, and developing recommendations for design and construction.*

RELEVANT PROJECTS

WRIGHT-PATTERSON AIR FORCE BASE SENSORS LABORATORY | DAYTON, OH
Variable subsurface conditions resulted in the use of drilled shafts and spread footings. Sensitive equipment is located in one of the structures with very low tolerance to settlement or heave.

WRIGHT-PATTERSON AIR FORCE FIRE/CRASH RESCUE STATION | DAYTON, OH
Vapor transmission of existing slab-on-grade was evaluated and mitigation measures were recommended. New foundations included spread footings.

WRIGHT PATTERSON AIR FORCE BASE ACQUISITION FACILITY & MATERIALS LABORATORY | DAYTON, OH
Renovations to the structures resulted in increasing loads to the existing foundations plus construction of new foundations. Helical piers coupled with conventional spread footings were employed to provide needed support.

WRIGHT PATTERSON AIR FORCE BASE BRAC HUMAN PERFORMANCE WING | DAYTON, OH
Four-story with column loads of approximately 900 kips and floor slab loads of 1,000 psf. Variable subsurface conditions resulted in a combination of spread footings and drilled shafts. Two of the structures include deep pits requiring the design of temporary excavation support systems.

CREDENTIALS AND QUALIFICATIONS

+ Professional Engineer: OH
+ OSHA 40-hour HAZWOPER

EDUCATIONAL BACKGROUND

+ Master of Science, Civil Engineering, Texas A & M University
+ Bachelor of Science, Civil Engineering, Mangalore University, India

EMPLOYMENT HISTORY

+ 23 years with Terracon Consultants, Inc.
+ 25 total years experience

Wright-Patterson Air Force Base, Dayton, OH

Wright-Patterson Air Force Base BRAC Human Performance Wing, Dayton, OH

Joe French

Lead Estimator: *Joe has over 17 years of experience in the construction industry, including preconstruction services. His ability to communicate effectively with owners, architects, suppliers and trade partners, as well as his deep knowledge of the local and regional markets makes Joe a valued partner. By considering trade partner capabilities, construction trends and resource availability, he can accurately provide systems analysis and options, accurate benchmarking and estimating, and a value-analysis approach to align budgets and estimates from the beginning.*

Role: *Joe will be the project lead estimator on preconstruction services. Working hand-in-hand with Tim, he will help ensure that your project stays on schedule and on budget.*

RELEVANT PROJECTS

HIGHLAND DISTRICT HOSPITAL | HILLSBORO, OH
Addition and Renovation
WHIRLPOOL NORTH AMERICAN HEADQUARTERS | BENTON HARBOR, MI
Corporate Office Building
THE BELLEVUE HOSPITAL | BELLEVUE, OH
Facility Master Plan
LIDNER CENTER OF HOPE | MASON, OH
Renovation and Addition
ST. ELIZABETH HEALTHCARE | FORT THOMAS, KY
Medical Office Addition and Renovation
WHIRLPOOL GLOBAL HEADQUARTERS | BENTON HARBOR, MI
Renovation existing facilities
UC HEALTH | CINCINNATI, OH
Specialty Pharmacy and Call Center

CREDENTIALS AND QUALIFICATIONS

+ OSHA 30-Hour certified

EDUCATIONAL BACKGROUND

+ Bachelor of Science/Building Construction Management, Purdue University

SELECT ENERGY EFFICIENT PROJECTS

+ Whirlpool Global Headquarters
+ Highland District Hospital
+ St. Elizabeth MOB

Whirlpool Corporation

Highland District Hospital

Ryan Geismar, PLA, LEED AP

Landscape Architect: *Ryan will provide Landscape architecture services and will work with the design team to ensure cost effective solutions.*

CREDENTIALS AND QUALIFICATIONS

+ Professional Landscape Architect in Ohio
+ LEED AP
+ Adjunct Professor of Planning, College of Design, Architecture, Art, and Planning University of Cincinnati, 2012 - Present

EDUCATIONAL BACKGROUND

+ BSET in Civil Engineering, Bluefield State College
+ Master of Landscape Architecture, Ball State University
+ BFA, Architecture, Miami University of Ohio

RELEVANT PROJECTS

WEST CHESTER TOWNSHIP FIRE STATION 73 | CINCINNATI, OH

Landscape Architect: This project involved demolition of an existing fire station and the design and construction of a new 10,000 sf three-bay station with support spaces, bunk rooms, kitchen, day room, training room, fitness room, locker rooms, offices and a storm shelter. The new $3.1M facility includes an exterior finish of brick veneer, metal wall panel and aluminum-framed windows & doors.

MEDPACE SITE DESIGN | CINCINNATI, OH

Landscape Architect: Human Nature led a campus master plan process to redefine the growing Medpace campus as a multi-purpose urban district for live, work, play, and stay. The master plan envisions the 32-acre Medpace campus as a mixed-use regional destination designed to accommodate rapid business growth, the needs of an active and vibrant workforce, and to help revitalize the Madisonville community. The vision seeks to unify buildings, streetscapes, and open space through a dynamic and contemporary form language, materials palette, and amenities.

MONASTERY CHAPEL GARDEN - CINCINNATI, OH

Landscape Architect: Human Nature collaborated with Towne Properties to breathe new life into an historic landmark. The renovated chapel has transformed into a dynamic space that serves the corporate headquarters of the owner, Cincinnati's premier event center, and Mt. Adams residential community. The new chapel garden plaza channels the old soul of the historic landmark and captures Mt. Adams' charming hilltop flair with a simple and sophisticated material and plant palette, sensitivity to the powerful underlying design principles organizing the site, and attention to proportion, balance, and enduring beauty.

MedPace Site Design

West Chester Fire Station #73

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3B. Subconsultant Identification

ROLE: Mechanical, electrical, plumbing, fire protection engineering

CONTACT INFORMATION
Lisa Huang, CEO
Office: 1405 Dublin Rd, Columbus, OH 43215
Phone: (614) 486-4778
Email: LisaH@aecmep.com

ROLE: Environmental engineering

CONTACT INFORMATION
Ron Lech, P.E.
Terracon Consultants, Inc. 611 Lunken Park Drive, Cincinnati OH 45226
ron.lech@terracon.com
P (513) 321 5816
F (513) 321.0294
www.terracon.com

ROLE: Cost Estimating

CONTACT INFORMATION
Joe French
4350 Glendale-Milford Road
Suite 160
Cincinnati, OH 45242
P: 513-563-7700

ROLE: Landscape Architecture

CONTACT INFORMATION
Ryan Geismar
990 St. Paul Drive, Cincinnati, OH 45206
(513) 281-2211
rgeismar@humannature.cc

AEC HISTORY & AREAS OF SPECIALIZATION

Our Advanced Engineering Consultants (AEC) was founded in Columbus, Ohio in 1998 and has since grown into a prominent consulting firm specializing in mechanical, electrical, plumbing, fire protection, and technology engineering design services. Since our founding 20 years ago, AEC now operates regional offices in Cleveland, Ohio, Indianapolis, Indiana and Virginia Beach, Virginia. AEC currently employs over 65 engineers, designers, and support staff with an average of over 16 years of project experience. Our staff includes:

+ 23 Professional Engineers (PE)
+ 2 Registered Fire Protection Engineer (FPE)
+ 18 LEED Accredited Professionals (LEED AP)

Members of our staff maintain numerous professional certifications, several of which include:

+ Green Globes Professionals (GGP)
+ Certified Energy Managers (CEM)
+ Registered Communications Distribution Designers (RCDD)
+ Certified Commissioning Agents (CxA)
+ Certified Lighting Designers (NCQLP)
+ Certified Plumbing Designer (CPD)
+ Certified Electronic Safety & Security Designer (ESS)

AEC has been involved with numerous projects in several states requiring the design of MEPT systems for new construction and renovation of existing facilities.

SUSTAINABLE DESIGN

Through practical experience and training programs, we strive to continually increase our multi-discipline team of LEED Accredited Professionals. AEC is on the forefront of researching and implementing innovative and sustainable technologies in the design of building systems and services. A significant percentage of our projects are pursuing LEED certification or must meet the strict requirements of the Federal Government's Energy Policy Act (EPACT) of 2005. Working in this environment has made us proficient in the process of designing sustainable facilities for our clients.

Advanced Engineering Consultants, Easton Transit Center Renovation, Columbus, OH

TEAM HISTORY WITH AEC

AEC and emersion DESIGN have a longstanding working relationship.

The AEC-emersion Joint Venture (AEJV) was formed in 2007 and includes Advanced Engineering Consultants, Ltd., an Economically Disadvantaged Woman-Owned Small Business (EDWOSB) and emersion DESIGN, LLC, a Small Business.

REPEAT CLIENTS

The AEJV repeat government clients include:

+ U.S. Army Reserves
+ U.S. Air Force Reserves (USAFR)
+ U.S. Army Corps of Engineers (various Districts)
+ U.S. Army
+ U.S. Air Force
+ National Aeronautics and Space Administration (NASA)
+ U.S. Navy
+ National Guard

The projects we have worked on for these clients have direct relevance to the types of potential projects outlined in this Statement of Qualifications for A/E services.

RELEVANT PROJECTS/CONTRACTS

The AEJV is currently providing A/E services on task orders under IDIQ contracts with the USACE Louisville and Tulsa Districts, U.S. Air Force at Wright-Patterson AFB, Ohio, NASA Langley Research Center, VA and Grand Forks AFB, ND, among others. Many of these task orders involve new construction and facility renovation projects. The AEJV team has an exemplary past performance record for providing our services for projects assigned as part of IDIQ contracts, Design/Build contracts and stand-alone Design/Bid/Build (full design) contracts.

EXPERIENCE

The AEJV has collaborated on more than 185 projects together, and over 85% of them were for Government clients. Many of these projects were executed under one of the 16 term contracts we have held. IDIQ contracts we have held in the past 12 years for government clients are presented later in this Section highlights. These speak to both the depth of our team experience and the quality of our work.

SUSTAINABILITY EXPERTISE

Responsible design is an important element of each project that comes under our influence at AEC. We are fortunate to have clients that desire to have high performance buildings in their real estate portfolio. A representative listing of LEED projects that AEC has been involved with includes:

LEED Gold Certified

+ AEC's New Headquarters Office Building
+ Cincinnati Art Museum Renovation
+ Columbus Fire Station No. 10
+ COTA Fields Avenue Bus Maintenance Facility
+ Clinton Elementary School Renovation
+ McPherson Middle School

LEED Silver Certified

+ Columbus West Side Family Health Center
+ COTA Essex Avenue Maintenance Facility
+ Ft. Stewart Child Development Center
+ COTA 33 N. High St. Administration Building Renovation

AEC has extensive experience with providing facilities engineering services for a variety of transit facilities. AEC has gained this experience through multiple yearly Facilities Engineering Services contracts that we have held with the Ohio Department of Transportation (ODOT), and through work with the Southwest Ohio Regional Transit Authority, the Greater Cleveland Regional Transit Authority, and the Central Ohio Transit Authority. Services include preparation of engineering reports, drawings, specifications, and plumbing, mechanical and electrical engineering design services for various A/E projects.

Fields Avenue Maintenance Facility Renovation ($17M)
Central Ohio Transit Authority, LEED Gold Certified

TRANSIT EXPERIENCE

AEC has worked on numerous projects for regional transit authority agencies throughout Ohio. Relevant projects include:

+ Facility Assessments – Southwest Ohio Regional Transit Authority
+ Yearly Engineering Services Contract Subconsultant – Central Ohio Transit Authority
+ Easton Transit Center Renovations - Central Ohio Transit Authority
+ Essex Avenue Maintenance Facility Renovation/Addition - Central Ohio Transit Authority
+ Fields Avenue Maintenance Facility Renovation - Central Ohio Transit Authority
+ Compressed Natural Gas Fueling Station Studies – Central Ohio Transit Authority
+ Triskett Garage CNG Upgrade – Greater Cleveland Regional Transit Authority
+ Electric Car Charging Stations – City of Columbus
+ Service Annex Building Study and Renovation – The Ohio State University
+ Compressed Natural Gas (CNG) Fueling Station – The Ohio State University
+ ODOT Yearly Facilities Engineering Services Contract – Ohio Dept. of Transportation
+ Maintenance Garage Emergency Generator & Lighting Improvements, District 10
+ Maintenance Garage Emergency Generator Replacement, District 1
+ HVAC Upgrade, District 10
+ Diesel Regeneration System in HQ Garages, District 4 & 12
+ Maintenance Garage Lighting Retrofit
+ Headquarters Garage Emergency Generator, District 9
+ District Office Emergency Generator Replacement, District 12

COMPANY PROFILE

Terracon is a 100 percent employee-owned consulting engineering firm providing quality services to clients. Since 1965, Terracon has evolved into a successful multi-discipline firm specializing in:

- Environmental
- Facilities
- Geotechnical
- Materials

In January 2007, H.C. Nutting joined Terracon Consultants, one of the nation's largest employee-owned engineering consulting firms. Over its history, Terracon has achieved significant expansion through both internal growth and acquisitions. Terracon has more than 5,000 employees providing environmental, facilities, geotechnical, and materials services from more than 150 offices nationwide. Additionally, we partner with our U.S. clients to serve their international needs. The firm's success is further evidenced by a current ranking of 22 in Engineering News-Record's 2020 listing of the Top 500 Design Firms, as compared to a ranking of 50 a decade ago. Terracon's growth is due to dedicated employees who are responsive to clients, provide quality services, and take advantage of opportunities in the marketplace.

Terracon provides services on thousands of projects each year. Our culture, systems, and structure enable us to excel at both small and large projects. By combining our national resources with specific local area expertise, we consistently overcome obstacles and deliver the results our clients expect.

Terracon serves a diverse portfolio of private and public clients. By being responsive, resourceful, and reliable, we strive to exceed our clients' expectations for service, solutions, quality, and speed of delivery. Based on a deep understanding of our clients' needs, Terracon's commitment is centered around these key objectives.

FINANCIAL

Terracon is 100 percent employee-owned through a broad-based program consisting of company stock and an Employee Stock Ownership Plan (ESOP). There are more than 5,000 individuals employed at Terracon offices or Terracon subsidiaries. As of December 2019, there are 1,122 individual employees owning 58% of stock and 42% owned through the ESOP. Of the over 4,500 employee owners, no individual shareholder owns more than 2% of the total outstanding shares. Terracon's financial information is not made public. Please contact Don Vrana, Terracon's chief financial officer, at (913) 599 6886 if you need additional information.

FORM OF ORGANIZATION
Corporation

NUMBER OF EMPLOYEES
5,000+

Pepper Construction
Tomorrow Transformed

COMPANY PROFILE

Leading the industry, an experienced regional construction firm.

At Pepper, we offer the confidence that comes from working with a partner dedicated to performance. We look for new technologies and methods that add value for our clients. Our insight and drive to achieve excellence results in safer projects, better buildings and stronger relationships.

As a subsidiary of Pepper Construction Group, founded in 1927, Pepper Ohio has provided construction management, general contracting and design-build services to Ohio for over 10 years. Our projects total nearly $1 billion, and we are considered a key contractor in the market. Our 80 percent repeat client success rate is attributed to the dedication of our people and the partnerships we create with clients, design firms and trade partners - to improve the communities we serve.

MARKETS SERVED include K-12, commercial office, interiors, healthcare, higher education, industrial, institutional, interiors, manufacturing and retail.

Thought leadership in action

At Pepper, our **Integrated Construction Services [ICS]** ensure a streamlined approach to construction and detailed, comprehensive plan that identifies best value solutions for both the owner and the good of the project. Our ICS team is comprised of industry-leading experts in preconstruction, virtual construction and high performance, as well as safety and quality control.

$137 million
2020 REVENUE [OHIO]

90+ employees
OFFICE, SALARIED + FIELD EMPLOYEES [OHIO]

95% of work
NEGOTIATED AS CM [OHIO]

$100 million
MILLION GENERAL LIABILITY INSURANCE POLICY

$1 billion
BONDING CAPACITY

PEPPER CONSTRUCTION - OHIO
Cincinnati, Ohio
Columbus, Ohio

PEPPER CONSTRUCTION - INDIANA
Indianapolis, Indiana

PEPPER CONSTRUCTION COMPANY
Chicago, Illinois
Barrington, Illinois
Milwaukee, Wisconsin

3C. Subconsultant Profiles






COMPANY PROFILE

Human Nature, established in 1995, was created to focus upon the planning and design of public open spaces and open space systems (parks, preserves, trails, greenways, streetscapes, playgrounds, nature play environments, gardens, and public art). At the heart of our practice is the commitment to creating and building meaningful places for people to connect with and enjoy nature and celebrate community. We believe these places offer the best opportunities for communities to express themselves through a celebration of cultural and natural resources. Additionally, we provide design services for environmental planning, urban design, natural resource restoration and management, institutional and educational campus design, green infrastructure design, and interpretive features.

A majority of our work is from satisfied clients either as repeat business or through their recommendations to others. Fortunately, our reputation in the Greater Cincinnati Area has led us to expand into the broader region, working in Missouri, Wisconsin, Kentucky, and Maryland to name a few. We continually strive to meet or exceed our client's expectations through all of our projects.

emersion DESIGN and Human Nature partnered on District 3 Police Station, ***the first Net Zero energy police station in the world****.*

emersion DESIGN and Human Nature partnered on the Cincinnati Art Climb.

3D. Organizational Chart

Tim Wiley, *emersion DESIGN*
Project Manager & Main Point of Contact

Architect of Record — emersion DESIGN

Architect, Rick Fussner, RA

Interior Designer, Amy Green, NCIDQ

Structural Engineer, Steve Ricci, PE, LEED AP

Sustainability Consultant, Chad Edwards, RA, NCARB, LEED AP BD+C

Wellness Designer, Yasha Ogg, WELL AP, WELL Faculty, LEED AP ID+C, BD+C, EcoDist. AP, LFA

QA/QC, Shannon Duffy, RA, NCARB, LEED AP

Transit Specialist — IBI GROUP

Design Director, J. Ola Ferm, NCARB

Transportation Planner, Randy J. Knapick, AICP

Civil Engineer, Mike Murray, PE

Sub-Consultants

ADVANCED ENGINEERING CONSULTANTS

Mechanical Engineer, Colin Todd, PE, LEED AP, CEM

Electrical Engineer, Gavin Lim, PE, LEED AP BD+C, LC

Plumbing/Fire Protection Engineer, Jack Lee, PE, FPE, LEED AP

Terracon

Hazardous Materials Manager, Joe Tussey, CHMM

Geotechnical Engineer, Rajan Viswanathan, PE

Pepper Construction — Tomorrow Transformed

Cost Estimator, Joe French

HUMAN NATURE

Landscape Architect, Ryan Geismar, PLA, LEED AP

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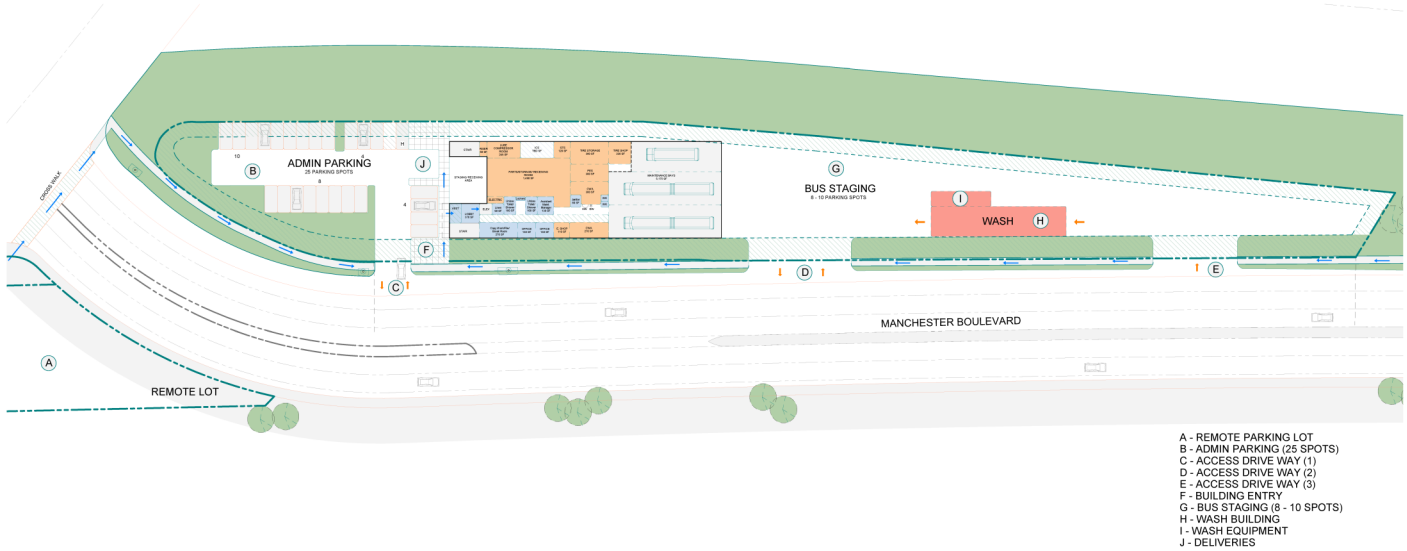
ANAHEIM RESORT TRANSPORTATION: ADMINISTRATION & TRANSIT BUS FACILITY

Anaheim Resort Transportation (ART) is the flagship program of the Anaheim Transit Network (ATN), which is a network of 19 bus routes serving more than 70 stops in Anaheim and Orange County. ART transports more than 9 million guests each year using a fleet of 81 buses. Beginning in 2016, ART began adding all electric buses to its existing fleet and by 2023 ART's entire fleet will be all electric with zero emissions. In conjunction with ART's electric bus initiative, ART's existing outdated facility is being moved to two new sites: one site will provide fleet and driver parking and driver's amenity spaces, while the second site will be designed to include a new two story building with administrative and operational headquarters on the second level and electric bus fleet maintenance, bus washing, staff parking, and electric bus charging infrastructure on the ground level. IBI Group is providing Owner's Representative Services for the conceptual design and master planning phase of the two sites including interior and exterior space needs programming, conceptual interior planning, conceptual site master planning, electric bus maintenance planning, and maintenance equipment planning and inventorying.



DESIGN HIGHLIGHTS

+ ***Project Director is proposed Senior Project Manager, Ola Ferm***
+ Designed to accommodate electric bus fleet additions
+ By 2023, entire fleet will be all electric with zero emissions
+ ***Site # 1 includes:***

  -Parking for bus fleet

  -Driver parking

  -Driver's amenity spaces
+ ***Site # 2 includes:***

  New two story building with administrative and operational headquarters

  Electric bus fleet maintenance facilities

  Bus washing

Owner Reference

Diana Kotler, Executive Director
Anaheim Transportation Network
1354 S Anaheim Blvd
Anaheim, CA 92805
714-563-5287
dkotler@atnetwork.org

Project Size

Operations & Maintenance Facilities, Administration Building, and Storage Facilities for 82 Electric Buses and Charging Infrastructure.

Construction Dates

To be Complete 07/2021

PROSPER PORTLAND

Portland, OR

PROSPER PORTLAND: PORTLAND UNION STATION REVITALIZATION AND MOBILITY PLANNING AND MULTI-MODAL TRANSPORTATION ASSESSMENT

Built in 1896, Portland Union Station is an iconic landmark and a multi-transportation gateway to the City of Portland. After 125 years of continuous service, the station is in need of critical repairs and enhancements to meet the future needs of the Amtrak Cascades regional high speed rail corridor. The surrounding Broadway Corridor is also in the midst of a dramatic transformation, positioning Union Station as a social, economic, and transportation hub for the emerging district.

IBI Group is leading a project to preserve and revitalize Union Station as a multi-modal transportation hub and vibrant mixed -use facility. The scope of improvements includes structural/ seismic retrofit, historic restoration, systems replacement, accessibility upgrades, and renewal of rail infrastructure and facilities.

As part of this effort, IBI Group develop strategies to reinforce Union Station's position as a multi-modal intercity and urban transit hub. Based on analysis of curbside operations and changing customer behavior, IBI Group recommended improvements to accommodate the growing use of shared mobility including TNCs, bike share, and car share. The project also considered operational and physical integration of intercity and local buses, light rail, streetcar, future Bus Rapid Transit, bicycles, pedestrians, taxi, parking, and freight delivery.

DESIGN HIGHLIGHTS

+ ***Proposed Multi-Modal Transportation Planner, Randy Knapick, is the Project Manager for this project.***
+ Multi-modal passenger transportation facility involving intercity passenger rail, bus transit, and other modes
+ Worked closely with Amtrak regional and national teams to envision and design passenger and rail support facilities
+ Illustrates team familiarity with Amtrak national station design guidelines and standards
+ Worked with Amtrak, FRA and two Class 1 railroads on design of new ADA accessible passenger boarding platforms

Owner Reference

Sarah Harpole
Prosper Portland
222 NW Fifth Avenue
Portland, Oregon
T: 503-823-3337
E: harpoles@prosperportland.us

Project Status

Preliminary Design/NEPA completion estimated December 2020

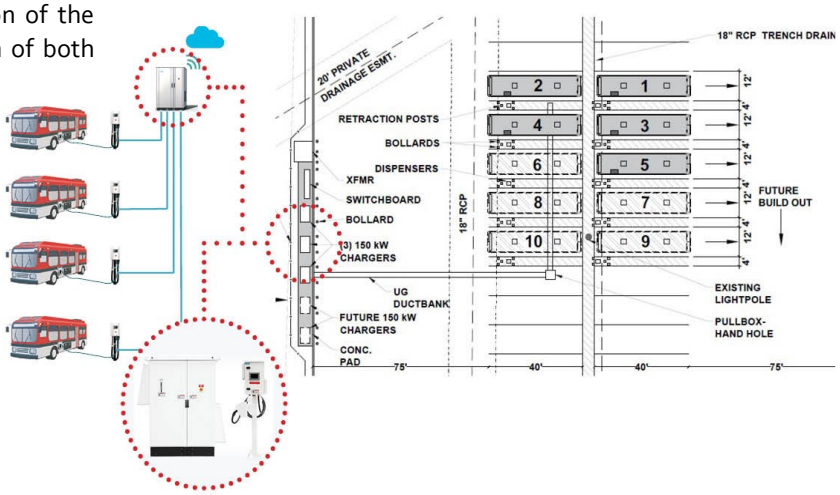
CNG FUEL, MAINTENANCE UPGRADES AND ELECTRIC BUS CHARGING INFRASTRUCTURE

Over the years, our IBI staff has developed and maintained an excellent and highly regarded working relationship with GoRaleigh. As a result, GoRaleigh has continued to engage IBI Group with facility projects, a direct result of GoRaleigh's trust in our team's ability to provide excellent quality in our work and the client's success at the forefront of the project.

In 2010, prior to joining IBI Group, Ola Ferm, as the Principal Architect, designed the Raleigh Transit Operations Facility. The building received a LEED Platinum rating followed along with being recognized as the APWA Project of the Year, recognition as well as the Sir Walter Raleigh Award for Community Appearance.

CNG Upgrades & Facility Expansion: In 2018, the City of Raleigh contracted IBI Group to provide architectural, engineering and construction administration services to modernize the facility for a new fleet of CNG Vehicles. The project scope included an expansion and modification of the current fuel station structure for the accommodation of both CNG and diesel vehicles. New CNG fuel facilities were installed to accommodate a new CNG bus fleet. Additionally, modifications and upgrades were made to the existing maintenance facility to accommodate maintenance of CNG vehicles. Additional services included security and access control, building automation controls, data, communications and other necessary systems to be connected to the City's network and coordination with utility providers.

Electric Bus Charging Infrastructure: IBI is currently contracted with GoRaleigh for the implementation of its Electric Bus Charging Infrastructure to accommodate its new fleet of electric buses. GoRaleigh recently acquired 5 new electric buses and expects to expand on this fleet in the near future. GoRaleigh asked IBI to evaluate, analyze, design, obtain permit approval, and prepare design/construction documents for the new infrastructure .



DESIGN HIGHLIGHTS

+ ***Original building design by proposed Senior Project Manager, Ola Ferm***. Facilities received LEED Platinum rating followed by the APWA Project of the Year award for Community Appearance.
+ Excellent relationship established between IBI Group and the City of Raleigh—GoRaleigh.

"IBI Group provided design services for GoRaleigh's new CNG fueling station, to support our new fleet of CNG buses. IBI provided excellent services during the design and construction phases of the project. IBI emphasized adherence to budget and schedule.

Some of IBI's team staff were involved in the original construction of our LEED Platinum facility, and that knowledge has proven to be an asset. IBI was recently selected to provide similar improvements for the facility's electric bus charging infrastructure, to support the addition of electric buses to the fleet."

-Gil Johnson, Project Manager, City of Raleigh

Owner Reference

Gil Johnson
Project Manager, City of Raleigh
220 Fayetteville Street, Suite 200
Raleigh, NC 27601
T: 919-744-9363
E: gil.johnson@raleighnc.gov

Project Size

Varies. See description.

Project Status

CNG Upgrade & Facility expansion completed 2020.
Electric Bus Charing Infrastructure is On-going

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CINCINNATI POLICE STATION | DISTRICT 3

Cincinnati, Ohio

Project experience: Police Station New Build

The City of Cincinnati commissioned emersion DESIGN as part of a design-build team to design and construct the District 3 Police Station Headquarters. This new 39,000 square foot, state-of-the-art facility is located on the city's west side and will allow 200 of Cincinnati's finest men and women to better respond to citizens' needs in the 14 western neighborhoods encompassed in District 3.

The building program includes a public lobby, administrative spaces, investigations offices and work areas, patrol functions, file and records storage, property and evidence handling areas, support areas for the police staff, and mechanic's bays.

Additionally, this headquarters is the first Net-Zero-Energy, LEED Platinum police station in the world. Working with the police staff, neighborhood committees, and city planners, aggressive goals have been set to reduce life-cycle cost of the building while maintaining function for police activities, security for occupants, and an aesthetically appealing design within the community. The project will act as a catalyst for appropriate means to integrate both environmental and community sustainability.

As proof that we lead our clients to the highest levels of sustainability with the lowest cost and the best value, we gave the City of Cincinnati the world's first LEED Platinum, Net Zero Energy police station for the same cost as our competitors' fossil fueled, LEED Silver Design. Cincinnati tax payers will never pay for energy bills for this building. Police dollars can now be spent on supporting the police mission instead of heating or cooling.

Paying particular attention to notable existing buildings in the 14 District 3 neighborhoods, features from each were transformed to create a city building that meshes into the fabric of the existing community. Community engagement, through the neighborhood committees, factored into the design process as well as public art within the building and on the surrounding site.

DESIGN HIGHLIGHTS

+ Net Zero Energy
+ LEED Platinum Certified
+ 26.6 measured EUI (kbtus/sq ft/per year)
+ Winner of Multiple Design and Sustainability Awards
+ New Construction
+ Administrative Spaces
+ Training Areas
+ ADA Accessible
+ Highly Secure Design
+ Inviting, Community Centered

Owner Reference

City of Cincinnati

Joel Koopman

(513) 352-6391

joel.koopman

@cincinnati-oh.gov

Project Size

39,000 sq ft

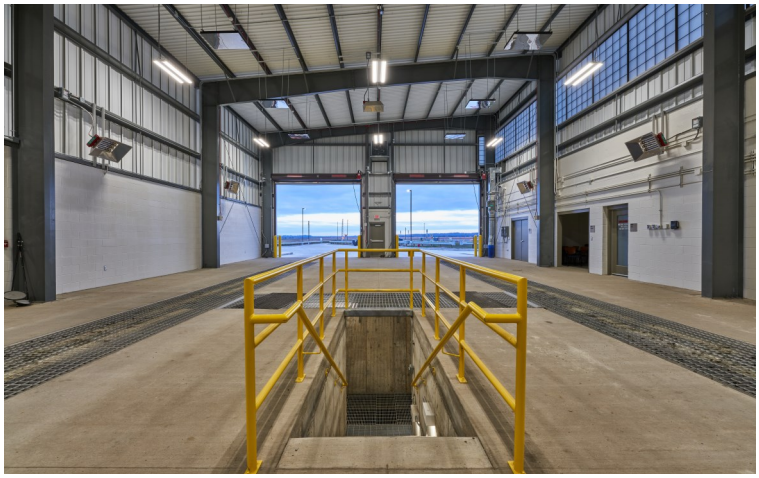
$14.4 million

Construction Complete in 2015

Advance Clients | Advance Society

"I'm excited. I'm excited for the department. I'm excited for these guys on District 3. They've worked so hard; they carry a huge part of the work load of the entire department. This workspace is probably the premier law enforcement building in the world. This is incredible." | Chief Jeffrey Blackwell, Chief of District 3 Police Station

"The District 3 police station continues to serve beyond any typical boundaries. This project changed the way the City procures design services. Our most recent RFQ included an EUI target to let design firms know that the City takes energy efficiency very seriously and convey these expectations upfront. In short, we wish that every one of our projects would run this smoothly, finish this quickly and with this high of quality, be this sustainable, engage the public this infectiously and present the value that this project has to the police, the City and its citizens." | Jaime Accurso, City of Cincinnati Project Manager



WRIGHT PATTERSON AIR FORCE BASE: GATE 26A

WPAFB, Ohio

GATE NEW BUILD: GATE 26A

This project is a Design/Build project set to advance the design effort in an RFP to a completed and fully functional facility. This facility is part of the Wright Patterson AFB Security Forces and functions as POV and Commercial Entry Control Gate. It is designated as Gate 26A and provides a more functional and secure entry than where it was previously located. The previous gate was located on the north end and provides little or no traffic control for POV's along the main drive to the base and causes a lot of congestion. With the construction of this new facility, security was greatly improved. The existing facility and the north side gate were removed in their entirety when the new gate facility is completed.

The new gate facility is approximately 6,100 gsf and composed of 2 inspection bays sized to fit to full length semi-tractor and trailers (approx. 4115 sf) and an administration area for the remainder. The administration area consists of the gatehouse main office, a holding and interview room, restrooms, military working dog space, storage and support facilities.

The gatehouse office's entire perimeter is designed to meet UL 752 level 5 ballistics. This includes all glass entry doors, observation windows and transaction window. The office is used for daily office routines for the guards as well as observation of POV and commercial vehicles entering the gate area. Exterior windows are tinted to obstruct viewing from the outside and reduce solar heat gain from the morning sun. For security purposes, interior window viewing into the gatehouse office consists of one-way glass, so no one can see into the space.

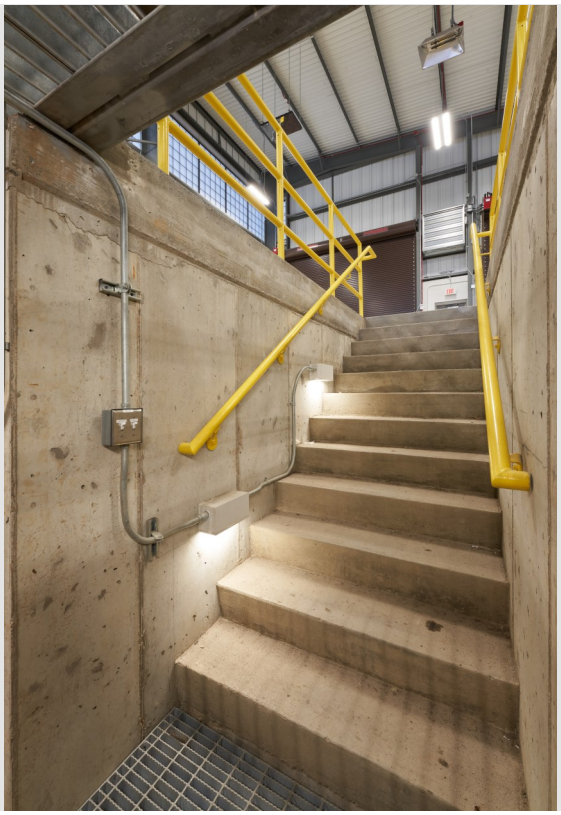
The two guard stations located on the northside for checking ID's were also designed to meet this same ballistic level rating. The POV drive lanes and guard stations are weather protected overhead by a fabric roof structure like other gate facilities located on the Base.

The working dog space has 48" high wire mesh partitions and gates which work as kennels for the dogs.

The inspection bays include a pit area designed for inspecting the underside of the commercial vehicles as well as mirrors mounted overhead to perform a visual inspection on top of the vehicles. The pit is covered by a HD25 rated metal grate that supports 25K wheel load whereas the walking surface of the pit was designed for pedestrian loading. The bay level floor or top of the pit is traced with LED lighting to help light the underside of the vehicles being inspected.

DESIGN HIGHLIGHTS

+ Design/Build
+ Secure Entry
+ Demolition & New Construction
+ Design/Build
+ Laboratory space



Owner Reference

U.S. Corps of Engineers—Louisville District, Natalie Bouxsein, 937-656-9123, natalie.a.bouxsein@usace.army.mil

Project Size

6,100 sq ft
New Build
$10.8 million

Construction Dates

Design: 2017
Construction: 2018

4B. Sub-Consultant Projects

Project Experience: Yearly Facilities A/E Services Contract

Advanced Engineering Consultants, Ltd. (AEC) is providing engineering services to Transystems in support of their On-Call A/E contract with the Central Ohio Transit Authority. Services provided by AEC include mechanical, electrical, and plumbing engineering services. Below are representative projects assigned under this yearly task order contract

+ COTA Reynoldsburg Park and Ride: AEC provided engineering services for a new drivers' facility in Reynoldsburg. The new drivers' facility is roughly 1,180 SQ FT and includes two new restrooms (male and female) a break room and a storage room for drivers. AEC was responsible for the mechanical, electrical, and plumbing engineering designs for the building. This project also provided improvements to the existing Park N Ride facility.
+ COTA Electric Vehicle (EV) Charging Stations: AEC provided electrical engineering services for the installation of six (6) EV charging stations throughout the City. The sites utilize AEP Ohio's Commercial Electric Vehicle (EV) Charging Station Incentive Program. AEC coordinated with TranSystems and AEP Ohio on the design, installation and activation of the EV stations.
+ COTA Spring St. Terminal Restroom: AEC provided engineering services for the addition of a single private restroom to the Spring St. terminal building. AEC services included HVAC design, domestic water supply, lighting and controls, card reader and power to the door hardware, fire alarm device, and exterior lighting for the Park and Ride site, canopy, and restrooms.
+ COTA Canal Winchester Park and Ride Car Charging Station: This task consisted of providing electric to support 10 car charging stations at the Canal Winchester Park and Ride facility. AEC provided electrical engineering services, which included evaluation of the electrical service size to meet the capacity of 10 cars, coordination with local Utility company, design of conduit pathways with pullstring to charging stations, design for additional conduit pathways to service a larger capacity electric panel, electrical specifications, and construction administration services.
+ COTA Canal Winchester Park and Ride – Security Cameras and Fiber Optic service: AEC provided electrical engineering services for the addition of fiber optic service to the Canal Winchester Park and Ride facility. AEC coordinated with the local utility company on the available conduit to run to the site. Security cameras included PoE IP Cameras utilizing the new fiber optic cabling.
+ COTA Bus Shelter at John Glenn Columbus International Airport: This project provided upgrades to the bus shelter at the airport. These upgrades require additional power and data connections to support new LED lighting, electronic displays (2 units), ticketing kiosk, data rack enclosure (weather resistant), IP security camera, and 120V normal power. AEC prepared engineering drawings for lighting, power, and telecommunications. AEC coordinated with the local utility company on available services in the area.
+ COTA Daylighting Study for Solar: AEC provided electrical engineering services to determine if the COTA Front Street. Third Street, and Fourth Street Bus Shelters could support solar panels. AEC performed a daylighting study to measure the amount of daylight at each shelter, determined the required power for each shelter, and made a recommendation on if solar could be provided at each shelter. The report determined the best and worth month for daylighting by measuring TSRF. The TSRF compares the actual solar radiation values against what could be realized with no obstructions and with ideal orientation.

CENTRAL OHIO TRANSIT AUTHORITY
Columbus, Ohio

DESIGN HIGHLIGHTS

+ Yearly facilities a/E contract
+ Facility assessments
+ 7 facilities included

Services Provided

Mechanical, electrical, plumbing and fire protection engineering

4B. Sub-Consultant Projects

Project Experience: Opportunity Corridor

AEC is part of a team that was selected to prepare construction documents for Section 2 of the City of Cleveland's Opportunity Corridor project. The Opportunity Corridor is a planned boulevard that will run from East 55th Street at Interstate 490 to East 105th Street in University Circle. The area between I-490 and University Circle has become known as the "Forgotten Triangle" due to the lack of economic activity. Outside of the transportation benefits it could bring to the Cleveland area, this effort opens the potential for new economic development, new jobs and a new identity for the community. The Opportunity Corridor encompasses nearly 1,000 acres on Cleveland's southeast side and is anchored by University Circle and the Cleveland Clinic. AEC is responsible for providing Mechanical, Electrical, and Technology engineering services for various tasks associated with the project.

There are multiple parts and phases to this project including major roadway improvements and renovations to a Greater Cleveland Regional Transit Authority (GCRTA) railway station. Improvements to the railway station include:

RTA Railway Station: AEC is providing mechanical and electrical design services for the renovation of the Quincy-105th Street RTA railway station in the project area. Mechanical design includes heating and cooling of the elevator equipment room and ventilation of the electrical equipment room. Electrical design includes power to all HVAC equipment, elevator equipment and lighting, plumbing, as well as new electrical service entrance equipment, new station lighting and lighting control.

Technology: AEC is providing design data fiber service, CCTV, and PA system including interfacing with the GCRTA Sonet network. The station communication systems are extended to connect to the Traffic Signal fiber optic network. A 12-fiber aerial single-mode fiber optic cable exists along the entire length of the Red Line. Provide fiber extensions into the new station connecting the closed-circuit television (CCTV), security, public address (PA) system, and other communications equipment. This includes a new fiber optic node in the station in a lockable rack within the appropriate communications/electrical room. The work is interfaced into the existing GCRTA sonet network.

DESIGN HIGHLIGHTS

+ Construction documents
+ 1,000 acres
+ Railway station

Services Provided

Mechanical, electrical, plumbing, technology engineering

CITY OF CLEVELAND
Cleveland, Ohio

Project Experience: Fields Avenue Bus Maint. Facility Renovation

This facility was built in 1984 and houses 260,000 square feet of bus maintenance and storage space as well as 13,000 square feet of administrative area. The facility had been underutilized and many of the building's systems were malfunctioning or had failed. The project renovated the building to "like new" condition with new mechanical and electrical systems as well as a small addition. The renovated facility is LEED Gold certified. Construction cost for the renovation was $17.3M.

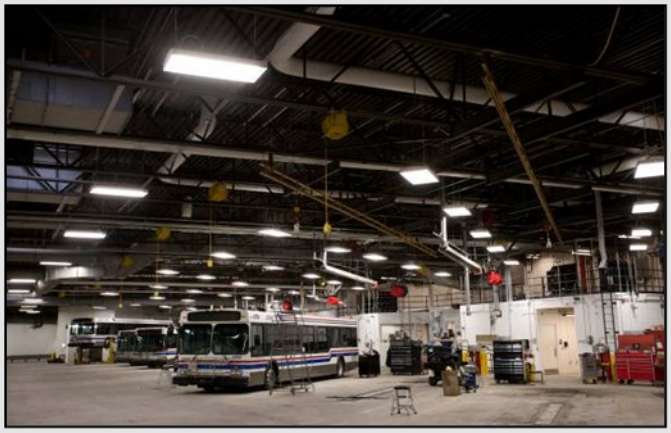
AEC was responsible for providing all mechanical, electrical, plumbing, and technology engineering design services for the renovation of this facility. The exhaust and make-up air systems were critical to the success of the overall design as they remove the harmful fumes from over 160 buses that occupy the space. The project also included substantial changes to the extensive floor drain system as the existing floor slab was replaced. Minor upgrades were made to the fire protection system including replacement of the fire pump. The entire electrical and lighting systems for the facility were replaced along with the emergency generator. New video surveillance, video intercom, door access, and complete voice and data systems were also provided. Design work was completed on a fast-track basis.

DESIGN HIGHLIGHTS

+ Renovation
+ 260,000 SQ FT Bus maintenance space, 13,000 SQ FT of administrative area
+ $17.3 M

Services Provided

Mechanical, electrical, plumbing and fire protection engineering



CENTRAL OHIO TRANSIT AUTHORITY
Columbus, Ohio

Project Experience: Compressed Natural Gas Fueling Stations

AEC was part of a team selected by COTA to conduct a feasibility study for the construction of Compressed Natural Gas (CNG) fueling stations at two of their bus facilities.

COTA 25 East Rich Street Facility CNG Fueling Station Study:

AEC's scope of services included conducting an assessment of this facility to determine what modifications would be required in order to allow the facility to be used for CNG busses. AEC was responsible for proving electrical and mechanical engineering assessment services. Electrical services included evaluating the power, lighting, security, data, and fire alarm systems. The mechanical services included evaluating the HVAC, domestic cold and hot water, sanitary and vent, sprinkler, storm and gas systems. AEC documented all existing systems, provided a narrative with recommendations, and provided a cost estimate.

COTA Fields Avenue Maintenance Facility CNG Fueling Station Study:

AEC participated in a feasibility study to add a CNG fueling station near the COTA Fields Avenue Bus Maintenance Facility. The electrical services included evaluating the electrical utility, developing concepts for the electrical service, emergency generator, site lighting, lightning protection, and fire alarm. The mechanical services included evaluating the natural gas utility, developing concepts for the natural gas service to the fueling station and generator. It was assumed that the CNG fueling station will include a small operator's building. AEC's services for the small operators building included electrical (Power, lighting, security, data) and mechanical (HVAC, domestic cold and hot water, sanitary, sprinkler, storm, gas).

DESIGN HIGHLIGHTS

+ Feasibility study
+ CNG fueling stations

Services Provided

Mechanical and electrical engineering

CENTRAL OHIO TRANSIT AUTHORITY
Columbus, Ohio

MT. AUBURN TUNNEL LIGHT RAIL TRANSIT, CINCINNATI, OH

A tunnel will be required to accommodate the 215-ft. grade change for the proposed light rail transit (LRT) through the Mt. Auburn community in Cincinnati, Ohio. Twin, 20-ft. diameter tunnels, approximately 1.1 mile long were proposed. Bottom of the tunnel varied from at-grade at the portals to 205-ft. below grade, at the deepest section. The maximum slope for the LRT system was established at 5% grade. The tunnel excavation was to be primarily in shale and limestone bedrock.

Terracon performed 10 test borings with deep rock coring to define conditions at the proposed tunnel stations, ventilation shafts, and along the tunnel alignment. Fieldwork included testing for volatile gases and testing the physical characteristics of the rock using a Menard Pressuremeter. This testing showed methane was the only gas detected of any significant quantity. In addition, field measurement of the bedrock lateral elastic modulus and the lateral static shear modulus was provided. Laboratory testing was performed on recovered rock core samples to define unconfined compressive strengths, sulfate and soluble chloride content, slake durability, and lateral creep tests of the bedrock. RQD values and point load tests were also performed on the bedrock to determine the strength characteristics of the fresh core.

The encountered conditions were presented in narrative and graphical format. Color photographs were provided for each core run. Using the developed factual data, recommendations were provided which included an evaluation of the hillside stability as related to the proposed portal construction, control of groundwater through bedrock joints and fractures, control of methane gas and other volatiles, and recommendations for stabilization of the completed tunnel and ventilation shafts.

CSXT RAILROAD OVER TWIN CREEK BRIDGE REHABILITATION SERVICES, WARREN COUNTY, OH

The URS Corporation retained Terracon to obtain geotechnical data for the CSXT Railroad Bridge over Twin Creek a rehabilitation project in Franklin, Warren County, Ohio. The existing CSXT railroad line traverses over the Twin Creek, a tributary of the Great Miami River, in Franklin, County, Ohio. Over the years through the course of erosive action, the channel of the creek had shifted nearly 400 feet to the west.

The scope of the study included a subsurface exploration consisting of three test borings, visual classification, laboratory testing of representative soil samples, and preparation of the geotechnical data submittal.

Erosion had undermined the western railroad bridge abutment. Based on field observations, prior railroad embankment and abutment protection efforts were implemented. Such efforts included a 1.5H:1V riprap-protected slope and installation of sheet piling near the abutment. It was apparent that the sheet piling had separated and was holding logs and debris carried by the creek current. The riprap protection was being undermined near the base which had resulted in settlement of the embankment. Further upstream, the western creek bank had been severely eroded.

The railroad embankment side slopes in the project vicinity were estimated to about 2H:1V or steeper. A deep foundation system for support of the bridge abutment was recommended.

GRISSOM AIR FORCE BASE, OHIO

Terracon was part of a successful design team as the hazardous materials consultant role for the renovate Building 668 at Grissom Air Force (GAFB) Base. Project totaled $13K in services for Terracon. Services included pre-renovation asbestos survey, lead paint testing, and observations for other hazardous material items such as universal wastes (lamps, mercury-containing equipment, and batteries), PCBs, and other similar items. Subsequent to the survey, Terracon provided an asbestos abatement estimate and developed design specifications and plans. During the design process, Terracon participates in the review stages through use of the ProjNet platform (formerly known as DrChecks).

Client: CEMS
Contact: Jeremy Bongiorno, P.E., CBCP, LEED AP BD+C, (843) 875 3637

WRIGHT-PATTERSON AIR FORCE BASE, OHIO

Over the course of the last 5 years, Terracon has been part of a successful design team as the hazardous materials consultant role for dozens of renovation and demolition projects at Wright Patterson Air Force (WPAFB) Base. Projects have totaled over $500K in services for Terracon. Services have included pre-renovation and pre-demolition asbestos surveys, RCRA 8-metals in dust sampling, lead paint testing, and observations for other hazardous material items such as universal wastes (lamps, mercury-containing equipment, and batteries), PCBs, and other similar items. Subsequent to the surveys, Terracon has provided asbestos abatement estimates and developed design specifications and plans. During the design process, Terracon participates in the review stages through use of the ProjNet platform (formerly known as DrChecks). An example list of projects by name at WPAFB have included: AFRL research cell 20 renovation, B33 and B248 HVAC replacement, B79 renovation, B280 renovation, B655 renovation, B1248 home and garden repair exterior finishes, B4020 new fire crash station, B10262 and B10266 renovation, B20194 demolition, B20206 window replacement, B34035 renovation, B167 demolition, central NICC, B20004 window replacement, B10828 DSN repair, historical family housing renovation, historical Foulois House renovation, and repair HVAC VACs 711HPE F200015.

Client: emersion Design
Contact: Mike Chapman, (513) 841 9100

VETERANS AFFAIRS MEDICAL CENTER

Terracon has provided services at VA facilities in Fort Thomas, Louisville, and Lexington, Kentucky; Cincinnati, Chillicothe, Columbus, Cleveland and Dayton, Ohio; and Indianapolis and Marion, Indiana. Professional services have been provided at the Cincinnati VA since 1947. In addition, we have provided services to dozens of others nationwide.

Terracon has provided IAQ services in conjunction with most renovations and construction activity at the Cincinnati Campus. This has included the performance of assessments based on EPA guidelines. Occupant Interview questionnaires have been prepared, distributed to staff members, and evaluated focusing primarily on high complaint areas. HVAC systems have also been monitored. Terracon has also provided the IAQ services in conjunction with more than a dozen asbestos assessments and abatement activities for the VA and their design group. Terracon is viewed as a valuable support team member of Cincinnati VA working closely with their design, facilities, and health and safety professionals.

Terracon performed a geotechnical study for the new Imaging Center addition at the Cincinnati VA Hospital, 3200 Vine Street, Cincinnati, Ohio. The project included a new 8-story building (with a basement) adjoining the existing main VA Hospital building. The addition has approximate plan dimensions of 95 ft. x 125 ft. Maximum column loads were estimated to be on the order of 1,100 kips. Site development included the demolition of existing structures within the addition footprint.

The addition site is located within the footprint of a major drainage swale that has been previously filled in (estimated to be prior to 1949 based on review of available information). Test borings performed for this study revealed up to 50 ft. of uncontrolled fill including cinders, glass, and wood fragments. The uncontrolled fill was underlain by compressible natural cohesive soils and ultimately bedrock. The depth to bedrock (interbedded shale and limestone) was observed to be variable ranging from about 90 ft. to 105 ft. below surface grades. Terracon performed physical laboratory testing on collected soil and rock samples and geotechnical engineering analysis to develop foundation and site preparation recommendations. A deep foundation system, bearing within the interbedded shale and limestone bedrock, was recommended to keep total and differential settlements within tolerable levels. Augered cast-in-place (ACIP) piles were recommended to be best suited for structure support.

Under separate contracts working for Legends Construction Company, Terracon is providing the Quality Control Testing Services in conjunction with Foundations, Site Grading, Concrete, Structural Steel, Masonry, Fireproofing, and Pavement.

Client: Veterans Affairs
Contact: Steve Burkhart, (513) 861 3100, ext. 5398

CINCINNATI/NORTHERN KENTUCKY INTERNATIONAL AIRPORT RUNWAY 9-27 IMPROVEMENTS

Terracon Consultants, Inc. (formerly H.C. Nutting) has performed geotechnical engineering and construction QA/QC testing services at Cincinnati/Northern Kentucky International Airport (CVG) since the 1940s. These projects have included dozens of airside projects including runways, taxiways, aprons, service roads, runway and taxiway bridges, tunnels, glycol transport, storage systems, and deicing pads. Landside and other miscellaneous projects have included terminals, maintenance buildings, hangars, ARFF facilities, baggage, and passenger transport tunnels, fueling facilities and jet fuel lines, sewers, sewage treatment plants, stormwater retention structures, such as dikes, and roller-compacted concrete dams.

In 2018 and 2019, Terracon provided subsurface exploration and geotechnical engineering services for the proposed rehabilitation of Runway 9-27 at the CVG as part of their on-going master-plan improvement projects. Terracon's services were provided to the owner, Kenton County Airport Board, as part of a teaming arrangement with a consulting engineer, C&S Companies. The purpose of this study was to supplement archive data with test borings/cores and further analyses to assist the design team with pavement rehabilitation design, including recommendations relative to subsurface soil and rock conditions, existing pavement section composition, earthwork and subgrade remediation, and pavement design and installation.

H. C. Nutting (now Terracon) began working in this area in 1972 when Yoell Road was relocated. Part of that site later became a borrow source for runway extension construction. Geotechnical studies were performed by Terracon for the extension of Runway 9-27, Taxiways K and J, taxiway connectors, and the deicing pad near Taxiway J in 1993, 1999, and 2001. These projects included planned cuts up to about 15 feet and fill up to 45 feet. A rehab project also took place in 1999 at the eastern end of Runway 9-27 which included the new Taxiway Connector K-3. This rehab project involved investigating the existing asphalt over concrete pavement section and replacing it with a concrete (P-501) section.

Our exploration scope for the current project included the advancement of 34 pavement cores and 12 test borings. This exploration supplemented the many historical borings performed for the projects discussed above. Our project engineers and technicians worked cooperatively with the other project team members and the airport staff to meet strict safety, security, and schedule requirements.

Client: Cincinnati/Northern Kentucky International Airport
Contact: Debbie Conrad, (859) 767 7021

THE GREATER DAYTON REGIONAL TRANSIT AUTHORITY GDRTA BUILDING 600 RENOVATIONS

Terracon performed a geotechnical engineering study for the existing Greater Dayton Regional Transit Authority Building 600 located in Dayton, Ohio. The existing building is a 2-story structure with an upper level serving public bus traffic and lower level serving passenger automobile traffic. Additionally, the building also houses office space which extends off the northwest corner of the structure.

The geotechnical engineering study was performed to assist in design of new interior renovations associated with the existing structure which will be subject to increased loads. Terracon performed a geotechnical study which included Standard Penetration Test (SPT) borings performed on the exterior of the building, laboratory testing of collected soil samples, and foundation engineering analysis.

The subsurface exploration found that existing fill and compressible alluvial soils that were beneath the existing building. Those materials were unsuitable for support of the new building loads when utilizing a conventional shallow foundation system and therefore deep foundations considered as an alternative. Due to the low overhead space, Terracon recommended installing helical piles under the existing building and tying them into the existing columns to support the new loads. The helical piles would be extended below the unsuitable soils into the deeper granular outwash soils and are commonly used in applications where low overhead clearance is required.

Client: Champlin Architecture

Contact: Jay Derenthal, (513) 241 4474

City of Oxford

RFP 2020-014 Chestnut Fields Amtrak A&E

Attachment D Scope Checklist

Proposers must complete the checklist and fill in their estimated hours in order to be considered responsive to the proposal.

Task	Submitted	Total Hours
1. Topographic and Property Survey	**Y**	**56**
2. Project Control	**Y**	**120**
3. Railroad Coordination	**Y**	**80**
4. Topographic Survey	**Y**	**26**
5. Property Survey	**Y**	**30**
6. Utilities	**Y**	**120**
7. Preliminary Engineering (30%)	**Y**	
a. Platform, Shelter, Geotechnical Investigation and Design, Pedestrian Access, Signage, Electrical/Lighting, Communications/Data, and Land-scaping	**Y**	**120**
8. Basis of Design (BOD) Report (100% Design)	**Y**	**228**
9. NEPA Review	**Y**	**60**
10. Benefit Cost Analysis (BCA)	**Y**	**40**
11. Construction Management of Rail Platform	**Y**	**HRLY RATES**
a. Bidding, contracting, and construction management	**Y**	**HRLY RATES**

Identify Key Staff

The project will commence with BCRTA and Oxford identifying each of the key staff members to be interviewed and those who will participate as members of the Stakeholder Group during the process. Persons to be interviewed may include the Director, Managers, Supervisors, and other key staff responsible for an area of the operation. The importance of a comprehensive Stakeholder Group on a multi department campus cannot be understated. The Design Team will also review all documents pertaining to the planning of this project that may have been prepared prior to our involvement. Questionnaires will be developed and approved by the stakeholders prior to the Orientation Meeting.

Orientation Meeting

The Design Team will conduct an orientation/kick-off meeting for all the key persons to explain the process and how each person can participate most effectively. Our process focuses on building consensus and harmony between various stakeholders, thus ensuring a cohesive, integrated campus design approach.

During this meeting, questionnaires will be distributed, the programing verification process will be explained, and issues addressed to ensure the most effective participation by all.

Tour Existing Facilities

Once the questionnaires have been completed and collected, the Design Team will assemble for the first on-site planning session. The first task of this session will be to tour the existing facilities to view the work and operations in progress in order to gain an understanding of current operating philosophies and conditions.

Tour Regional Facilities

We always find it helpful to tour other regional facilities that our team have completed. This is an opportunity for you to discuss lessons learned with peers and view firsthand discuss how some innovative solutions can be translated into operational gains.

Interview Key Staff

Interviews of approximately 1 to 2 hours in length will be held with each of the identified staff to determine more fully the needs, requirements and current operating procedures for each department/division. Typically, these interviews focus on identifying the number of staff, vehicles and equipment, key design issues, the type of work in which each person is involved, the storage requirements, and the function and responsibilities of each department with which there is significant interface. Specific information to be gathered and discussed during the on-site interviews will include, but not be limited to addressing the following issues.

+ Key design issues for each space and/or functional area within the planned facility.

+ Current staffing plans and organization charts.
+ Hours of operation and site and building security requirements.
+ Emergency operation procedures and after hour access.
+ Office, assembly, and operational spaces.
+ Data Center and Emergency operation functions and specific requirements.
+ Staff support space needs including restroom, shower, and locker areas, break rooms, and vending areas.
+ Supervisory, control, and dispatch requirements.
+ Meeting, training, and conference room needs.
+ Requirements for equipment repair, inspection, and special use shops.
+ Fleet type, age, and average annual miles.
+ Equipment servicing requirements.
+ Storage requirements for parts, supplies, materials, and archives.
+ Parking requirements for fleet, employee, visitor, and delivery vehicles.

Analyze Growth/Consolidate Data

The Design Team will analyze the growth data and will make staff and space projections based upon the growth in operational size, fleet size, staff size, and other factors as it pertains to the overall facility. A space matrix will be developed and rolled up showing the space need standards, common areas, and support areas. This analysis will compare the existing facilities against national standards to help determine the appropriateness of the current facilities, and how the service capabilities and vehicle domicile locations impact the final solution.

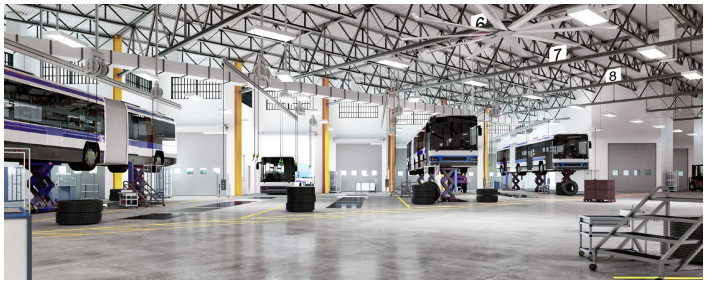
Emerging Technologies and Alternative Fuels

Our team will lead a discussion regarding design impacts of new technologies and alternative fuels that are becoming a very important part of futureproofing Emerging Technologies and Alternative Fuels Our team will lead a discussion regarding design impacts of new technologies and alternative fuels that are becoming a very important part of futureproofing Vehicle Fleet buildings. We have the experience in designing facilities servicing Vehicles with Fuel Cells (hydrogen), Electric, CNG, LP as well as conventional Hydrocarbons. The design decisions made at the onset of the project will determine the long-term usability of the facility, as well as eliminate future costly upgrades. There is no cost of incorporating simple fundamental design principles as it relates to preparing the building for the technologies we will face tomorrow.

Verified Space Needs Program

Based upon the information learned through the questionnaires, interviews, review meeting, and growth analysis, the Design Team will prepare a space needs program. Included in this program will be, industry benchmark standards and ratios, the amount currently required and the projected area to meet growth over the next 10 to 20 years for the Project. A Space Matrix will be developed to show the space needs, standards, common areas, and support areas. Space will be programmed for determined needs and is anticipated to include:

+ Interior spaces (offices, operational spaces, support spaces, shops, maintenance bays of various types, etc.)
+ Covered spaces (canopy covered storage for materials or vehicles)
+ Exterior and vehicle spaces (vehicle circulation, employee parking, agency vehicle parking, visitor parking)
+ Site spaces, including required landscaping, setbacks and space allocation for storm water management etc.
+ A scalable functional relationship diagram will be developed, showing primary and secondary relationships for the site.



A report will be submitted in preliminary form to the client, and then revised based on comments to serve as the basis for the Master Planning/ Conceptual Design.

Define Developable Site Area Envelope

Based upon the information received from survey work as well as the Phase I ESA and wetland delineations, a developable site envelope will be produced and verified. This developable envelope, or "site base plan" will further identify other traffic and utility constraints. It becomes the basis for where programming elements are explored during charrettes in the next phase.

BUILDING CONCEPTUAL DESIGN/ SITE MASTER PLANNING

Once the programming phase is complete, and the short and long operational requirements have been established, the Design team will work with the BCRTA and Oxford to develop the conceptual design.

We propose to use an established design charrette procedure

that our team has successfully used on many similar projects. This process will give all interested stakeholders, users, and agencies the opportunity to work together and build consensus on project functions, quality, and cost.

We have found the most effective way of creating this participatory environment is through intensive multiday sessions in which the Team gathers together at the project site or nearby facility, to actively study, plan, and design the project. The on-site process is a way to consolidate into one or more work sessions what normally takes weeks, or even months, to accomplish. It is also an excellent vehicle to bring together the Team members in one location to brainstorm ideas. The process is focused upon balance, so that solutions represent equal input from your management, the end-users, our planners, designers, and other key stakeholders.

Each consecutive day of the charrette series typically requires a time commitment and participation by the City stakeholders of 1 to 2 hours. The remainder of each day is used by the Design Team, working on-site, synthesizing decisions that have been made by the whole team that day, preparing concept alternatives, and preparing for the next day's session. The time you invest with us will pay large dividend when developing a campus that satisfies the requirements of multiple departments and stakeholders. Given the size and scope of this project, we would propose a one-week sessions with the following schedule framework:

Day 1: Four to Five prototypical site layouts are shown to the work group. The sketches are evaluated based on operational flow and context. Everyone can provide input on advantages as well as disadvantages for each version. Once the team has everyone's comments, we will take the sketches back to the drawing board for the initial fine-tuning.

Day 2: The design team narrows the layouts down to two or three based on the feedback from the previous day. These new designs incorporate everyone's comments and begin to show circulation, parking and rough landscaping features.

Day 3: Another review session and more refinements will allow the design team to combine these last choices down to one final site layout. With the preliminary master plan now being developed, the team will turn its focus to the inside of the buildings.

Days 4-5: The design team will review building interior options and discuss equipment needs in an open forum until a conceptual design is agreed upon.

The charrette process will be one of the most important aspects of Phase I of the project and the project. The design decisions made during this process will inform and shape all later phases of the project. The key to success of the on-site session is momentum, which builds all week to the ultimate closure of ideas toward the end. It always works, and it is always successful. Part of the reason is that people get involved. The speed by which things happen gets everyone excited and encourages participation. Because everything is put out for scrutiny, the participants really become players in doing the work, and they become advocates for the product. The "buy-in" occurs naturally because the participants see their concerns considered and solved instantly in a new set of alternatives or in a modification of an old one.

The completion of this task will translate the programming elements into a well-defined functional project. The site plan and floor plans will include all the various spaces and elements arranged to meet programmatic requirements

6. Disadvantaged Business Enterprise Program

A. The names and addresses of DBE firms that will participate in the contract.

Advanced Engineering Consultants (AEC) is the DBE firm that we have selected for this contract.

B. A description of the work that each DBE will perform.

AEC will be performing mechanical, electrical, plumbing and fire protection engineering.

C. The dollar amount of the participation of each DBE firm participating.

AEC will be participating for $___.

D. Written and signed documentation of commitment to use a DBE subcontractor whose participation it submits to meet a contract goal (Attachment K).

Please see the next section titled "Attachments" for Attachment K.

E. Written and signed confirmation from the DBE that it is participating in the contract as provided in the prime proposer's commitment (Attachment K).

Please see the next section titled "Attachments" for Attachment K.

F. Evidence that proposed DBE is certified through the Ohio Department of Transportation (Attachment L).

Please see the next section titled "Attachments" for Attachment L.

Colin Todd, PE, LEED AP, CEM

Mechanical Engineer: *Colin is one of AEC's Mechanical Engineers. He has more than 14 years of experience designing mechanical systems. His experience includes design of mechanical and plumbing systems for both renovation and new consultation projects. His extensive design experience also includes assisting with mechanical studies and assessments.*

Gavin Lim, PE, LEED AP BD+C, LC

Electrical Engineer: *Gavin has accumulated more than 13 years of experience designing a wide variety of electrical, lighting, and telecommunications systems. He is experienced in fire alarm, power, lighting, systems design, lighting calculations and analysis, design of primary and emergency power distribution systems, preparing construction documents and construction administration.*

Jack Lee, PE, FPE, LEED AP

Plumbing/Fire Protection Engineer: *As a State of Ohio registered Fire Protection Engineer, Jack is uniquely qualified for this role. He has over 30 years of experience with the management and design of a wide variety of mechanical, plumbing, and fire protection systems, including for transportation facilities.*

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ATTACHMENT A – SUMMARY OF PROPOSAL REQUIREMENTS

Failure to Submit Any of the Following Documents May Render Your Proposal Non-Responsive

Proposal Submission: Complete the following checklist indicating that the documents required for this proposal are enclosed.

- X RFP Cover Page
- X Table of Contents
- X Qualifications & Capabilities
- X References and Related Experience
- X Technical Proposal – Multimodal Station & Shared Services Facility
- X Technical Proposal – Passenger Rail Platform
- X Attachment A – SUMMARY OF PROPOSAL REQUIREMENTS (this form)
- X Attachment C – Receipt of Addenda
- X Attachment D – Scope Checklist
- X Attachment E – Certification of Lobbying Restrictions
- X Attachment F – Certification of Government-Wide Debarment
- X Attachment G – Personal Property Tax Affidavit
- X Attachment J – DBE Good Faith Efforts
- X Attachment K – DBE Contractor Commitment
- X Attachment L – Evidence of DBE Certification
- X Bureau of Worker's Compensation Certificate
- X Employer Liability Insurance Certificate
- X Commercial General Liability Insurance Certificate
- X Commercial Auto Liability Insurance Certificate
- N/A ~~Proposer's Warranty Information (as required)~~
- N/A ~~Bid Bond (as required)~~
- X Attachment B - Price Proposal Form (SEALED SEPARATELY)

Authorized Signature	PROJECT MANAGER *Title*
Timothy M. Wiley, RA, NCARB, LEED AP *Signature Name Printed*	*Project Manager* *Title Printed*
emersion DESIGN *Company Printed*	*10/19/2020* *Date*

ATTACHMENT B – PRICE PROPOSAL FORM (BID FORM)

See Excel Document on website.

ATTACHMENT C – RECEIPT OF ADDENDA

The undersigned acknowledges receipt of the following addenda to the Documents.

(Give number and date of each. Please submit with NA if no addendums issued)

Addendum Number 1 Dated 10/02/2020

Addendum Number 2 Dated 10/15/2020

Addendum Number _____ Dated _____

Addendum Number _____ Dated _____

Addendum Number _____ Dated _____

Addendum Number _____ Dated _____

Addendum Number _____ Dated _____

Failure to acknowledge receipt of all addenda may cause the Proposal to be considered non-responsive to this Request for Proposal, which will require rejection of the Proposal.

Signature

Project Manager

Title

ATTACHEMENT D – SCOPE CHECKLIST

See template on website

ATTACHMENT E – CERTIFICATION OF LOBBYING RESTRICTIONS

The undersigned certifies, to the best of his or her knowledge and belief, that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

3. The undersigned shall require that the language of this certification be included in the award documents for all sub-awards at all tiers (including subcontracts, sub-grants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

Signature of Contractor's Authorized Official

Timothy M. Wiley, Project Manager Name and Title of Contractor's Authorized Official

10/19/2020 Date

Firms that engage in lobbying must submit Standard Form LLL in addition to this certification

ATTACHMENT F – GOVERNMENT-WIDE DEBARMENT AND SUSPENSION

2 CFR part 180
2 CFR part 1200
2 CFR § 200.213
2 CFR part 200 Appendix II (I)
Executive Order 12549
Executive Order 12689

Debarment, Suspension, Ineligibility and Voluntary Exclusion

The Contractor shall comply and facilitate compliance with U.S. DOT regulations, "Non-procurement Suspension and Debarment," 2 C.F.R. part 1200, which adopts and supplements the U.S. Office of Management and Budget (U.S. OMB) "Guidelines to Agencies on Governmentwide Debarment and Suspension (Non-procurement)," 2 C.F.R. part 180. These provisions apply to each contract at any tier of $25,000 or more, and to each contract at any tier for a federally required audit (irrespective of the contract amount), and to each contract at any tier that must be approved by an FTA official irrespective of the contract amount. As such, the Contractor shall verify that its principals, affiliates, and subcontractors are eligible to participate in this federally funded contract and are not presently declared by any Federal department or agency to be:

a) Debarred from participation in any federally assisted Award;

b) Suspended from participation in any federally assisted Award;

c) Proposed for debarment from participation in any federally assisted Award;

d) Declared ineligible to participate in any federally assisted Award;

e) Voluntarily excluded from participation in any federally assisted Award; or

f) Disqualified from participation in ay federally assisted Award.

By signing and submitting its bid or proposal, the bidder or proposer certifies as follows:
The certification in this clause is a material representation of fact relied upon by the AGENCY. If it is later determined by the AGENCY that the bidder or proposer knowingly rendered an erroneous certification, in addition to remedies available to the AGENCY, the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment. The bidder or proposer agrees to comply with the requirements of 2 C.F.R. part 180, subpart C, as supplemented by 2 C.F.R. part 1200, while this offer is valid and throughout the period of any contract that may arise from this offer. The bidder or proposer further agrees to include a provision requiring such compliance in its lower tier covered transactions.

Date: *10/19/2020*

Signature: 

Company Name: *emersion DESIGN*

Title: *Project Manager*

ATTACHMENT G - PERSONAL PROPERTY TAX AFFIDAVIT

(O.R.C. 5719.042)

The person making a proposal shall submit to the BCRTA Executive Director a statement affirmed under oath that the person with whom the contract is to be made was not charged at the time the proposal was submitted with any delinquent personal property taxes on the general tax list of personal property of any county in which the taxing district has territory or that such person was charged with delinquent personal property taxes on any such tax list, in which case the statement shall also set forth the amount of such due and unpaid delinquent taxes and any due and unpaid penalties and interest thereon. If the statement indicates that the taxpayer was charged with any such taxes, a copy of the statement shall be transmitted by the Manager of Administration to the county treasurer within thirty (30) days of the date it is submitted.

STATE OF *OHIO*
COUNTY OF *HAMILTON*

The undersigned being first duly sworn states that he/she is (check one):

□ the proposer OR ☒ the duly-authorized representative of the proposer

to whom a contract pursuant to Invitation for Proposal No. 2020-015 for LEGAL SERVICES was awarded; and further states that, at the time the proposers' proposal was submitted (check and complete as required):

☒ proposer was not charged with any delinquent personal property taxes on the general tax list of personal property of *Hamilton, Ohio*
(County, State)

□ proposer was charged with delinquent personal property taxes on the general tax list of personal property of as follows: _____
(County, State)

$ _____ in due and unpaid delinquent taxes

$ _____ in due and unpaid penalties and interest thereon

Name of Proposer: *Timothy M. Wiley, RA, NCARB, LEED AP*
Authorized Signature: _____
Title: *Project Manager*
Company: *emersion DESIGN*
Address: *310 Culvert Street, Suite 100*
City, State, Zip: *Cincinnati, OH, 45202*

Sworn to before me and subscribed in my presence this *Nineteenth* day of

, *October* 20 *20* .

ATTACHMENT J - DISADVANTAGED BUSINESS ENTERPRISE (DBE) GOOD FAITH EFFORTS

PART 1: GUIDELINES

On DOT-assisted projects that have an established DBE Contract Goal or establish a DBE Participation expectation (no specific contract goal), the Prime Contractor must make sufficient Good Faith Efforts ("GFEs") to meet the goal or expectation. The Prime Contractor can meet this requirement in either one or two ways. First, the Prime Contractor can meet the requirement with sufficient DBE participation. Second, the Prime Contractor can document adequate GFEs to meet the DBE requirement on the project. Both ways require review and approval. CFR Title 49, Part 26, Appendix A, states that determination concerning the sufficiency of the Prime Contractor's GFEs is a judgement call and using quantitative formulas is not permitted to make the determination.

Demonstration of GFEs

A Prime Contractor must show that it took all necessary and reasonable steps to achieve a DBE goal which could reasonably be expected to obtain sufficient DBE participation, even if it was not successful. The documentation should reflect that the Prime Contractor was actively and aggressively trying to obtain DBE participation sufficient to meet the DBE contract goal. Mere pro forma efforts are not an acceptable demonstration of a Prime Contractor's GFEs in meeting the DBE requirements.

A Prime Contractor selecting portions of work to be performed by DBEs will increase the likelihood that the DBE requirements will be achieved. This includes, where appropriate, breaking out contract work items into economically feasible units (i.e. smaller tasks or quantities) to facilitate DBE participation, even when the Prime Contractor might otherwise prefer to perform these work items with its own forces.

Documentation of GFEs

Evidence of GFEs should include, but are not limited to, a list of names, a number of contact attempts, how firms were contacted (i.e. copies of e-mail, letters, etc.), addresses, and telephone numbers of DBEs that were considered; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why agreements could not be reached for DBEs to perform the work. Please note that documentation provided may be subject to audit.

Additional Considerations

The fact that there may be some additional costs involved in finding and using DBEs is not in itself sufficient reason for a Prime Contractor's failure to meet the contract DBE requirement, as long as such costs are reasonable.

The ability or desire of a Prime Contractor to perform the work of a contract with its own organization does not relieve the Prime Contractor of the responsibility to make GFEs.

Prime Contractors are not required to accept higher quotes from DBEs if the price difference is excessive or unreasonable. It should be noted that excessive or unreasonable will be evaluated on a case by case basis while reviewing the Prime Contractor's total GFEs submittal.

In the event of a substitution or a replacement of a DBE on a project, a Prime Contractor's inability to find a replacement DBE at the original price is not alone sufficient to demonstrate GFEs.

Prime Contractors should select DBE firms that have been DBE certified with the proper NAICS codes for the work the DBE will be performing. Conversely, DBE firms should not commit to work that they do not have the proper NAICS codes to perform.

PART 2: DBE UNAVAILABILITY CERTIFICATION

Timothy M. Wiley, RA, NCARB, LEED AP (Affiant) — 10/19/2020 (Date)

of emersion DESIGN (Prime or General Bidder)

certify that prior to the bid opening date, I contacted the following DBE contractors to obtain a bid/proposal forservices/supplies necessary to be performed on RFP-2020-014.

Disadvantaged Service/Supplies

Date	Contractor *(Must be DBE)*	Item(s) Sought *(i.e., Unit Price, Material & Labor, Labor Only, etc.)*
	N/A	

Attach a detailed narrative of efforts made to involve disadvantaged contractors, subcontractors, & suppliers as suggested in Attachment J, Part 1.

N/A

To the best of my knowledge and belief, said disadvantaged contractor(s) was unavailable (exclusive of unavailability due to lack of agreement on price) for work on this project, or unable to prepare a bid/proposal for the following reasons:

N/A

Signature: _____ *(Prime or General Contractor)*

Date: 10/19/2020

N/A was offered an opportunity

(DBE firm)s

participate on the above identified Legal Notice on _____ by _____

(date) *(Source)*

ATTACHMENT K - DBE CONTRACTOR COMMITMENT

PART 1: DBE UTILIZATION

The undersigned bidder/offeror has satisfied the requirements of the bid specification in the following manner (please check the appropriate space):

__X__ The bidder/offeror is committed to a minimum of __15__ % DBE utilization on this contract. **minimum 15% on first phase, 30% on entire contract*

_____ The bidder/offeror (if unable to meet the DBE goal of ____%) is committed to a minimum of ____% DBE utilization on this contract a submits documentation demonstrating good faith efforts.

Name of bidder/offeror's firm: *emersion DESIGN*

State Registration No. *42-1745940*

By _____ PROJECT MANAGER

(*Signature / Title*)

PART 2: DBE PARTICIPATION CONFIRMATION

Name of bidder/offeror's firm: *emersion DESIGN*

Address: *310 Culvert Street, Suite 100*

City: *Cincinnati* State: *OH* Zip: *45202*

Name of DBE firm: *Advanced Engineering Consultants, Ltd.*

Address: *1405 Dublin Road*

City: *Columbus* State: *Ohio* Zip: *43215*

Telephone: *614-486-4778*

Description of work to be performed by DBE firm:

Mechanical, Electrical, Plumbing and Fire Protection Services

The bidder/offeror is committed to utilizing the above-named DBE firm for the work described above. The estimated dollar value of this work is $ *30,000 (first phase)*

Affirmation

The above-named DBE firm affirms that it will perform the portion of the contract for the estimated dollar value as stated above.

By _____ PROJECT MANAGER

(Signature / Title)

If the bidder/offeror does not receive award of the prime contract, any and all representations in this Letter of Intent and Affirmation shall be null and void.

(Submit this page for each DBE subcontractor.)

ATTACHMENT L - EVIDENCE OF DBE CERTIFICATION

AFFIDAVIT OF DISADVANTAGED BUSINESS ENTERPRISE

State of Ohio

County of Franklin

I hereby declare and affirm that I am the President
(Title)

and duly authorized representative of Advanced Engineering Consultants, Ltd.
(Name of Company)

whose address is 1405 Dublin Road, Columbus, OH 43215

I hereby declare and affirm that I am a disadvantaged business enterprise and can be found listed in the Ohio Unified Certification Program (UCP) as AWP Vendor ID: D23083116

I DO SOLEMNLY DECLARE AND AFFIRM UNDER THE PENALTIES OF PERJURY THAT THE CONTENTS OF THE FOREGOING DOCUMENT ARE TRUE AND CORRECT, AND THAT I AM AUTHORIZED, ON BEHALF OF THE ABOVE FIRM, TO MAKE THIS AFFIDAVIT.

By: _____ Oct. 13, 2020
(Affiant) *(Date)*

On this 13th day of October , 20 20 , before me,

Lisa Huang , known to me to be the person described in the foregoing affidavit acknowledged that he/she executed the same in the capacity therein stated and for the purpose therein contained.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

_____
(Notary Public)

My Commission Expires: 09/29/2021 (SEAL)

KRISTEL L. SHERWOOD
Notary Public, State of Ohio
My Commission Expires 09-29-2021