Alex Ericksen, PE

Transportation Engineer

EDUCATION

B.S., Civil Engineering, Valparaiso University

Joined Firm in 2023

Years of Experience: 15

REGISTRATIONS

Licensed Professional Engineer: Illinois and Wisconsin

Alex has more than 15 years of transportation engineering experience including highway design, traffic analysis, bridge inspection, surveying, and construction observation. His expertise includes the development and management of both Phase I and II highway, local road, and intersection projects. Alex is well-versed in OpenRoads, Bentley MicroStation, Guidesign, AutoTurn, and Highway Capacity Software.

REPRESENTATIVE PROJECTS

Illinois Tollway*

PSB 15-2: I-490 Expressway Design Phase II, Cook County

Project Engineer responsible for the geometric design, coordination with subconsultants, leading coordination meetings, project management, and design deviations. The project consisted of constructing a new, all-electronic toll road around the western border of O'Hare International Airport linking the Jane Addams Memorial Tollway (I-90) and the Tri-State Tollway (I-294). The segment which was designed is located between the Canadian Pacific Railway (CPR) Bensenville Yard to the south and O'Hare Airport to the north, extending from Franklin Avenue to IL 19 (Irving Park Road) near the intersection of York Road. Roadway design segments included I-490 (NB & SB), CDA Perimeter Road, Taft Avenue (Ramps Z1 & Z2), and IL 19 (Ramps U5 & U6).

Illinois Department of Transportation*

I-80 Phase II Ridge Road to Des Plaines River Bridge, Cook County

Project Engineer responsible for quantity coordination, overseeing the development of barrier warrants, and geometric design. This project within the I-80 corridor will reduce congestion and improve safety on this five-mile stretch of interstate. The overall scope of work includes the reconstruction of the existing interstate pavement from Ridge Road to Houbolt Road, including the structure replacement of six bridges. The I-55 Interchange improvements consist of a new flyover bridge, and a new bridge carrying the mainline and ramp reconfiguration.

Illinois Department of Transportation*

I-55 Phase I Study, Cook County

Responsible for the Phase I environmental/engineering study for the implementation of new managed lanes within the existing freeway corridor. The project consisted of assessing options like High Occupancy Vehicles (HOV), High Occupancy Toll (HOT), and Express Toll Lanes along this 25-mile stretch. It required extensive public outreach, field traffic studies, crash data analysis, utility coordination, and highway design. Alex also led a study on vehicle occupancy and collected travel speed data, identified ingress/egress locations for the managed lanes, and analyzed crash data for the entire corridor. Utility coordination included working with utility companies to plan for utilities.

Illinois Tollway*

PSB 18-3: Design Upon Request, Cook County

Transportation Engineer for the design of 14 task order assignments. Responsibilities included a feasibility study to enhance geometrics near Union Pacific (UP) and Canadian Pacific (CP) Railroad lines. The tasks involved building demolition,

coordinating with Hansen Court, creating exhibits, calculating quantities, designing parking, driveways, and landscaping. They aimed to establish a temporary maintenance facility with office space, parking, electrical setup, and site improvements for 16 employees and 14 vehicles. The project encompassed utility coordination, coordination with IDOT and ISTHA, electrical planning for 14 plows, and ADA accessible ramps and parking. Alex also designed alternative hook ramp alignments while coordinating with various entities, including the airport, railroads, DuPage County, Chicago Department of Aviation, utilities, and adjacent DSEs. Additionally, engineering design services were provided for a new fence and perimeter road along the west side of O'Hare International Airport, meeting all relevant design standards.

Illinois Tollway*
PSB 18-3: I-88 Pavement and Structural Preservation and Rehabilitation, DuPage County
Project Engineer responsible for the design of the pavement rehabilitation for approximately 12 miles of I-88 between Washington Street and York Road. Duties included combining multiple topographic drawings while verifying current field conditions, determining a pavement rehabilitation assessment based upon field visits, creating pavement rehabilitation plans consisting of full shoulder replacement and mainline pavement patching, identifying damaged guardrail for replacement, locating and identifying drainage improvements, adjusting pavement markings to current standards, and performing quantity calculations.

Minnesota Department of Transportation*
86th Street Bridge Replacement over Trunk Highway 35W, Hennepin County, MN
Project Engineer providing design engineering services for the replacement of the existing 86th Street bridge (#9039) with a new bridge (#27W40) and associated roadway work. Alex's tasks for this project include detailed roadway construction plans, quantities, special provisions, utility coordination, project management, and cost estimates necessary to secure bids, award a contract, and construct the proposed project. All aspects of the project were designed to MNDOT standards.

Texas Department of Transportation*
Loop 375, El Paso Border Highway, El Paso, TX
This design-build project consists of the construction of a 9-mile extension for Loop 375 in El Paso, TX. For this project, eight weeks were spent in the Austin, TX office providing engineering and CAD support. Duties included creating utility profiles throughout Loop 375 for cross section development along the railroad and redesigning an access road to TXDOT standards. Other duties included the revision of plans to reflect comments from various agencies.

Illinois Department of Transportation*
Bridge Project Management, Phase I Studies, Various Counties, IL*
Responsible for preparing Phase I studies and documentation for 18 bridge, culvert, and intersection safety improvements and project management overseeing 26 other Phase I studies. Services include bridge inspections, bridge condition reports, alternatives analysis, stream surveys, hydraulic analysis, hydraulic/drainage reports, intersection design studies, geometric studies, cost-estimating, right-of-way studies, public coordination, utility coordination, traffic management planning, and environmental coordination.

Following are the representative projects: Illinois Route 47 over Virgil Ditch #2 – PPC deck beam replacement with steel beams over the Virgil Ditch; Illinois Route 23 over Coon Creek – Bridge replacement and roadway improvements; Illinois Route 176 over East Skokie Ditch – PPC deck beam replacement with three-sided precast concrete structure; Illinois Route 64 over Des Plaines River – Bridge replacement at a major intersection; Illinois Route 62 over Salt Creek – PPC deck beam replacement with steel beams; I-94 (Bishop Ford Freeway) at Cottage Grove Avenue – PPC deck beam replacement over freeway; I-90/94 (Dan Ryan Expressway) at 63rd Street – PPC deck beam replacement with steel beams over expressway and CTA rail; and IL 173 at Tiffany Road – Channelization and new signals.

Illinois Tollway*
PSB 08-2: I-355 (Veterans Memorial Tollway) Roadway and Pavement Rehabilitation, DuPage County*
This project involved preparing contract plans, specifications, and estimates for the resurfacing and rehabilitation of I-355 from I-55 to Butterfield Road. Included within the project were the pavement patching/resurfacing rehabilitation on 17 structures, guard rail replacement, barrier wall adjustment, sign replacement, drainage/curb and gutter reconstruction, and maintenance of traffic.

PNC Bank*
PNC Bank Parking Lot ADA Improvements, Various Locations, IL*
Project Engineer responsible for the preparation of preliminary conceptual designs depicting the ADA remediation items and identified all required permits for 10 local branch locations to ensure they are readily accessible to those with disabilities in accordance with all ADA Standards and Regulations. Design included accessible parking, accessible routes, line striping, signage heights, and public sidewalk connections. After concept approval, prepared construction documents and provided services through the bid/award phase.

BRIDGE INSPECTION, ASSESSMENT, AND REHABILITATION

Biennial NBIS Fracture Critical and PONTIS Level Inspection, IL Route 89 over the Illinois River Bridge in Spring Valley, Putnam County, IL*
Bridge inspection team member responsible for conducting the NBIS fracture critical and PONTIS level inspection of the truss structure carrying Illinois Route 89 over the Illinois River. The five simple span (199’-9”, 199’-9”, 362-10”, 199’-9”, 199’-9”) truss structure consists of a reinforced concrete deck supported by a simple span and multiple stringer/floor beam system. The bridge has six approach spans to the north and eight approach spans to the south. These approach spans are reinforced concrete decks supported by wide flange steel beams.

NBIS Fracture Critical and PONTIS Level Inspection, I-80 (EB & WB) over the Des Plaines River in Joliet, Will County, IL*
Bridge inspection team member responsible for conducting the NBIS fracture critical and PONTIS level inspection of the truss structures carrying I-80 (east- and westbound) over the Des Plaines River. Each three-span (192’-0”, 362’-8”, 192’-0”) cantilever truss structure carries three lanes of traffic, plus entering and exiting ramp traffic, and consists of a reinforced concrete deck supported by a simple span and multiple stringer/floor beam system. The bridge has 18 approach spans to the east and six to the west. These approach spans are reinforced concrete decks supported by wide flange steel beams.

I-55 over the CSX Railroad, Lyons, Illinois*
Bridge inspection team member responsible for conducting the condition inspection of the I-55 over CSX Railroad bridge. The detailed inspections were performed in accordance with the requirements of the National Bridge Inspections Standards and the Illinois Department of Transportation Structure Information and Procedure Manual.

Chevron, Cook County*
Bridge and culvert inspection team member responsible for inspecting and conducting a general structure condition report. Responsibilities included: identifying structural deficiencies, taking photographs, under and above structure inspections, and creating a condition report. As a part of the inspections, it was required for the team to review all of Chevron's safety procedures including Site-Specific Health and Safety Plan for Structural inspections, Preventing Serious Injury and Fatalities, Ground Disturbance, and CEMC Notification & Reporting Guide.

CONSTRUCTION OBSERVATION, INSPECTIONS AND REPORTING

I-57 at Stuenkel Road Construction, Monee*
Alex was a construction observer for the construction of a new interchange between Stuenkel Road and I-57 in Monee, IL. In observing the construction process, Alex was responsible for observing deck, roadway and ramp concrete pouring, depth checks, rebar inspection, ditch grading and shaping, loop detector layout, proof testing, and curb and gutter placement. Alex used a DCP to test for compaction on subgrade. As the project progressed Alex was a part of a survey crew to verify and determine the depths of sub and final grades. Additional responsibilities included plan verification, resolving plan versus field issues and recording construction quantities.

Warrenville Road Construction, Will County*
Construction observer for a resurfacing project in Lisle, IL. Responsible for observing road grinding and paving, IDOT asphalt temperature verification on delivery and placement, loop detector layout and placement, topsoil and seed placement, pavement marking, and recording project quantities.

Briggs Street, Bridge Construction, Will County*
Construction observer for a bridge replacement over Spring Creek. On the project site Alex observed and inspected concrete pours of the pier cap, abutments, and deck, placement of rebar, guard rail and rip rap, removal of existing piles, drainage structures, and earthwork. Site surveys were conducted to verify the plan specifications and quantity calculations of roadway and creek cross sections.

DuQuoin Site Remediation, Perry County*
Pavement and Construction Inspector for a roadway which sustained approximately 15 trucks per day at +/- 25-ton loads for 18 weeks on average. Alex made biweekly visits to the site which involved roadway observation and condition reporting. Condition recording consisted of field notes, photos, road condition reports, and videos. At the conclusion of the project, rehabilitation locations were identified along with quantities and pay items for each location. Alex also observed the construction of the roadway and verified IDOT standards. The IDOT Standard Specifications for Road and Bridge Construction manual was referenced for rehabilitation specification details.

ADA Field Inspection, Skokie, Cook County*
Field inspector conducted an ADA study in the Village of Skokie, IL. In the field, ADA/PROWAG field inspection guidelines were implemented at each location. The study's purpose was to observe and document the current conditions of ADA sidewalks by checking each location's components consisting of detectable warnings, side flares, slopes, turning space, etc. to determine if they meet the current ADA requirements.

RAILROADS

Union Pacific Feasibility Study, Milwaukee County, WI*
The purpose of this feasibility study was to evaluate clearance issues at several structures for the introduction of double stack container operations on the Milwaukee and Adams subdivisions. The assignment included 11 overhead roadway, rail, and pedestrian structures to evaluate the feasibility of increasing the vertical clearances to 22'0" and 23'4" and examine the associated impacts at these locations over the Union Pacific Railroad tracks.

Alex's responsibilities for this project included: preforming survey on rail and overhead structures, evaluating existing site and structure conditions, analyzing existing track and as-built plans, providing opinion of probable cost comparisons for all options including raising or constructing a new structure or undercutting the rail, evaluating drainage, and providing a recommendation for consideration.

TOPOGRAPHIC SURVEYS

William Natcher Green River Parkway Stateside Pavement Rehab Field Work, Butler County, KY*
Land surveyor responsible for the design survey of six miles on William Natcher Green River Parkway. The project involves drainage, widening, resurfacing, bridge joint, guardrail, and a rock cut area. The scope of the project includes establishing a GPS network, inspection of guardrail, locating and inspecting culverts, and surveying a 35-foot high rock cut area. Equipment used in the project includes TDS electronic data collectors with Trimble stations and Trimble R-8 GPS receivers to complete the project in a timely and efficient manner.

LANDSCAPE ARCHITECTURE

Elgin-O'Hare Expressway Landscape Improvement, Cook County*
This landscaping contract consisted of tree, shrub, and grass plantings along the IL-390 corridor from Lake Street to Rohlwing Road within Cook and DuPage counties, IL. The work under this contract included: furnishing and installation of trees, shrubs, perennials and ornamental grasses, providing plant care throughout the establishment period, slope repair and seeding of areas disturbed during construction.

Alex's responsibilities within this contract included: Coordination with the firm's Petaluma office, organizing preferred tree and shrub locations, coordination with impacted municipalities and homeowners associations, identifying wetland site locations, perform site visits to determine existing and proposed tree and shrub locations as well as tree removals, coordination with several projects to create a

current plan of the corridor during ongoing construction, and estimating seeding and various landscaping items.