Indiana Department of Transportation
80/94 FlexRoad Project
RFP #PD2403
Technical Proposal (Proposal Volume 2)

Due Date:
12/20/2024 | 4:00 ET
via INDOT EDMS

SUBMITTED TO:
Brian W. Shattuck
Major Projects Project Manager
Indiana Department of Transportation
100 N. Senate Ave.
Indianapolis, IN 46204

SUBMITTED BY:
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FHP CMGC TEAM | F.H. PASCHEN | ALDRIDGE | MARTELL ELECTRIC LLC CONTRACTORS & ENGINEERS | Jacobs

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FHP CMGC TEAM | FHP F.H. PASCHEN | ALDRIDGE | MARTELL ELECTRIC LLC CONTRACTORS & ENGINEERS | Jacobs

80/94 FLEXROAD CMGC TEAM

PARSONS · F.H. PASCHEN · MARTELL ELECTRIC LLC · ALDRIDGE · Jacobs

Project Executive
Jim Reitz (FHP)

Engineer of Record
Parsons Transportation Group

Project Manager
David Beale, TCS (FHP)

Safety Manager
Don Snyder, CHST (FHP)

Construction Quality Manager
Jim Claus, CMQ/OE, CQA (FHP)

Electrical Quality Manager
Brian McLinden (Aldridge)

Engineering Consultant
Chad Hammerl, PE, PTOE (Jacobs)

Project Scheduler
Kim Campagna (FHP)

Construction Manager
Steve Fernandez, TCS (FHP)

Elec. Project Manager Underground Infrastructure
Matt Wiseman (Martell)

Elec. Project Manager ITS/Foundations
Dan Hourihan (Aldridge)

TSMO Coordinator
Josh Platt (Aldridge)

Lead Estimator
Eric Wasko (FHP)

Project Superintendent
Joel Pervinich (FHP)

Maintenance of Traffic (MOT) Manager
Byron Stevens, TCS (FHP)

Prefab Director
Jeff Buckley (Aldridge)

Electrical Estimator ITS/Foundations
Brian Floral (Aldridge)

Project Superintendent ITS/Foundations
Caoilte Byrne (Aldridge)

Electrical Estimator Underground Infrastructure
John Martell, PE (Martell)

Project Superintendent Underground Infrastructure
Pete Schindler (Martell)

LEGEND
Proposer: F.H. Paschen, S.N. Nielsen & Associates LLC (FHP)
Identified Subcontractors: Aldridge Electric, Inc. (Aldridge) | Martell Electric, LLC (Martell) | Jacobs Engineering Group (Jacobs)
Key Personnel

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EXPERIENCE OF THE PROPOSER AND IDENTIFIED CONTRACTORS

CMGC TEAM | F.H. PASCHEN | ALDRIDGE | MARTELL ELECTRIC LLC CONTRACTORS & ENGINEERS | Jacobs

EXPERIENCE OF THE PROPOSER AND IDENTIFIED CONTRACTORS

F.H. PASCHEN | PROPOSER

F.H. Paschen, S.N. Nielsen & Associates LLC (FHP) is known for delivering complex transportation projects and will bring this directly applicable experience to the FlexRoad project. As a Construction Manager/General Contractor that has completed major CMGC, CMAR, and design-build public infrastructure projects. FHP's expertise in alternative delivery will include CMGC team members that are subject matter experts in innovative project delivery on both a local and national level.

FHP has operated as a general contractor and construction manager with a family history in construction for over 115 years. We have focused on public infrastructure throughout our history. In the last decade, FHP has completed over $3 billion in public transportation infrastructure projects. We are staffed with industry experts that have completed hundreds of complex projects for clients that include INDOT, Illinois Department of Transportation (IDOT), NICTD, Illinois State Toll Highway Authority (ISTHA), Chicago Transit Authority (CTA), Chicago Department of Transportation (CDOT), and Chicago Department of Aviation (CDA). These projects entailed complex phasing and sequencing to meet aggressive schedules while maintaining continuous, around the clock operations.

Our Michigan City, Indiana office, led by FHP Vice President, Jim Reitz, has focused on INDOT projects, aviation projects, industrial projects, and local municipal infrastructure. FHP is also currently completing the $584 million NICTD West Lake Corridor project with Aldridge Electric, Inc. as our electrical subcontractor and Jacobs Engineering Group as our Lead Designer. **We are proud to be the recipient of the 2024 Silver Safety Program Award from Indiana Constructors, Inc. (ICI). This recognition highlights our commitment to being a Leader in Construction Employee Safety, achieving excellence with over 1,000,000 manhours worked.** FHP has the experience and resources to deliver the FlexRoad project collaboratively with INDOT and Parsons, bringing experience, innovation, and CMGC expertise to the preconstruction process which will ultimately lead to a best value construction project.

F.H. PASCHEN | LEADER IN TRANSPORTATION CONSTRUCTION & ALTERNATIVE DELIVERY

INDOT PROJECTS | $150+ MILLION

Working with INDOT has allowed FHP to engage in a diverse range of projects from the $58 million design-build of 8+ miles of I-69 to numerous other projects of various scopes and complexity. Work includes concrete paving, bridge reconstruction, foundation installation, excavation, storm drainage, wetlands, environmental, railroad coordination, ITS infrastructure, box culverts, and complex maintenance of traffic.

ISTHA I-294 PROGRAM | $735 MILLION

This program includes the widening, reconstruction, and demolition of multiple sections of I-294, including bridges, ramps, retaining walls, and noise abatement walls. Highlights include ITS gantries, overhead signs, toll plazas and bridge replacements over railroads, canals, and rivers. Additional work covered drainage improvements, detention ponds, erosion control, fire protection systems, temporary soil retention, grading, lighting, signage, and complex maintenance of traffic.

O'HARE 21 CMAR PROGRAM | $800 MILLION

As a member of one of the O'Hare 21 CMAR teams, FHP has completed approximately $800 million in preconstruction services and complex construction in operational areas of the airport since 2018. The $100 million Taxiway A/B East West Advance Work project consisted of the relocation of Fiber Optic Transmission Systems (FOTS) and required extensive coordination with FAA and other stakeholders for nightly runway and taxiway closures. The scope included proofing of existing conduits and routing followed by installation of innerduct, pull rope, fiber optic cable, additional conduits, cable trays, patch panels, connectors, and pull boxes to support the fiber optic system installations. The project also included testing, termination, quality control testing, and commissioning of these systems. The CMAR team, with Aldridge as our electrical subcontractor, installed 51 miles of new FAA 24 strand fiber, eight miles of airfield lighting controls (12 strand fiber), and 22 miles of new airline 96 strand fiber.

CMGC TEAM MEMBERS

When planning for the 80/94 FlexRoad project, we understood that in order to maximize the value of the CMGC delivery method we would need strong electrical subcontracting partners that would participate in the preconstruction phase and be integral to developing the most efficient and constructable approach and schedule for this project. Our team includes **Aldridge Electric, Inc. (Aldridge) and Martell Electric, LLC (Martell)** as Identified Contractors. Aldridge and Martell have extensive highway experience, including local and nationwide ITS experience that will bring value to this project. Additionally, Aldridge was the electrical contractor for the last major reconstruction of the IDOT Borman Expressway and has a comprehensive understanding of IDOT's technology systems. Their institutional knowledge of the IDOT system will ensure efficient coordination of the IDOT tie-in points. Martell has been providing electrical services, including fiber optic networks and ITS, in Indiana for many years.

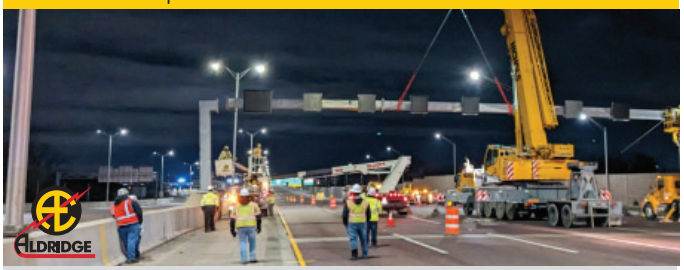
ALDRIDGE / MARTELL TEAM

Engaging two industry-leading electrical contractors that are experts in the scope of this project on both a local and national level will bring cost and schedule certainty, best practices, and the labor and equipment resources for successful and on-time project delivery.

While there will be a clear division of scope, Aldridge and Martell will share resources as needed to advance the project. Aldridge will be responsible for all above-ground infrastructure (including foundations for ITS and sign structures) and Martell will be responsible for installing the underground fiber network. Aldridge will furnish, install, and oversee all testing of the ITS network hardware and software.

ALDRIDGE | FHP and Aldridge have partnered on over 80 projects of all sizes and complexity, totaling over $400 million in subcontracts. This long-term partnership experience has allowed FHP and Aldridge to seamlessly share industry knowledge that results in the best value to our clients. Aldridge is an innovation leader in the electrical construction industry. By leveraging subject matter and technology experts, Aldridge delivers creative solutions for the most challenging aspects of a project. Their comprehensive pre-planning process, including the use of Virtual Design and Construction (VDC) modeling and identification of prefabrication opportunities will bring cost and schedule-saving innovations to this project. Aldridge's extensive resume of Intelligent Transportation System (ITS) and Active Traffic Management (ATM) work with agencies such as IDOT, ISTHA, VDOT, CDOT, MDOT, and the City of Chicago ensures that the FHP CMGC team will incorporate this complex scope into the planning of this project from day one to develop an integrated and efficient project schedule.

ALDRIDGE | LEADER IN PREFAB INNOVATION



ISTHA I-21-4837 ATM ITS & FIBER

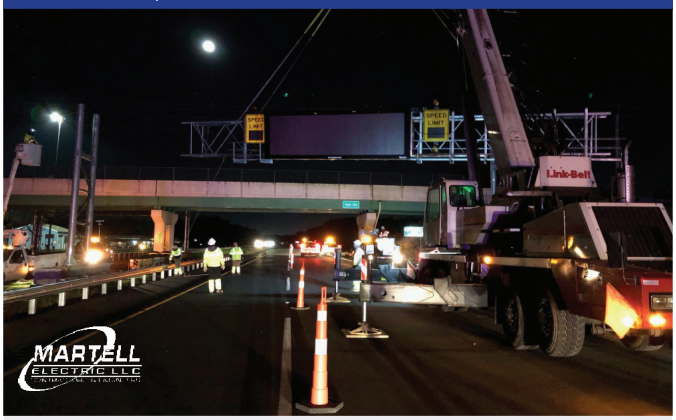
Aldridge installed ITS equipment, equipment cabinets, ATM structures and dynamic signs, CCTV, VDS monopole CCTV assembly, ramp detection, ITS steel poles, all communication and power equipment and wiring, removal/relocation of existing ITS equipment, new fiber optic communication cable and network switches, connection to tolling system at plazas, and maintenance of traffic. **Prefabrication of 14 gantry structures, each with seven DMS signs was a major differentiator on the project.** With all the fiber and power landed in the signs before installation, lane closures and the effect on traffic was reduced. Each gantry was installed in one night shift with no more than two 15-minute all stops. Building and installing the same gantry on-site would have involved one night to install the gantry and four nights of triple lane closures for the sign and fiber/power installation. **The Aldridge prefabrication strategy saved 56 nights on the jobsite involving significant lane closures.**

MDTA BAY BRIDGE AUTOMATED LANE CLOSURE SYSTEM (ALCS)

This ALCS installation was the first of its kind in the United States. The scope demanded precise coordination and integration of various ITS components, including overhead lane control signs, in-pavement lighting, and automated swing gates. Aldridge utilized a prefabrication and modular design approach. Roadside cabinets, in-pavement lighting assemblies, and lane control devices were preassembled and thoroughly bench tested offsite. **Aldridge was awarded the Excellence in Partnering Award from MdTA for successful owner collaboration throughout the project.**

MARTELL | Indiana-based Martell Electric, LLC (Martell) provides electrical infrastructure and telecommunication services to clients in Indiana, Michigan, and Arizona. They thrive on the more complex logistically challenging projects. With office locations around the Midwest, Martell's robust local labor force ensures that adequate labor will always remain on site. They have a proven history of executing large and complex projects with aggressive schedules in a fully employed market. Martell has completed major ITS infrastructure projects for MDOT, Indiana Toll Road Concession Company (ITRCC), and has also installed and provided maintenance of complete fiber optic networks for St. Joseph Valley Choice Light.

MARTELL | LOCAL FIBER OPTIC/ITS EXPERTISE



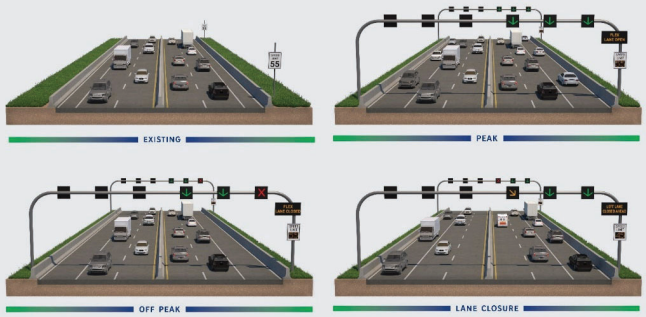
ITRCC 80/90 PUSH

The ITRCC 80/90 PUSH project included a new fiber optic backbone and ITS network along 157 miles of the Indiana Toll Road connecting Ohio to Illinois. As part of this multi-phased 80/90 PUSH project, Martell Electric designed and installed more than **750,000 ft of fiber, 21 DMS structures, 46 CCTV cameras,** and several active wrong way detection systems, which was all completed to INDOT standards.

In addition to the design and installation, Martell Electric worked closely with the systems integrator to test and integrate all improvements into ITRCC's new Traffic Management Center software. This project provided the ITRCC with the ability to offer advanced incident detection and messaging, monitor traffic flows, change advisory limits, and reduce wrong way incidents along the Toll Road. In almost 100,000 hours of construction there were zero lost time incidents, Martell minimized downtime on the Toll Road and met the aggressive schedule of each phase. **Upon completion, the ITRCC reported an 11% reduction in accident rates and 26% reduction in cumulative lane closure occurrences.**

JACOBS | In addition to FHP's key electrical subcontractors, we are also including Jacobs Engineering Group, Inc. (Jacobs) on the FHP CMGC team. Jacobs has recently led FlexRoad designs in Ohio, Pennsylvania, and Virginia, and continues to support these agencies as they migrate to second and third-generation designs. Jacobs led a 2-day best practices information sharing workshop with both the PennDOT and Virginia DOT to discuss hard shoulder running, lane control sign usage, and variable speed limits. On the I-80/94 FlexRoad project, having an experienced engineering firm on our team takes full advantage of the CMGC delivery method with no impact on project costs or schedule. In addition to working with FHP on NICTD West Lake Corridor since 2019, Jacobs has worked with FHP on several design-build projects and pursuits. During the preconstruction phase, Jacobs will support the CMGC team through value engineering reviews and constructability assessments, as needed. **Jacobs will add value by bringing national managed lane/hard shoulder running operation and integration experiences to enhance the preconstruction phase.**

JACOBS | DELIVERING VALUE TO OWNERS



PENNSYLVANIA DOT I-76 INTEGRATED CORRIDOR MANAGEMENT

Jacobs is leading a multi-disciplinary team to provide program management and design services for a fully active traffic management (ATM) solution along I-76 outside of Philadelphia including hard shoulder running (Flex Lanes). Their scope includes:

- Planning: Systems Engineering, Environmental Investigation, Traffic and Safety Modeling (Vissim and IHSDM), Alternatives Analysis
- Roadway and Structure Design to facilitate necessary widening for Flex Lanes
- ITS: CCTV, DMS, Lane Use Control, Dynamic Junction Control, Hard Shoulder Running, Variable Speed Limits, Queue Detection, Ramp Metering
- Network: Design of Fully Redundant Communications and Electrical Distribution Systems

DEVELOPING AND IMPLEMENTING INNOVATIVE, COST SAVING, AND VALUE ADDITIVE CONCEPTS

COST REDUCTION INCENTIVE PLAN

F.H. Paschen | INDOT R-41434-A - PCC Thin Overlays and Asphalt Resurface

FHP and INDOT recognized that the final 11,000 feet of the project was extremely congested due to the amount of traffic caused by the residents and I-65. Together, INDOT and FHP developed a Cost Reduction Incentive Plan. The CRI Plan eliminated the installation of 5 inches of reinforced concrete on this portion of the project. The designer determined that 4.5 inches of intermediate asphalt and 1.5 inches of surface asphalt would suffice in lieu of the originally specified 5 inches of concrete. The use of 5 inch PCC thin concrete overlay is a unique method that INDOT and the American Concrete Paving Association regard as a high-profile demonstration of thin concrete benefits. **The CRI Plan was a determining factor of this project's success, resulting in significant cost savings and a three-week reduction in schedule.**

SAFER AND MORE EFFICIENT WORK PLAN

F.H. Paschen | INDOT R-42445-A Small Structure Replacement

This project consists of removing and replacing nearly 200 linear feet of 78 inch diameter smooth concrete pipe with waterproofing membrane. The project was originally to be completed by multiple Maintenance of Traffic phases to install the pipe. After several meetings with INDOT, existing field conditions did not make it possible to install the concrete pipe per plan. The plans indicated that a centerline retention system was needed to install the pipe per the planned traffic configuration.

FHP partnered with INDOT to establish two crossovers that eliminated the need for the phased centerline retention system, creating a safer work zone for the construction workers and the traveling public and providing a higher quality finished product for the project.

INNOVATIVE CONSTRUCTION METHODS

Aldridge | I-64 Express Lanes Segment 2

Aldridge led the project from the heavy civil work to the Intelligent Transportation Systems (ITS). The 8 mile project included one express lane in each direction, 4 overhead tolling gantries, 27 cabinets, 16 dynamic message signs, 6 generators, and the retrofit of existing ITS services and devices. **Expertise in innovation was evidenced when Aldridge set a prefabricated 238 foot truss span over both sides of I-64 which carries 12 travel lanes plus shoulders**. This structure, the largest in Aldridge history, required two cranes with six tractor-trailers of counterweights to set in place. The removal of the existing structure was also accomplished during the same shift.

EARLY CONTRACTOR INVOLVEMENT/DESIGN-ASSIST

Martell | ITRCC 80/90 PUSH

This project provided ITRCC with the ability to offer advanced incident detection and messaging, monitor traffic flows, change advisory limits, and reduce wrong way incidents along the Toll Road. **To meet the aggressive project schedule and help minimize cost, Martell's collaboration with ITRCC was a blend of early contractor involvement and design-assist.** Martell's fiber optic design ensured adequate sizing and placement of cable to allow their team to install state-of-the-art information capabilities to inform drivers via overhead message boards, speed limit signs, and incident detection cameras.

BEST VALUE SOLUTIONS

Jacobs | Indiana Toll Road Owner's Rep

Jacobs has been the Owner's Representative to the Indiana Toll Road since 2017. They have worked to optimize several ITS deployments. Following several high profile head-on crashes, ITRCC initiated a project to install active wrong way detection at 12 locations. After review of geometric conditions a non-technical solution was recommended. The end result was 5 active wrong way detection systems and 7 barrier systems. **This strategy reduced cost and eliminated incidents of wrongway driving at each of these locations.**

3 KEY PERSONNEL EXPERIENCE

DAVID BEALE, TCS

Project Manager

EDUCATION

St. Joseph College,
B.S. Education, Business

CERTIFICATIONS

- OSHA 30
- ATSSA Traffic Control Supervisor
- ATSSA Traffic Control Technician
- INDOT Level 1 Stormwater Quality Manager
- INDOT HMA Field Supervisor

SKILLS

- Design-Build
- Innovative Project Delivery
- Cost Reduction Incentives
- Traffic Control & Maintenance of Traffic
- Construction Sequencing
- Railroad Coordination
- Wetlands
- Concrete Paving
- Estimating

18 YEARS OF EXPERIENCE

PROFESSIONAL EXPERIENCE

Dave has 18 years of construction industry experience. Most of Dave's career has been in the management of INDOT highway / road / bridge rehabilitation and reconstruction projects that require extensive phasing. He is experienced with stakeholder engagement and proficient at subcontractor coordination and management. Additionally, Dave's experience in managing large-scale projects requiring minimal disruption to the travelling public will be an asset to this project. As Project Manager, he develops strong client relationships and facilitates effective communication among project teams, clients, and stakeholders. He will be responsible for overall team leadership, cost management, schedule review, and project progress through completion. Dave will be the Primary Point of Contact for INDOT.

REPRESENTATIVE PROJECT EXPERIENCE

INDOT | I-65 Design-Build Rehabilitation | Lafayette, IN | $100 million

Complete rehabilitation of Interstate 65 in Lafayette Indiana from the Wabash River to State Road 38. Project scope included concrete slipform paving, bridge deck overlays, piling installation, cofferdam, bridge monitoring system, bridge demolition, bridge beam steel erection, bridge deck replacement, installation of weight in motion system, maintenance of traffic management.

Robert Fisher, Program Director – Construction Services | Parsons | Robert.fisher@parsons.com | 317-616-1000

INDOT | I-65/I-465 Bridge Replacement | Indianapolis, IN | $23 million

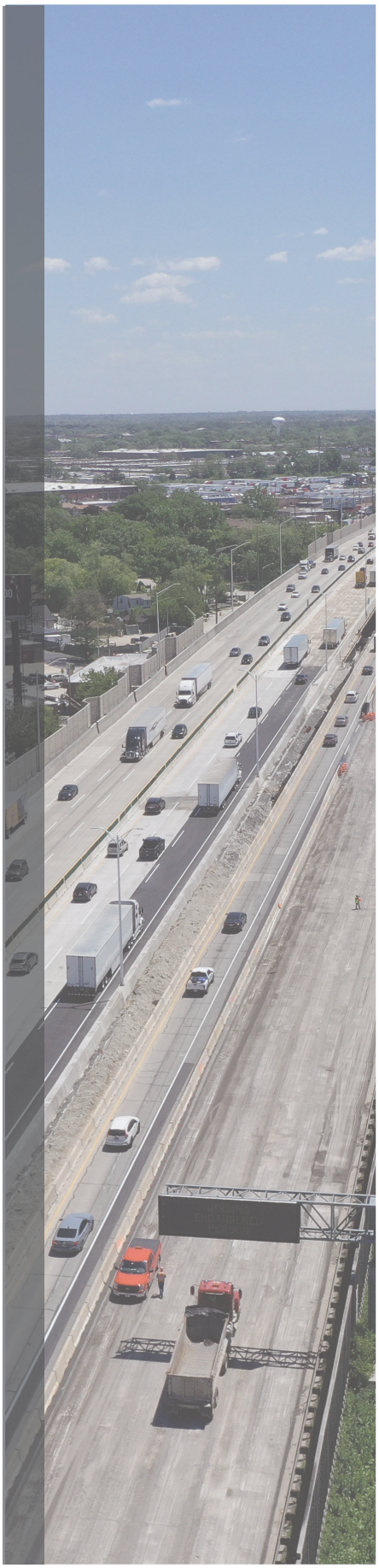
Mainline concrete slipform paving, pile installation, subgrade treatment, MSE wall installation, sheet piling installation, complete bridge demolition, underdrain installation, temporary barrier wall installation, concrete slipform of barrier wall, elastomeric bearings installation, bridge beam steel erection, drainage improvements, earthwork excavation, cold weather concrete placement, bridge deck replacement, maintenance of traffic management.

Ling Gan, Construction Engineer | INDOT | lgan@indot.in.gov | 765-745-1717

INDOT | SR 114/SR 16 PCC Thin Overlay and Asphalt Resurface | Jasper/Newton County, IN | $17 million

Precision controlled mainline PCC thin bonded overlay slipform paving, patch/earthwork excavation, subgrade treatment, installation of drainage improvements, precision milling technology, maintenance of traffic management.

Rick Newton, Area Engineer | INDOT | rinewton@indot.in.gov | 219-214-2887



INDOT | SR 2 Interchange Reconstruction | Lowell, IN | $10 million

Mainline concrete slipform paving, subgrade treatment, installation of drainage improvements, earthwork excavation, underdrain installation, installation of reinforced concrete pipe, chemical modification of subgrade, maintenance of traffic management.

Tom Stryzinski, Construction Project Manager | INDOT | tstryzinski@indot.in.gov | 219-344-0996

INDOT | US 41 Bridge over Montgomery Ditch | Kentland, IN | $9 million

Demolition, pile installation, subgrade treatment, HMA milling, bridge deck replacement, maintenance of traffic management.

Don Leonard, Area Engineer| INDOT | Retired

INDOT | US 52 Thin PCC Overlay | Fowler, IN | $6 million

Precision controlled mainline PCC thin bonded overlay slipform paving, patch/earthwork excavation, subgrade treatment, precision milling technology, maintenance of traffic management.

Erik Seef, Construction Manager | Burgess & Niple | erik.seef@burgessniple.com

INDOT | US 41 Widening | St. John, IN | $5 million

Conventional milling, widening of mainline, earthwork excavation, precision controlled slipform curb and gutter, QC/QA, HMA placement, maintenance of traffic management.

Karen Douthett, Area Engineer| INDOT | 219-363-2232 | kdouthett@indot.in.gov

City of Fort Wayne Indiana | Effluent Pump Station and Pond Improvements | Fort Wayne, IN | $15 Million

Installation of effluent pump station, sedimentation pond improvements, CS pond sweetwater improvements, deep earth foundation installation, CS ponds outfall improvements.

Brian Robinson, Superintendent | City of Fort Wayne | 260-427-2409

Town of Kentland Board of Aviation Commissioners | Kentland Municipal Airport West Aircraft Apron Division C Kentland, IN | $2 Million

Subgrade improvements, precision controlled mainline PCC thin bonded overlay slipform paving.

Joseph D. Worley, Regional Aviation Lead/Assistant VP | Hanson Professional Services Inc. | jworley@hanson-inc.com | 317- 850-7100

The Wetlands Initiative | Water Control Structure Construction | Highland, IN and Gary, IN | $175,000

Construction of two concrete stop-log water control structures within the outlet channels of two wetland systems along the West Branch of the Little Calumet River.

Harry Kuttner | The Wetlands Initiative | 312-504-0129

STEVE FERNANDEZ, TCS

Construction Manager

EDUCATION

Purdue University,
B.S. Organizational Leadership

CERTIFICATIONS

- OSHA 30 HR
- First Aid/CPR
- ATSSA Traffic Control Supervisor
- Excavation Competency
- Rigging and Lifting
- Fall Protection
- Silica Awareness
- Indiana State Dig Law Trained

SKILLS

- Construction Management
- Subcontractor Management
- Surveying
- Estimating
- Complex Maintenance of Traffic

33 YEARS OF EXPERIENCE

PROFESSIONAL EXPERIENCE

Steve has been in the construction industry for 33 years. In his four years with F.H. Paschen, Steve has primarily been overseeing field construction on INDOT projects of varying scopes and complexity throughout his career. He has also managed apron projects at Gary/Chicago International Airport, Kentland Municipal Airport, and French Lick Municipal Airport. During Preconstruction, Steve will review plans and design submittals for constructability and performance optimizations. During Construction, he will oversee daily field operations, resource procurement and allocations, manage the project superintendents, coordinate and schedule subcontractors, verify work according to contract drawings and specifications, and ensure the safety and quality of the project site.

REPRESENTATIVE PROJECT EXPERIENCE

ITRCC | Indiana Toll Road PUSH | $200 million

Complete rehabilitation of roadway/bridges from MM20 to MM93 on the Indiana Toll Road over a two-year period. The scope included repair of the bridges, pile installation, substructure repair/replacement, structural steel repair/replacement, bearing modification/replacement, bridge deck removal/replacement, slope wall repair/replacement, lead abatement/clean/paint structural steel, latex modified bridge deck overlay, and traffic maintenance.

Jacob Kwilasz, Project Manager | Rieth-Riley | 219-916-8143

INDOT | R-41434-A Thin Concrete Overlay on SR114, Newton & Jasper County | $17 million

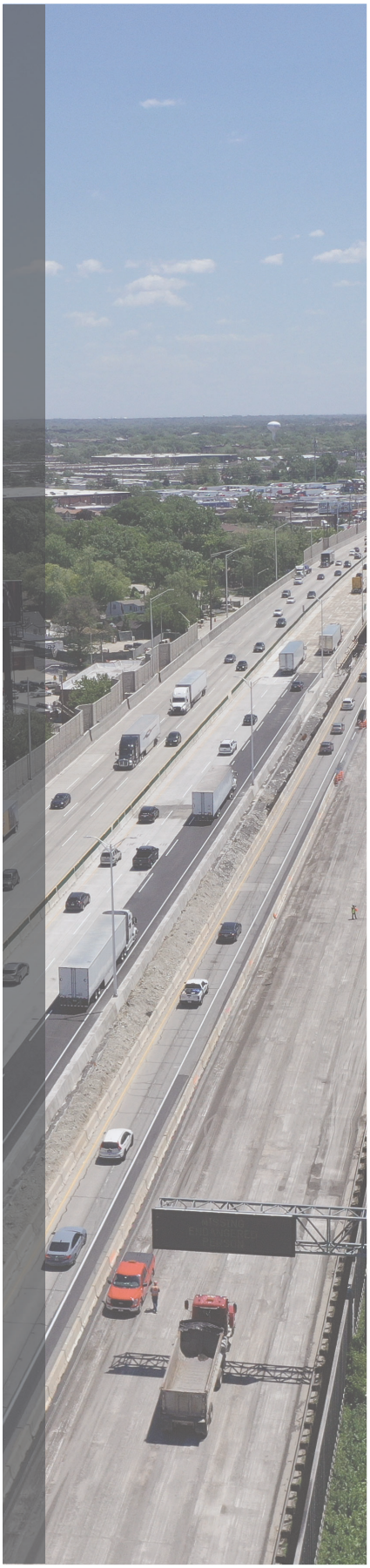
Project scope required the milling of existing HMA roadway surface to be milled to grade, installation of drainage piping, undercutting of unsuitable soils, subgrade treatment installation, subbase installation, QC/QA PCC Thin Bonded Overlay installation, HMA milling/replacement, aggregate shoulder installation, guardrail removal/replacement, signage/striping installation, shoulder corrugation installation, traffic maintenance and landscaping.

Sam Gilcrest, Engineer | INDOT | 219-221-3527

INDOT | B-36679-A SR23 over St. Joseph River/Associated Bridges | St. Joseph County | $18.9 million

Rehab of existing SR23 bridge over the St. Joseph River including rip rap placement around existing piers, substructure demolition/patching, abutment demolition/replacement, major structural steel repairs, removal/replacement of the existing bridge deck, approach slab removal/replacement, latex modified overlay of existing exit ramp, HMA milling/replacement, lead abate/clean/repaint entire structure and associated traffic maintenance. Scope also included varying degrees of rehabilitative work on 19 additional bridges.

Kylie Horvath-Jonas, Engineer | INDOT | 219-380-2557



INDOT | B-38391-A Capitol Avenue over St. Joseph River | Mishawaka, IN | $15 million

Removal and replacement of the entire superstructure of the bridge in two phases over a period of two years. A large portion of the work necessitated the use of barges and was done from the river. to the success of this project. Project also included associated landscaping and traffic maintenance.

Jeff Boucher, Engineer | INDOT | Retired

INDOT B-41209-A Bridge Deck Overlays | St. Joseph County, IN | $6.3 million

Project consisted of multiple bridges requiring varying degrees of rehabilitative work including hydro demolition of existing bridge decks, patching of existing bridge deck substrate material, abutment removal/replacement, structural steel repairs, polymeric bridge deck overlays, silica fume bridge deck overlays, approach slab replacements, abutment modifications, deck drainage system replacement, HMA replacement, guardrail replacement, inlet replacement, pavement marking, and associated landscaping.

Nate Marable, Project Manager | HW Lochner | 219-380-2187

Gary/Chicago International Airport | Rehabilitate Taxiway | $5.3 million

Replacement of portions of the existing taxiway in various locations throughout the airport. The scope included pavement sawing, pavement breaking, pavement removal, subgrade preparation, subbase replacement, forming/pouring of tarmac concrete, pavement joint installation, regrading, reseeding and restriping.

Ken Cast, Airport Director | GCIA | 219-805-6445

INDOT | Cleveland Road over St. Joseph River | South Bend, IN | $9 million

This project included one mile of concrete roadway removal and replacement along with a complete rehabilitation of the existing Cleveland Road bridge along with necessary utility upgrades and relocates. Work was done in 2 phases over a two-year period.

Bridge work included regrading/fortifying existing rip rap slope walls, remove/replace existing bearings, major in place structural steel repairs, lead abate/clean/paint all structural steel, remove/replace end abutments, remove/replace bridge deck, remove/replace parapet rail, remove/replace approach slabs, install outlets/rip rap, install signage/lighting. Road work included re-grading the entire roadbed, drainage structures/piping installation, underdrain installation, subbase installation, PCCP installation, shoulder aggregate installation, HMA milling/installation, signage/lighting installation, traffic maintenance, and assistance with various utility relocations.

Dale Wills, Engineer | Lochmueller Group | 574-334-5460

JOSH PLATT

Transportation Systems Management & Operations (TSMO) Coordinator

EDUCATION

York College of Pennsylvania, B.A. Political Science/Pre-law

CERTIFICATIONS

- FOA Certified Fiber Technician - FOA # 1381579 CFOT
- Advanced Fiber Optic Diagnostics Specialist
- Prefabrication Specialist
- Network Infrastructure Specialist

14 YEARS OF EXPERIENCE

PROFESSIONAL EXPERIENCE

As a member of the Intelligent Transportation and Tolling & Traffic Management industry for over 14 years and an employee of Aldridge since 2020, Josh is a subject matter expert for all Intelligent Transportation System (ITS) work. He has the ability to foresee system challenges during the design phase and identify ITS/TTMS risks early in the project execution process. Josh leverages this vision to drive capital efficiencies during design-assist phases as well as support the constructibility and installation of the technology. He is an innovative leader who capitalizes on Aldridge's pre-fab capabilities, driving design optimization and schedule certainty for his clients. Josh participates in technical programs on the latest industry innovations including such topics as EV charging concepts and ITS America.

REPRESENTATIVE PROJECT EXPERIENCE

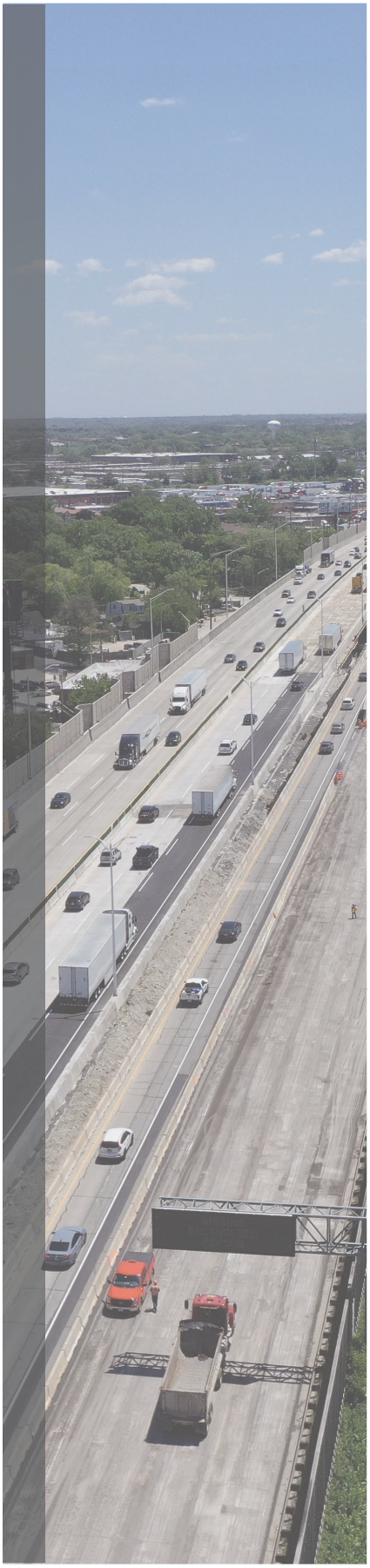
I-95 Express Lanes | Springfield, Virginia | Transurban | $150 million

The I-95 HOV/HOT Lanes Project created 29 miles of reversible high-occupancy toll (HOT) lanes , converting 20 miles of HOV lanes to HOT lanes, widening 14 miles to three lanes, and adding a nine-mile extension. Josh managed over 120 employees and multiple subcontractors and was involved from preconstruction through commissioning. He collaborated with the designer by addressing design flaws and implementing electrical and communication design changes to resolve site challenges. Josh led the installation and integration of over 1,000 ITS devices, including tolling shelters, ITS cabinets, dynamic message signs (DMS), Lane Control Signs, PTZ cameras, microwave detectors, reversible gates, lighting systems, and backup-powered electrical services. He ensured seamless integration into the existing systems and the new managed lane network. His expertise included electrical diagnostics, fiber optic repairs, network troubleshooting, and programming of Layer 2 switches. As a lead ITS engineer, Josh managed design reviews, testing, client training, and system turnover.

John Garfield, ITS Engineer | Transurban | jgarfield@transurban.com

Maryland Transportation Authority | Bay Bridge Automated Lane Closure Systems | Stevensville, MD | $16 million

Josh led the integration of a cutting-edge ITS solution for reversible lane management , including in-pavement LED lighting, dynamic message signs, swing gates, and overhead lane-use signs. Designed a fault-tolerant network supporting over 200 IP-enabled devices with redundant fiber optic loops. Streamlined installation through



prefabrication, reducing time by 40%, and ensured seamless system integration with MDTA's central traffic management system, improving safety and traffic flow on a critical transportation corridor

Barry Grasso, ITS Consultant | MdTA | brasso@intellivid@comcast.net

Virginia Department of Transportation (VDOT) | B34 Road Widening & Bridge Modifications | Poquoson, VA | $8 million

Widening of Rt 172 in an effort to relieve heavy congestion during rush hours. This includes the rebuilding of the bridge that spans Wythe Creek. The project features a complex Lane Control system that allows for the use of reversible/flexible lanes during peak operations. The Lane Control system incorporates Wrong Way Vehicle detection with mitigation measures, video audit capabilities, and built-in redundancy.

James Harrington, Lead ITS Consultant | VDOT | jharrington@clarknexsen.com

Transurban | I-95 Express Lanes Fredericksburg Extension | Virginia | $56 million

This project extends I-95 Express Lanes approximately 10 miles south of Route 610 to the vicinity of Exit 133 and included three new access points. Two reversible high-occupancy toll lanes were constructed in the existing median of I-95. Reversible lanes flow one way during peak congestion periods. The scope included the installation of over 400 network devices including DMS signs, microwave vehicle detection systems, CCTV cameras, AID cameras, reversible roadway gate systems, electrical services and generator sites, 3 toll site locations, 80+ equipment cabinets, as well as all associated electrical and fiber optic cable. Josh was directly responsible for design management, procurement, installation, testing, and validation of the complete ITS System and served as the ITS Construction Manager, a Key Personnel position for the Project.

John Garfield, ITS Engineer | Transurban | jgarfield@transurban.com

Virginia Dept. of Transportation (VDOT) | I-64 Hampton Roads Express Lanes Segment 2 | Virginia Beach & Norfolk, VA | $20 million

This project includes the installation of East and Westbound toll lanes on 8 miles of I-64 between I-264 and I-464. Josh was responsible for all ITS device procurement, installation, testing and commissioning, and turnover. including all associated electrical and network/communications infrastructure. The scope included the installation of 16 DMS signs, 30+ microwave vehicle detection systems, 8 electrical services, 6 generator sites, 4 toll site locations, 27 layer 2 ethernet switches, and the modifications to 28 existing cabinets. The integration of the systems had an added complexity due to its location between two ongoing projects both of which were installing tolled lanes. Once completed, it became part of the oldest and largest transportation network for VDOT.

Andrew Peck, ITS Manager Eastern Region Operations | VDOT | andrew.peck@vdot.virginia.gov

JIM CLAUS, CMQ/OE, CQA

Construction Quality Manager

EDUCATION

West Virginia University, B.A., History

Community College of Allegheny County, A.A., Civil Engineering Technology

CERTIFICATIONS

- OSHA 30
- ASQ Certified Manager of Quality/ Organizational Excellence #57401
- ASQ Certified Quality Auditor
- IDOT PCC Level 1, 2, 3
- IDOT Mixture Aggregate Technician
- INDOT SWPPP Stormwater Quality Manager
- NICET Level 1 II - Tranportation Engineering Technology Highway Construction Inspection

12 YEARS OF EXPERIENCE

PROFESSIONAL EXPERIENCE

Jim has 12 years of engineering design, construction inspection, and quality control implementation experience. He has developed and implemented project-specific Quality Control Plans on several major infrastructure projects. At F.H. Paschen, he was the Quality Control Manager on two major runway projects and the recirculation bridge replacement at O'Hare International Airport, all of which ran concurrently. He is currently the Construction Quality Control Manager on the $584 million NICTD West Lake Corridor project, where he develops, implements, and maintains the Quality Management Plan per ISO 9001 and FTA requirements. Prior to joining F.H. Paschen, Jim assisted, conducted, and supervised field inspections on large-scale transportation projects for Larson Design Group and TRC Engineers, Inc. in Pittsburgh, PA. As the Construction Quality Manager, Jim will be involved on a part-time basis throughout the Term of Agreement. He will oversee Quality Assurance and Quality Control Inspectors, Independent Testing Agency (ITA) Technicians, and subcontractor quality representatives. He will oversee and collaborate with the Aldridge Quality Manager on the ITS system installation. He will also be responsible for implementation of F.H. Paschen's TIC Plan.

REPRESENTATIVE PROJECT EXPERIENCE

Northern Indiana Commuter Transportation District (NICTD) | Design-build West Lake Corridor | Dyer/Munster/Hammond, IN $584.7 million

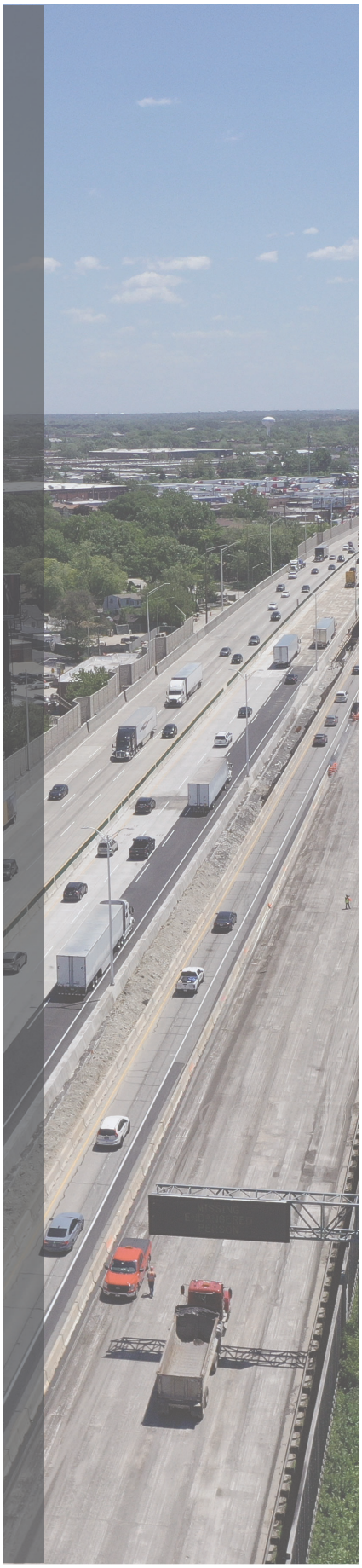
This design-build, eight-mile extension of the South Shore commuter rail line ncludes 21 bridges and elevated structures spanning over roadways, active railroads, and waterway, eight miles of ballasted mainline track, track guideway & embankment, three traction power substations, and four new stations. Jim was involved during the design phase, performing design reviews from 60% through RFC. He developed, implements, and maintains the project-specific Quality Management Plan. He manages a team of Quality Acceptance Technicians and ITL Quality Control Technicians that perform in-process inspections on deep foundations, concrete structures, HMA placement, and utility installations and removals. He also performs weekly SWPP inspections as the site Stormwater Quality Manager.

John Lukas, Resident Engineer | AECOM | 773-401-8489

Metra/NE Railroad Corp. | Van Buren & Millenium Stations Platform/Track Reconfiguration | Chicago, IL | $95.8 million

Construction of new platforms at Van Buren Street Station and Millennium Station, platform modifications at Millennium Station, and the construction and reconfiguration of catenary supporting structures south of Balbo to Millennium Station on the Metra Electric Line.

Maher Hammouudeh, title | Metra | 312-502-6131



Cook County Dept, of Highways | Old Orchard Road - Woods Drive to Skokie Blvd/County Hwy A83 | Skokie, IL | $34.4 million

The project includes several improvements for Old Orchard Road from Woods Drive to Skokie Boulevard in Cook County, Illinois. Key enhancements include adding dual right turn lanes for the Interstate 94 Northbound Ramps, supported with retaining walls, and adding a third eastbound through lane from the Interstate 94 Northbound Ramps to Lamon Avenue. The project also includes roadway reconstruction, bridge superstructure work, and bridge removal/demolition. Storm sewer and drainage structure adjustments and installations will be completed, along with roadway lighting and traffic signal installations, landscaping, and construction of a multi-use path.

Darren Frawley, title | Cook County Dept. of Hwys | 630-660-6180

Chicago Department of Aviation | ORD Recirculation Bridge Replacement | Chicago, IL | $6.6 million

This project included removal and replacement of the recirculation bridge over the inbound/outbound traffic from the main parking garage and associated drainage and electrical on the roadway under the bridge. As Quality Control Manager, Jim performed daily inspections, managed daily and 3-week look ahead schedules, coordinated self-perform concrete work, and managed ITL testing and inspections.

Hasan Ahmed, Resident Engineer | O'Hare Modernization Program | 678-538-8805 | hahmed@careplusllc.org

Chicago Department of Aviation ORD Runway 9R - 27L | Chicago, IL | $73.6 million

The first of two projects to lengthen the existing runway, this package included construction of the extended 9R approach end of the runway and associated taxiways and corresponding earthwork, storm sewer, electrical, and taxiway and runway pavement construction. Substantial completion was required within nine months of mobilization. Jim's responsibilities included oversight of ITL and the QC Team, management of the MIT scanning process, acceptance of concrete runway joints, and coordination and supervision of subcontractors.

Hasan Ahmed, Resident Engineer | O'Hare Modernization Program | 678-538-8805 | hahmed@careplusllc.org

Chicago Department of Aviation | ORD Runway 9C-27C Bid Package #2 | Chicago, IL | $159.1 million

F.H. Paschen constructed a portion of the new Runway 9C-27C at This portion of the new Runway 9C-27C included 19 work areas on an operational airfield, demolition of 12 structures totalling over 770,000 SF, and extensive removal and relocation of underground storm sewer, sanitary sewer, water main, electrical and communication utilities. F.H. Paschen self-performed the concrete paving using stringless technologies. Coordination with the airlines, FAA, City of Chicago operations, and other contractors was essential to the success of this project. Jim's responsibilities included oversight of ITL and the QC Team, management of the MIT scanning process, and acceptance of concrete runway joints.

Hasan Ahmed, Resident Engineer | O'Hare Modernization Program | 678-538-8805 | hahmed@careplusllc.org

BYRON STEVENS, TCS

Maintenance of Traffic (MOT) Manager

EDUCATION

Ivy Tech,
A.S., Applied Sciences

CERTIFICATIONS

- ATSSA Traffic Control Technician
- ATSSA Traffic Control Supervisor
- ATSSA Certified Flagman

SKILLS

- Complex Maintenance of Traffic
- Construction Management
- Subcontractor Management
- Indiana State Dig Law Trained
- Cost Reduction Incentives
- Wetlands
- Railroad Coordination
- INDOT Specifications

29 YEARS OF EXPERIENCE

PROFESSIONAL EXPERIENCE

Byron has 29 years of construction industry experience as a Project Manager and Traffic Control Specialist in Indiana. He has served as MOT Manager on several INDOT projects. Byron will supervise resource allocation by identifying and addressing equipment and material needs, document crew activity, and review work orders and field logs. He will be involved in project planning during Preconstruction and develop and implement the Transportation Management Plan throughout construction.

REPRESENTATIVE PROJECT EXPERIENCE

INDOT | State Road 912 & I-80 Various Locations | Lake County, IN | $12.8 million

Multiple areas of patching and bridge rehabilitation. Coordinated multiple phases of MOT to install lane closures and traffic shifts along both mainline and all auxiliary on/off ramps from I80 to Cline Ave. Project consisted of multiple detour routes and closures.

Eric Bechinsk, Site Engineer | HW Lochner | 219-789-8643 | ebechinske@hwlochner.com

INDOT | R-40635-A U.S. 41 @ Various Locations | Lake County, IN | $5 million

Multiple resurfacing projects along with roadside structure installation. Performed multi-phase MOT designs along north and south bound U.S. 41 through the town of St. John, reduced 4 lanes of traffic down to 1 lane in each direction with multiple shifts and changes over a two-year span.

Bob Lenard, Site Engineer | HW Lochner | 219-983-2319 | rlenard@hwlochner.com

INDOT | I80/94 @ Various Locations | Porter County, IN | $1.8 million

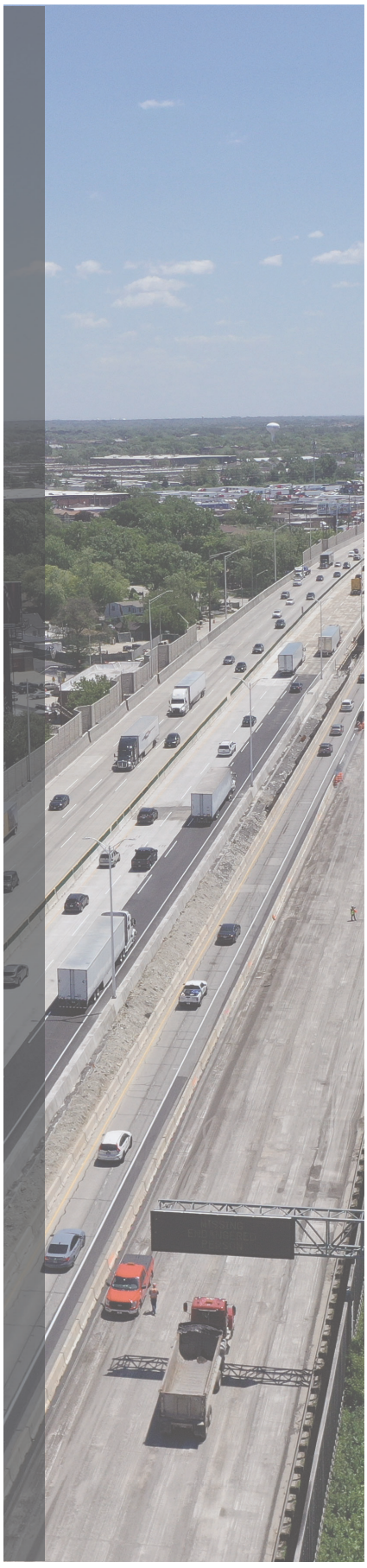
Managed MOT for multiple bridge overlays taking place on two bridges, three lanes each way. Performed multiple single and double lane closures on a nightly basis with lane switches and shifts.

Drew Thompson, Site Engineer | Beam, Longest and Neff | 219-789-8643 | 219-688-9005 | dthompson@b-l-n.com

Cleveland Cliffs | West Gate Entrance Bridge | Lake County, IN | $1.1 million

Coordinated all MOT for the various concrete repairs at column bases located on private and public roadways. Project primarily required individual lane closures with traffic shifts.

Chris Rainbolt, Lead Project Engineer | Cleveland Cliffs | 219-406-3929 | Chris.rainbolt@clevelandcliffs.com



Cleveland Cliffs | Fresh Water Intake Bridge | Lake County, IN | $900,000

Coordination of all MOT inside the plant. Full bridge deck replacement with new approach slabs on the heavy haul entrance road inside the entrance to the facility, located directly behind the scales. Multiple lane closures and traffic shifts were required to reroute 90% of all mill traffic entering and exiting the plant.

Chris Rainbolt, Lead Project Engineer | Cleveland Cliffs | 219-406-3929 | Chris.rainbolt@clevelandcliffs.com

INDOT | B-41865-A 80/94 Various Locations | $6.4 million

Project Manager for MOT subcontractor to Rieth-Riley, responsible for coordinating all on/off ramp closures and detours, all lane closures and traffic switches on I-80/94, all traffic MOT on roadways under I-80/94.

Dan Zaklan, Superintendent | Rieth-Riley Construction | 708-825-3384

INDOT | B-41214-A US 41 SB Calumet Ave @ I-80/94 | Lake County, IN | $2.7 million

Coordination of all US 41 southbound ramp closures and detours, all lane shifts and merging traffic southbound, and nightly lane closures for installation of pavement markings.

Dan Zaklan, Superintendent | Rieth-Riley Construction | 708-825-3384

INDOT | R-41186-A Through Roads Along Lake Max Trail | Culver, IN | $975,000

Performed a 4-phase MOT design running through the town of Culver. Project consisted of multiple detours along with lane closures reducing two separate roads from two lane traffic down to one lane only, east and only west bound lanes with multiple flips.

Joe Kantowski, Site Superintendent | Gariup Construction | 219-707-7217

Granite Construction | Cline Avenue Toll Road | Lake County, IN | $350,000

Responsible for the coordination of multiple overnight complete road closures for all traffic in both directions. This also consisted of closing all on ramps to the Cline Ave Bridge Toll Road.

Marc Potter, Superintendent | Granite Construction | 708-473-1842

The Wetlands Initiative | Water Control Structure Construction | Highland, IN and Gary, IN | $175,000

Construction of two concrete stop-log water control structures within the outlet channels of two wetland systems along the West Branch of the Little Calumet River.

Harry Kuttner | The Wetlands Initiative | 312-504-0129

ERIC WASKO

Lead Estimator

EDUCATION

Purdue University,
B.S., Building Construction Management

CERTIFICATIONS

- OSHA 30
- CPR/First Aid
- Mental Health First Aid USA, National Council for Mental Well Being

SKILLS

- INDOT Specifications
- Design-Build
- Public Private Partnership (P3)
- Surveying
- HCSS HeavyBid
- Complex MOT
- Innovative Project Delivery
- Wetlands
- Subcontractor Relationships

16 YEARS OF EXPERIENCE

PROFESSIONAL EXPERIENCE

With 16 years of construction industry experience, Eric is Chief Estimator for F.H. Paschen's Indiana operations. He is responsible for overseeing the complete process of assembling bid proposals including soliciting subcontractors, developing scopes of work, preparing self-perform work estimates, and qualifying subcontractor proposals. F.H. Paschen's Indiana office bids an average of 100 projects per year.

Eric has been estimating INDOT project opportunities for over 13 years. In his four years at F.H. Paschen, he has led the estimate on 146 INDOT bids, and has been successful on 26 projects. He will bring a comprehensive knowledge of the local subcontractor market to the INDOT FlexRoad project. Eric will be involved from project award through the Construction phase.

REPRESENTATIVE ESTIMATING EXPERIENCE

INDOT and IFA| I-69 Evansville to Indianapolis, Section 6, Contract 5 DBBV | $700 million

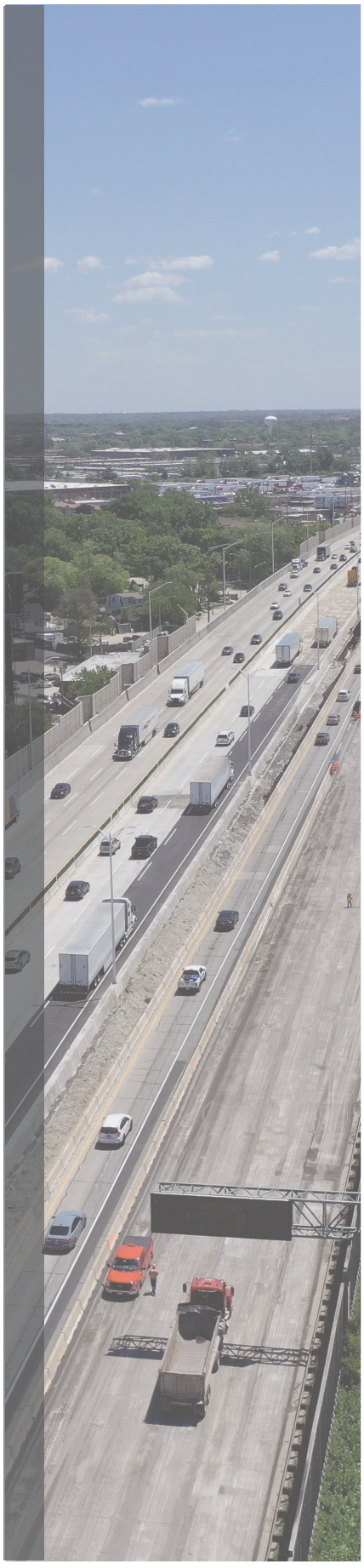
This project in Marion and Johnson Counties in Indiana involves full reconstruction and conversion of a portion of existing State Road 37 to interstate standards, full reconstruction and widening to provide added travel lanes on a portion of I-465, the conversion of at-grade crossings to interchanges or overpasses, reconstruction and construction of local access roads, reconfiguring of existing interchanges, and a new system interchange for I-69 and I-465.

Troy Jessop, National Bridge Group Leader | American Structurepoint | 317-547-5580 | tjessop@structurepoint.com

INDOT | North Split Reconstruction Project | Indianapolis, IN | $400 million

This project will upgrade the interchange where I-65 and I-70 meet in downtown Indianapolis. The North Split is the second-most heavily traveled interchange in Indiana. Pavement and bridges in the interchange area require rehabilitation or replacement due to their poor structural condition. The North Split Project will also improve safety and operations for the 214,000 motorists who use it daily. Project included constructing 47 new bridges, widening three existing bridges, rehabilitating three additional bridges, removing and repaving 35 lane miles of new, continually reinforced concrete pavement, and moving more than 1 million cubic yards of earthwork.

Kevin Gorak, Project Engineer | American Structurepoint | 317-547-5580 | kgorak@structurepoint.com



INDOT | I-65 Northwest Indiana Major Moves 2020 Expansion Project | $65 million

The Project involves constructing one additional travel lane along northbound and southbound I-65 along the outside shoulder from Exit 253 (US 30) to Exit 247 (US 231), constructing an additional travel lane for northbound and southbound I-65 within the existing median from Exit 247 (US 231) to Exit 240 (SR 2) and replacement of the bridges over the Kankakee River.

Junell O'Donnell, Vice President | HNTB | 219-307-1512 | jrodonnell@hntb.com

Owner | Ohio River Bridges East End Crossing (ORB EEC) | $763 million

East End Crossing project will provide a new highway connection between Clark County, Indiana and Jefferson County, Kentucky, completing the I-265/KY-841/IN-265 circumferential freeway corridor in the eastern suburbs of Louisville. The project consists of a new toll bridge over the Ohio River and approaches on both sides, including a 3.3 mile extension of I-265 on the Kentucky side (featuring a 1,700-foot tunnel under a historic property) and a 4.1-mile extension of I-265/SR 265 on the Indiana side. The project also includes a 13-foot-wide pedestrian and bicycle path.

Marcos Loizias, VP Divisional Operations & US Chief Bridge Engineer | Jacobs | 973-738-0106 | Marcos.Loizias@jacobs.com

INDOT | B-41439-A US Bridge 6 Replacement | $16 million

Bridge demolition and replacement of the US 6 Bridge over I-80 and I-94, 2.27 miles west of SR 51. Project will also modify and update the existing interchange ramps to increase mobility and safety at this busy location of I-80/94.

Ashley Przybylinski, LaPorte District Project Manager | INDOT | 219-402-7342 | aprzybylinski@indot.in.gov

INDOT | R-43382-A US 35 Pavement Replacement | LaPorte, IN | $35 million

Project includes pavement replacement on US 35 from 1.21 miles south of SR 2 to SR 2 in LaPorte, Indiana. Project also includes utility relocation and reconstruction of storm sewer, sanitary sewer, and water main along US 35. Utility sizes range from 6-inch diameter to 78-inch diameter.

Michael Grylewicz, Project Manager, Senior | INDOT | 219-851-0169 | mgrylewicz@indot.in.gov

INDOT | R-41434-A PCC Thin Overlay & Asphalt Resurface SR114 and SR16 | $17 million

PCC thin overlay and asphalt resurface project on SR 114 from US 41 to I-65 and on SR 16 Project also included subgrade treatment, large amount of milling, guardrail, pavement markings, underground piping, and maintenance of traffic.

Regina Sessions | American Structurepoint | 219-923-9240 rsessions@structurepoint.com

KIM CAMPAGNA

Project Scheduler

EDUCATION

Purdue University NW,
B.S. Construction Management & Engineering Technology

A.S., Architectural Engineering

SKILLS

- 20+ years of Primavera scheduling experience
- Schedule Analysis
- Schedule Recovery Plans
- INDOT Specifications
- HCSS HeavyBid
- Complex MOT
- Innovative Project Delivery
- Wetlands
- Subcontractor Relationships
- Partnering

20 YEARS OF EXPERIENCE

PROFESSIONAL EXPERIENCE

Kim has 20 years of construction experience, 16 of which have been as a Project Scheduler. Kim has developed schedules for large-scale highway, bridge, and rail projects and pursuits for INDOT, IDOT, MDOT, ISTHA, and NICTD, three of which also included installation of ITS systems and overhead sign structures. Prior to FHP, she managed project schedules for work at the BP Whiting Refinery for over 12 years. Kim is an expert at creating and maintaining integrated schedules by collaborating with design, construction, and quality management teams. She produces detailed, resource loaded schedules that correlate with project budgets and provides weekly updates based on project progress and milestones. She performs schedule analysis, including critical path(s), longest path, and slippage analysis, and assists the project team in the development of recovery plans.

REPRESENTATIVE SCHEDULING EXPERIENCE

Illinois Department of Transportation | I-55 Bridge Over Lemont Road | $20 million

Replacement of the existing bridge structure, reconstruction of ramps, installation of new lighting and storm sewers, resurfacing, and landscaping.

Kim did not interface with the Owner and therefore cannot provide an Owner reference.

Michigan Department of Transportation | I-75 Bridges/ Roundabout | $25 million

New interchange on I-75 at Newport Road and Swan Creek overpass including two roundabouts.

Kim did not interface with the Owner and therefore cannot provide an Owner reference.

ISTHA | UPPR Bridge (Elgin O'Hare) | $250 million

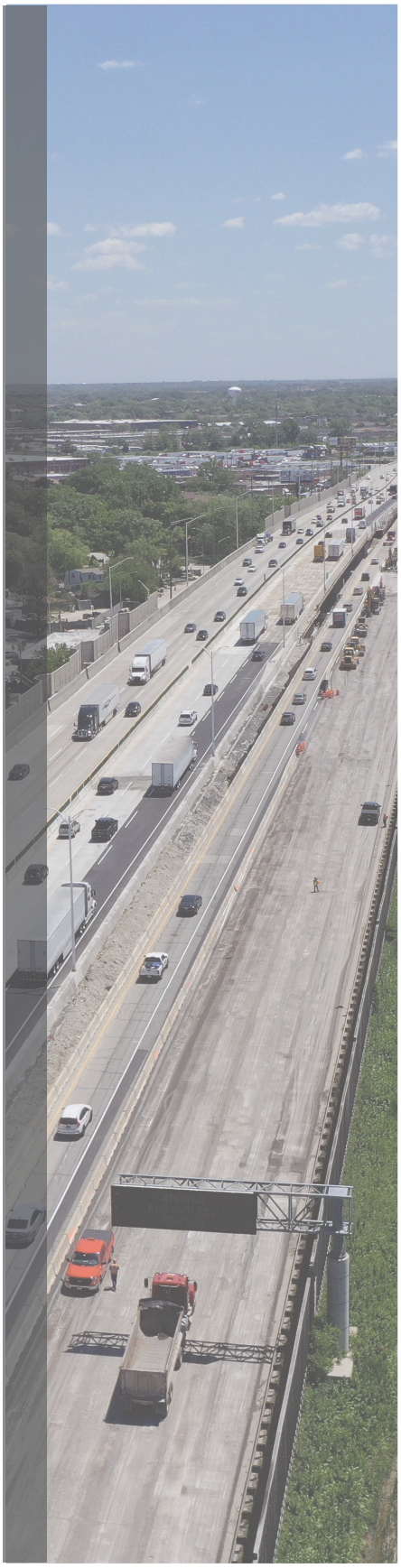
Elgin O'Hare Access Tollway (I-490) included widening roadway bridges, building a new partial interchange, new ramp bridges, lighting, retaining wall, sewer and stormwater improvements, and ITS infrastructure.

Kim did not interface with the Owner and therefore cannot provide an Owner reference.

NICTD | NICTD Double Track – One (DT-1) | $373 million

16.9 miles of second track, four new bridges, 8 new platforms, 1447 additional parking spaces at 4 stations, and replacement of single street-running track in Michigan City with 2 new separate ballasted tracks.

Kim did not interface with the Owner and therefore cannot provide an Owner reference.



INDOT | Pavement Replacement and Utility Relocation | $32.2 million

Pavement replacement and utility relocation on and around US 35 including intersection improvements, new turn lanes, drainage improvements, driveway approaches, new sanitary laterals and water services, lighting and signs, and a new storm detention basin.

Kim did not interface with the Owner and therefore cannot provide an Owner reference.

Planning / Scheduling Team Lead | BP Products of North America, Inc. | May 2012 – Feb. 2021

- Managed project schedules for work at the BP Whiting Refinery
- Managed the Planning/Scheduling team to act independently to create, manage, and implement effective, fit-for-purpose, robust and bench marked project schedules, plans and procedures.
- Served as a Subject Matter Expert (SME) for the development and maintenance of projects, including major projects' integrated EPC Master Schedules.
- Drove continuous improvement efforts to enhance the planning/scheduling function in response to changing business needs.
- Developed an improvement plan for the Planning & Scheduling Team.
- Implemented a standard set of key milestones for all project schedules that were reported biweekly

BP Reference: Johnny Svetich, Planning / Scheduling Lead | 219-476-5681

Senior Scheduler | Superior Construction Company, Inc. | Aug. 2009 – May 2012

- Managed project schedules for work at the BP Whiting Refinery
- Maintained total ownership of project schedules, including producing detailed, resource loaded schedules that coincide with project budgets, weekly updates based on the progress of the projects, and enforcing schedule milestones.
- Performed schedule analysis and reported findings, including critical path(s), longest path, and slippage analysis, and assisting in the development of recovery plans.
- Created complete and accurate schedule variance and manpower reports to assist in the development of the monthly cash flow reports. Performed monthly KPI portfolio reporting.
- Contributed to the development of integrated master control schedules for the Whiting Projects Alliance.

4

PROJECT UNDERSTANDING AND APPROACH

CMGC TEAM | F.H. PASCHEN | ALDRIDGE | MARTELL ELECTRIC LLC CONTRACTORS & ENGINEERS | Jacobs

MAXIMIZING THE CMGC APPROACH

The FHP CMGC team understands the goals of the INDOT 80/94 FlexRoad project are to increase the operational efficiency of the corridor by reducing travel times and increasing travel time reliability, and improving safety by reducing crashes. This will be accomplished by a combination of TSMO strategies, fiberoptic improvements, and various interchange, lane, and ramp improvements along the corridor. Our team knows that understanding INDOT and Parsons decision-making process is key to efficiently integrating the scopes of this project. The CMGC delivery method allows for early collaboration and partnership during Preconstruction that provides benefits throughout the Construction phase. The same core team dedicated to the pursuit of this project will be key members of the team from award through construction, to ensure continuity throughout the project.

A comprehensive and collaborative Preconstruction process that includes F.H. Paschen, Aldridge, Martell, and Jacobs will reduce risk and result in schedule and budget certainty. During the preconstruction phase, our operations team will produce a Work Breakdown Structure (WBS) as the foundation for our work plan and schedule development. This collaborative approach creates an intimate understanding of the project by all team members. It preemptively identifies project obstacles to allow the project team to mitigate and remove hurdles.

Upon award as the Progressive Contractor, our team will immediately focus on the Preconstruction Work, Phase Compensation Gap, the Preconstruction Phase Project Schedule, the Hazardous Material Initial Site Assessment, and the environmental compliances indicated in the executed agreement. A co-located space will be acquired to promote partnership throughout the Project. Also during this time, our team will develop the Risk Register along with developing the framework for the Risk Workshops that will be utilized for the life of the Project. We will utilize the CMGC resource approach that will maximize and incorporate innovative solutions that will benefit all stakeholders.

While anticipating the approval of the NEPA and the Project Cooperation agreement, our Key Personnel, along with team members, Aldridge, Martell, and Jacobs will develop the Preconstruction Phase Schedule, while evaluating the project to identify potential schedule impacts, potential sequencing delays, additional engineering, risk identifications, and construction or cost impacts.

Risk Mitigation

A major benefit to the CMGC process is the ability to identify, prioritize, and plan for items that present a risk to the budget, schedule, or safety of the project. We recognize and support INDOT's goal of minimizing impacts to the natural and built environment.

Wetlands: There are 83 likely jurisdictional wetlands that are located within and near the IN-80/94, IL-294 and IL-94 Corridors. With over 36 acres that were identified on or near the project limits in both states, the protection of this acreage is of utmost importance. The FHP team will partner with the INDOT/IDOT Environmental Services Division and make every effort to avoid and minimize impacts to these areas. Our team has successfully completed wetland mitigation projects, such as the Water Control Structure project located in Highland and Gary Indiana. The Wetlands Initiative project included installation of concrete stop-log water control structures located along the wetland systems of the Calumet River. Our team members include Certified Professional Erosion and Sediment Control (CPESC) professionals that will aid in following the proper steps if environmental impacts occur during construction.

Providing a high quality fiber optic system while minimizing environmental impact is a key commitment of our team. The key environmental risks to the project for the fiber installation that will be addressed during preconstruction are pollution prevention, protection of wetland areas, air quality, noise and waste.

Railroads: Our team acknowledges that the site and the project involve the presence and operation of multiple railroads and railroad properties. The CMGC delivery method allows for an early start

to the railroad coordination process and obtaining permits, a process which historically takes several months and can have major impacts to project schedule. As Progressive Contractor, the FHP CMGC team will address railroad-related commitments and mitigate railroad-related risks during the preconstruction and construction phases. Eight (8) railroad segments, CSX, Norfolk Southern, Canadian National, and Chicago Fort Wayne & Eastern, are adjacent to the project area and will require coordination due to the installation of the underground fiber network. Standard coordination will occur with INDOT utilities and the railroads by the FHP CMCG team.

Minimizing Impacts to Traffic: Our team understands the importance of minimizing the disruption to traffic flows, and, in developing our methodology, this is a key priority. We have reviewed the project path and believe there are ways to prevent and/or minimize lane closures by working from access points off the main line and utilizing rolling closures to decrease downtime. On the ITS PUSH Project, Martell was able to install full dynamic message sign (DMS) safely and efficiently by working hand-in-hand with the roadway team and Indiana State Police. Through a team approach, they were able to utilize rolling lane closures to set structures in under ten minutes, thus minimizing the disruption of traffic flow.

KEY ITEMS TO PRIORITIZE DURING PRECONSTRUCTION

KEY ITEM	PRECONSTRUCTION SOLUTION	CONSTRUCTION SOLUTION
Wetlands	Work with INDOT and Parsons to provide interactive and transparent construction method insight for solutions to avoiding impacts to known existing wetlands.	Provide construction solutions for delineating, working around, and eliminating impacts to known existing wetlands.
Environmental Impacts	Communicate with INDOT and Parsons to provide potential construction solution methods to areas identified within the RID documents to avoid these areas or minimize the impact required while offering cost saving ideas in the process.	Provide solutions to minimize impacts to environmental area. When necessary, remove and dispose of these materials properly. These materials will be disposed of depending on their identification.
Railroad Coordination	Assist INDOT and Parsons with coordination efforts for executing agreements with the applicable Railroads within the project corridor. Provide for construction details and information as needed	Coordinate with INDOT, Parsons and Applicable Railroads to execute a ROE agreement. Provide construction information and details as needed.
Utility Relocation	Work with INDOT and Parsons to provide interactive and transparent costs and solutions to reduce costs of utility relocates and/or the amount of utility relocations required for the project	Coordinate with INDOT, Parsons and applicable utilities. Provide construction schedule updates to utilities. Provide construction information and details as needed.
Long Lead Items	Coordinate with INDOT and Parsons to identify any long lead items to prioritize design components if necessary to ensure ordering of materials are timely and accurate. Assemble a procurement log with major and long lead items identified with duration from placement of order to delivery.	Incorporate procurement log into CPM schedule to ensure delivery dates coincide with construction activities. Continually update procurement log and share with INDOT and Parsons.
Minimizing Impacts to Traffic	Continued coordination with INDOT and Parsons to assist in further developing the current Traffic Plan(s) through engaging local Traffic Control Companies and offering insight to our experience with working within this corridor. Assist in analyzing how the Traffic Control Plan may or may not impact construct activites and offer our opinion with cost and safety in mind	Continued monitoring and observing of traffic flow within each Traffic Control setup. Within each Phase we will offer potential solutions to INDOT and Parsons to help increase traffic flow through each work zone by observing how traffic is flowing within our work zones throughout the corridor.

Prefabrication Approach

During Preconstruction, our team will also identify opportunities for prefabrication. **Aldridge, an industry leader in prefab innovation, has been incorporating prefabrication into their projects for decades**. They have a fully staffed prefab shop and a comprehensive ordering process. Prefabrication translates to demonstrated cost and schedule savings, but more importantly, it reduces the hazard exposure of the crews and ensures a manufacturing quality tolerance far exceeding traditional stick-built concepts. It reduces the onsite craft count needed to complete the work, further reducing risk and site congestion. It also creates sustainability opportunities in reducing waste and improving recycling efforts.

With approximately 70 gantries to be installed along the tight and congested corridor, our prefabrication process is a critical component of our approach and overall project success. The gantry structures, including all wiring and devices, will be completely prefabricated off-site. Devices are checked prior to initial installation on the gantry. Once the devices are in place and wired, the entire module is, again, 100% bench-tested. Every gantry arrives at the job site location quality-approved and ready to be set. Each gantry will be set in a single night with short duration lane closures. Because of our proven process, the chances of rework are very small. Our construction plan ensures cost efficiency, high quality, schedule certainty, and improved safety, all while minimally impacting both INDOT operations and the traveling public.

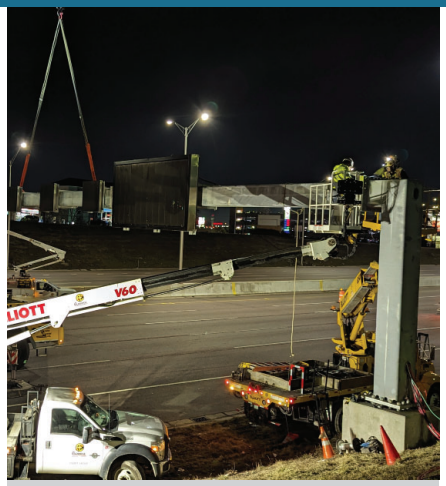
On the INDOT FlexRoad project, Aldridge will prefabricate all gantries in their fully staffed Prefab Shop. Gantries will arrive to the site quality-approved and will be set in minutes with a rolling or short duration lane closure.

Our work plan may involve both the crane and the completed gantry (on the trailer) to be parked and ready at a nearby staging area. Timing of the work will be based on the least density of vehicles. At the agreed upon time, the crane and the gantry will be moved down the roadway to the final location. One or two lanes of traffic will be shut down for two 15 minute timeframes to execute the work.

Additionally, all service racks, roadside cabinets, gantries, electronic signs, control buildings, CCTV camera poles, custom circuitry and telecom fiber is analyzed for preassembly and offsite testing. This streamlined deployment process eliminates the

PREFABRICATION MAXIMIZES THE CMGC BENEFIT OF EARLY CONTRACTOR ENGAGEMENT

Bench testing of network switches prior to installation on the gantry



Setting a prebabricated, quality tested gantry after being delivered to site

Fully operational gantry installed in a single overnight shift

need for complex on-site adjustments, reducing installation time and ensuring all components are fully operational upon placement. The result is a seamlessly integrated system providing reliable, synchronized functionality across all ITS elements.

Value Additive Concepts

As part of the design/preconstruction phase, the FHP team will work with INDOT and Parsons to identify and develop potential Value Additive Concepts. The goal is to work together to develop a high quality, cost-effective design that aligns with INDOT's goals for the project. Our team will maximize the CMGC benefit of early contractor involvement as we advance the design and identify potential Value Additive Concepts, innovations, and efficiencies. Throughout this process our team will prioritize quality, safety, risk mitigation, cost, efficiency, and schedule, as well as address future maintenance requirements for INDOT.

Development of Project Schedule and Transportation Management Plan

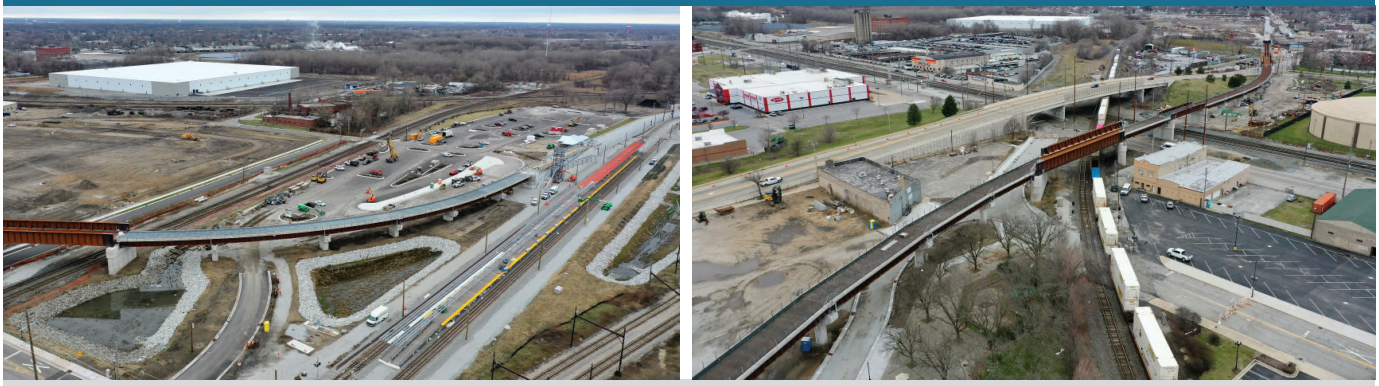
The CMGC method of early collaboration with key subcontractors with regard to schedule development allows major trades to work together to plan and sequence the construction, including the Transportation Management Plan, which is key to the success of the project. The F.H. Paschen team is committed to developing a constructable schedule that reduces risk to INDOT and the FHP Team, minimizes impacts to travelers, and can be used to efficiently plan and manage the work. Throughout the Preconstruction Phase, and with input from the Project Team, Project Scheduler, Kim Campagna, will develop an integrated Baseline Pricing Package Schedule. Kim will maintain the schedule throughout the project, including monthly schedule updates as well as any other associated submittals.

Our team will be working directly with INDOT and Parsons to identify potential material risks, timing of estimates, work to be included in the Design Documents, potential Construction Change Orders, coordinating site access, and any potential utility specific delays. While working with the Design Engineer regarding risks, the FHP Team will be implementing processes to develop accurate cost estimates. This will include an ICE Consultant, risk and opportunity workshops, interactive design processes, plan/specifications reviews, major project milestones, pre-estimating meetings to discuss assumed bid item measurements for payment, pricing milestone estimates, and reconciliation meetings to review discrepancies to protect and maintain the independent ICE Estimate.

Identification of Long Lead Items

Long lead items will be identified and prioritized during Preconstruction. At this time, we know that various types of generators, ITS poles/camera poles, electrical equipment (Eaton manufactured), communication cabinets and various types of network components (Ethernet Switches - Cisco) can have lead times that extend beyond a year. Sign structures and DMS signs are slightly under a year, so these items will be addressed early in the preconstruction process. Material deliveries will be

NICTD WEST LAKE CORRIDOR PROJECT | MUNSTER, DYER, AND HAMMOND, IN FHP Aldridge Jacobs



FHP, Aldridge, and Jacobs have been working together since 2019 on the $584 million Design-Build NICTD West Lake Corridor project which includes heavy civil/rail/bridge construction, a complex systems scope, and extensive 3rd-party coordination with utilities, railroads, and municipalities. **This provides INDOT with a team that has recent, relevant experience working together to develop an efficient schedule and approach, has established and proven processes for design and constructability review and 3rd-party coordination, and ensures transparency between the Owner, Contractor, and subcontractors throughout the project.**

incorporated into the project schedule, and material commitments will be included in subcontracts and supplier agreements.

Material Procurement Log

The Material Procurement Log will be developed during Preconstruction and maintained throughout the project. Material submittal, fabrication, and delivery activities will be incorporated into the baseline schedule to support this tool. During subcontractor and material procurement, commitments on delivery dates will be made and updated in the schedule. After subcontract awards, weekly subcontractor meetings are held to review the Material Procurement Log with the Schedule Update to ensure that all material and fabrication (by both F.H. Paschen and subcontractors) is on track. Procurement of materials will be managed and coordinated with suppliers and material sources to coincide with the project schedule. Key materials required in subcontractors' scope, along with associated durations for shop drawings, engineering, fabrication, testing (if required), and delivery commitment dates are incorporated into the subcontract agreements.

Safety

FHP will be implementing our safety program on this project, which uses a top-down approach to safety, with leadership and support coming from our president and executive staff members, down to our project staff who implement our safety initiatives on our projects nationwide. Additionally, FHP utilizes an internal safety committee to address safety concerns. FHP also uses in-house safety professionals and an outside safety consulting firm that provides additional safety expertise, training, and 3rd party jobsite safety audits.

Quality Management

Construction Quality Manager, Jim Claus, CMQ/OE, CQA, will ensure that all Preconstruction work complies with the Approved Preconstruction Phase Quality Management Plan. Throughout Construction, Jim will ensure that all work complies with all construction phase requirements and the contract documents. He will also oversee and collaborate with Electrical Quality Manager, Brian McLindon (Aldridge).

Cost Estimating

As the Progressive Contractor, we will also prepare and submit a Preliminary Pricing Package Plan. This submission will include definitive pricing following the Agreement parameters regarding the Cost Model and Pricing Process Meeting. Included in these submissions is the Open Book Basis Cost Model that is required.

Our estimators and PreFab specialists have field operations experience and understand the importance of budget-conscious decisions, including choosing means and methods that don't require materials with unacceptable procurement lead times. We are driven to be constantly evaluating any potential issues early while also presenting cost effective solutions to those issues. This team will ensure an expedited installation that consists of all the necessary elements of safety, constructability, and offsite prefabrication.

DBE Performance Plan

F.H. Paschen understands the value of diverse subcontractors and is committed to maximizing the utilization of DBE firms for this project. We utilize our relationships with local agencies to assist in reaching the widest possible audience of DBEs. We regularly work with community leaders and partners, union representatives, and other stakeholders to ensure that diverse local businesses and community residents are represented. Our approach is not only to meet minimum goals but to provide growth opportunities for diverse firms and tradespeople. During Preconstruction, our team will develop the project-specific DBE Performance Plan. The DBE Performance plan will include yearly timeframes of DBE participation, list the DBE Compliance Manager, and track all good faith efforts to achieve the DBE requirement that is established for this project.

ACTIVITIES AND STAFF RESPONSIBILITIES

The CMGC project delivery method allows INDOT to play a pivotal role during the design phase to provide constructability input throughout the duration of the project. The CMGC delivery method allows for full transparency regarding anticipated costs. FHP's general management structure will provide personnel that understands this type of project delivery and will provide effective approaches and solutions for all construction activities. This process also allows INDOT to participate in the design process with the FHP team and make decisions based on our team's comprehensive knowledge of this work.

FHP is providing INDOT with staff members that have years of INDOT experience as well as TSMO expertise.

Project Manager, David Beale, TCS, will facilitate all third-party involvement during the Construction Period of this project. His responsibilities will also include ensuring maintenance, overall construction activities, contract administration, all environmental and required safety conformity for this project. David will be responsible for the overall success of this project. David will have full authority and responsibility to make decisions on any aspect of this project. David is the Primary Point of Contact for INDOT.

Construction Manager, Steve Fernandez, TCS, will be responsible for the critical factors that are crucial to the success of the project. This includes reviewing the constructability of the work along with FHP team members, Aldridge, Martell, and Jacobs. He will communicate constructability and scheduling concerns to the Design Team while ensuring that the Project is built per the Contract Documents and INDOT specifications. Steve's extensive INDOT experience and knowledge of the Indiana subcontractor market will bring value to the Preconstruction and Construction phase. Steve will oversee FHP's Superintendent Team.

Transportation Systems Management Operation (TSMO) Coordinator, Josh Platt (Aldridge) will be dedicated to this project on a part-time basis during Preconstruction and Construction. Josh will directly manage all required Traffic/ Intelligent Systems for this project. Responsibilities include active engagement with the Design and Construction Team, identifying potential issues and possible solutions relating to the design and installation to all ATM/ITS items, review of design milestones, and developing cost effective solutions for our team. All technical requirements will be reviewed with the design team while working in conjunction with our TSMO Coordinator. Josh has national experience in this scope of work. He has the ability to foresee system challenges during the design phase and identify ITS/TTMS risks early in the project execution process. Chad Hammerl (Jacobs) will work with Josh to optimize this scope of work, whether it's schedule optimization or operation and maintenance improvements.

Construction Quality Manager, Jim Claus, CMQ/OE, CQA, will be involved on a part-time basis for the duration of the project. He will be actively involved in the quality management of all transportation systems indicated within the Project Agreement. Throughout the Construction Phase all quality programs and quality assurances will be managed and supervised by Jim. He will have the responsibility and authority to make improvements on any quality issues and will also have the authority to suspend work if the quality standard is not met. Jim has managed QA/QC for both local and national clients that include NICTD, Metra, Deparment of Aviation, and PennDot. Jim will also oversee and collaborate with the Electrical Quality Manager.

MOT Manager, Byron Stevens, TCS, will be dedicated to this project on a part-time basis. He will be responsible for managing and implementing the project traffic control plan. With the anticipation of the high volume of traffic within the work zone and potential maintenance of traffic challenges, he will be a key component to our CMGC team.

FHP CMGC TEAM | DEDICATED TO STRENTHENING PUBLIC HIGHWAY INFRASTRUCTURE

The FHP CMGC Team is dedicating a team of experts that have spent most of their careers managing public highway infrastructure projects for INDOT, ITRCC, ISTHA, and IDOT.

Lead Estimator, Eric Wasko, will manage FHP's open-book process with INDOT. Eric has been estimating INDOT project opportunities for over 13 years, bringing a comprehensive knowledge of the local subcontractor market to the FlexRoad project. Costs will be rectified while coordinating with the ICE consultant to secure agreements during construction cost estimate review meetings. Eric will be dedicated on a part time basis throughout the Preconstruction and Construction phases.

Project Scheduler, Kim Campagna, will be responsible for the development and maintainance of the Project Schedule, including all updates and Submittals that will affect any impact to the Project Schedule. She will be dedicated on a part-time basis throughout the duration of the project. Kim will be accountable for the Baseline Pricing Schedule and managing all Schedule modifications and adjustments. The Primavera software is an enterprise-wide project planning, management and control solution that enables our team to meet budget and deadline commitments by managing schedules, resources, cost and will be utilized for this project. Kim has 20 years of experience in Primavera scheduling.

SEQUENCING THE CONSTRUCTION WORK

The FHP team will work collaboratively with INDOT and Parsons to develop a sequencing plan for the FlexRoad project that will minimize impacts to the traveling public. Aldridge, Martell, Jacobs, and other major trade subcontractors will be involved throughout preconstruction to provide input on schedule impacts, work sequencing impacts, cost engineering, constructability, cost estimating, and risk identification.

Aldridge and Martell will be instrumental in the planning of the FlexRoad project. Their local and national experience will bring best practices and innovations to the TSMO/ITS scope to ensure project delivery that meets INDOT's goals. The FHP team will proactively develop design-assist and constructability input during project planning. Aldridge has deep knowledge of technology vendors and the cutting-edge devices on the market today. Schedule, cost, operation and maintenance, and integration will be analyzed for opportunities to add value.

SEQUENCING THE WORK

Prefabrication of the approximately **70 gantries on this project,** will be a major driver in the construction sequencing. Aldridge is a leader in comprehensive prefabricated gantry construction.

While there will be a clear division of scope, Aldridge and Martell are Subject Matter Experts in the entire electrical scope, and will work together to plan the FHP team's approach, sharing resources as needed to advance the project. The balanced combination of strengths between Aldridge and Martell provides a complete understanding of every aspect of the electrical work on the FlexRoad project. In addition to the prefab gantries, Aldridge will identify additional opportunities for prefabrication, which will be a driver in the sequencing of this project.

TRAFFIC CONTROL AND PHASING

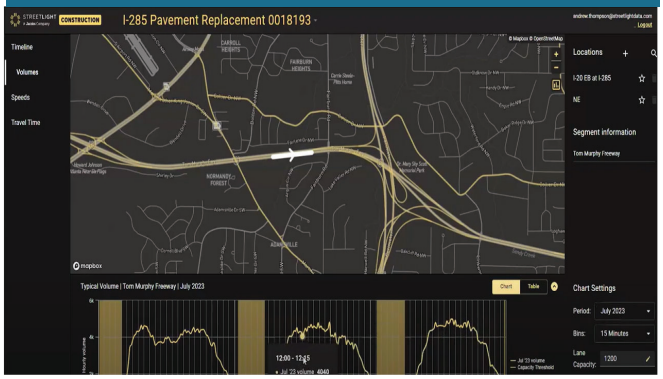
With nearly 200,000 vehicle per day traveling on the I-80/I-94 Borman Expressway, Maintenance of Traffic and construction phasing will be crucial to the success of this project. FHP has reviewed the phasing plan and will determine whether there are opportunities to optimize or possibly combine phases during the design/preconstruction process. Our Team's expertise in balancing safety, traffic management, and operational efficiency will ensure minimal disruption to motorists throughout the project phases. Each phase will have a variety of temporary traffic barrier protections.

While reviewing each phase, we will explore innovative ideas that will minimize impacts to the travelling public during construction. One example includes prefabrication of the proposed box truss structures offsite, delivering and installing the structure, as a whole, at one time in each respective traffic control phase. We believe that this will potentially reduce lane closures and/or rolling closures during this activity. This innovative idea will reduce back of traffic queue occurrences, which will ultimately improve mobility and decrease potential accidents in the work zone.

Streetlight Insight

Jacobs has the ability to leverage their proprietary Streetlight Insight® tool to evaluate traffic and travel patterns within the area of the Flex Road project to identify allowable work hours, identify the least impactful times for roadway/lane closures, and assist in the development of construction staging to minimize disruption to traffic flow, speed up the construction, and improve overall safety. During construction, we have the ability through Streetlight to develop near real-time monitoring of the construction work area as well as other impacted roadways to assess the performance as a result of construction activities. This data can be used to further modify work hours, work zone setup, future staging and identify any enhancements to support regional mobility when construction is ongoing.

Streetlight Insight® to Optimize Phasing



TSMO HARDWARE, SOFTWARE, AND EQUIPMENT INSTALLATION AND INTEGRATION

Our Team's integration strategy for TSMO hardware, software, and equipment is built on a comprehensive project lifecycle approach. This approach ensures alignment with system compatibility, technical requirements, and overarching project goals. Each phase, including planning, design, deployment, integration, and long-term operational support, is carefully executed to achieve these objectives.

We begin by thoroughly analyzing the project's technical requirements, challenges, and the existing network infrastructure to ensure compatibility and optimize performance. Working collaboratively with engineers and stakeholders, we develop tailored solutions that mesh well with the owner's systems. Leveraging our extensive relationships with vendors nationwide, we identify the best-suited hardware and software options, carefully considering cost, availability, lead time, and technical suitability. These options can be presented to our client, enabling them to play an active role in driving decisions that best support the project's success.

To further strengthen integration, we incorporate prefabrication and bench testing into our process. Prefabrication allows us to pre-assemble and pre-wire critical components, such as ITS cabinets, communication systems, and power distribution panels, in a controlled environment. This minimizes risks, reduces installation timelines, and ensures consistent quality. Prior to installation, all hardware and software undergo extensive bench testing under simulated real-world conditions to verify device functionality, system communication, and network performance.

Following installation, integrated system testing validates end-to-end functionality, ensuring a seamless transition to the operational phase. We can also provide detailed training to stakeholders/operations, empowering them to maintain and operate the system effectively.

The 80/94 FlexRoad project will also be installing new and emerging technologies such as a debris detection system to support the safe opening and closing of the shoulder lane. The debris detection system will supplement manual visual confirmation efforts. Through their integration and testing efforts of emerging technologies on similar projects, Jacobs has worked with vendors, integrators, and stakeholders to develop, integrate, test, and optimize the performance of emerging technologies. These experiences will enhance the performance of the debris detection as well as other FlexRoad systems.

This combination of collaborative planning, technical precision, prefabrication, and rigorous testing ensures that all TSMO hardware, software, and equipment are seamlessly integrated into the existing infrastructure, supporting both immediate project needs and long-term operational sustainability.

FHP CMGC TEAM

The FHP CMGC team is structured to meet the needs and accomplish the goals set forth for this transformative project. Our team of infrastructure, Maintenance of Traffic, ITS, and CMGC experts will provide an innovative, effective, collaborative, and partnering approach to the project.

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