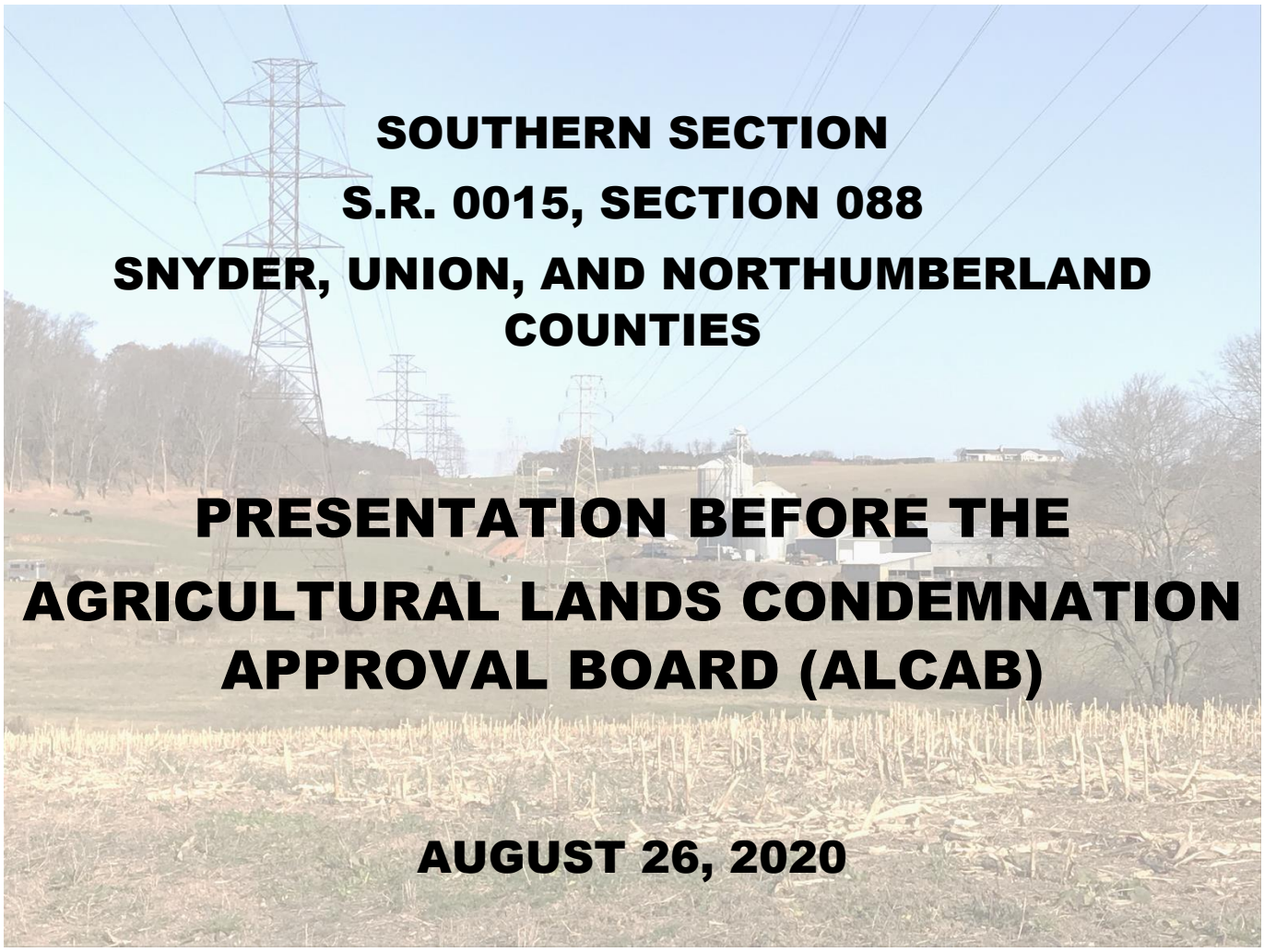
central Susquehanna Valley transportation project



SOUTHERN SECTION

S.R. 0015, SECTION 088

SNYDER, UNION, AND NORTHUMBERLAND COUNTIES

PRESENTATION BEFORE THE AGRICULTURAL LANDS CONDEMNATION APPROVAL BOARD (ALCAB)

AUGUST 26, 2020

pennsylvania DEPARTMENT OF TRANSPORTATION

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CENTRAL SUSQUEHANNA VALLEY TRANSPORTATION PROJECT

SOUTHERN SECTION

S.R. 0015, SECTION 088

ALCAB HEARING – AUGUST 26, 2020

PENNDOT TESTIMONY AGENDA

1. Opening statement: Christopher J. Clements, Sr. Counsel in-Charge, Right-of-Way, Pennsylvania Department of Transportation

2. Project Location, Description and Project Needs: Sandra K. Basehore, President, Skelly and Loy, Inc.

3. Environmental Features: Sandra K. Basehore

4. Alternatives Analysis: David A. Hamlet, PE, Vice President and Highway Design Operations Manager, Gannett Fleming, Inc.

    a. Jason M. Gardner, PE – Principal Geotechnical Engineer, Gannett Fleming, Inc.
    b. Marvin H. Klinger – Director of Environmental Compliance Services, Skelly and Loy, Inc.

5. Farmland Assessment: Eric R. Bruggeman, Environmental Specialist, Skelly and Loy, Inc.

6. Closing statement for ALCAB Approval: Christopher J. Clements, Sr. Counsel in-Charge, Right-of-Way

CENTRAL SUSQUEHANNA VALLEY TRANSPORTATION PROJECT

SOUTHERN SECTION

S.R. 0015, SECTION 088

ALCAB HEARING – AUGUST 26, 2020

WITNESS LIST

Gannett Fleming, Inc., Final Design Engineer

David A. Hamlet, PE – Vice President and Highway Design Operations Manager

Jason M. Gardner, PE – Principal Geotechnical Engineer

Skelly and Loy, Inc., Preliminary and Final Design Environmental Consultant

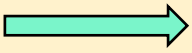
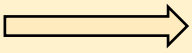
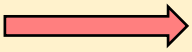
Sandra K. Basehore – President

Marvin H. Klinger – Director of Environmental Compliance Services

Eric R. Bruggeman – Environmental Specialist

Appendix A contains a curriculum vitae for each of the witnesses.

TABLE 5
EVALUATION OF FINAL DESIGN FOCUS AREA ALTERNATIVES

	After ALCAB Approval (May 8, 2006)	Conclusion	Notes	Reason for Dismissal	
				Not Prudent	Not Reasonable
Mill/App Road Focus Area Alternatives					
DA Modified (DAM)		Dismissed	Not prudent. Fails to fully meet need due to constructability issues related to bridge skew.	X	
Option 3-1		Dismissed	Not prudent. Fails to fully meet need due to decreased levels of service/capacity and decreased safety due to potential turning conflicts at the stop-controlled "T" intersection.	X	
Option 3-2			Option 3-2 is the only prudent and reasonable alternative for the Mill/App Road Focus Area.	**ALCAB PREFERRED ALTERNATIVE**	
Option 3-3		Dismissed	Not prudent. Fails to fully meet need due to decreased levels of service/capacity and decreased safety due to potential turning conflicts at the stop-controlled "T" intersections.	X	
Acid-Bearing Rock Focus Area Alternatives					
DA Modified (DAM)		Dismissed	Not prudent. Fails to meet need due to constructability issues related to ABR. Not Reasonable due to excessive environmental impacts associated with ABR excavation.	X	X
ABR Design Refinement			Prudent and reasonable alternative; 80% reduction in ABR excavation.	**ALCAB PREFERRED ALTERNATIVE**	
Ash Basin Focus Area Alternatives					
DA Modified (DAM)		Dismissed	Not prudent or reasonable due to constructability and excessive environmental concerns related to impacting crossing the ash basins.	X	X
Western Alternative		Dismissed	Not prudent due to not fully meeting the need of reducing traffic congestion due to length of PA Route 61 Connector. Not reasonable due to excessive impacts to residences, wetlands, and agricultural resources.	X	X
Central Alternative		Dismissed	Not reasonable due to excessive impacts to residences, wetlands, and agricultural resources.		X
Eastern Alternative			Eastern Alternative is the only prudent and reasonable alternative for the Ash Basin Focus Area.	**ALCAB PREFERRED ALTERNATIVE**	

CENTRAL SUSQUEHANNA VALLEY TRANSPORTATION PROJECT

SOUTHERN SECTION

S.R. 0015, SECTION 088

ALCAB HEARING – AUGUST 26, 2020

ERRATA SHEET - FARMLAND ASSESSMENT REPORT

TABLE 7, FAR PAGE 51

The following revised table is provided to clarify impacts to remaining land available for production, as referenced in Table 7, Column H. FAR parcels AWH-1B and AWH-6 are intersected by the Mill/App Road Focus Area Boundary. Impacts to these two FAR parcels did not reflect the additional impact outside the focus area to remaining land available for production. The corrected impacts are referenced below in Column H and footnoted accordingly. Also, parcel ownership for AWH-21 was confirmed to be owned by Aqua Pennsylvania, Inc. in its entirety.

TABLE 7
A. W. HEIMBACH AND SONS
IMPACTED FARM PARCELS – MILL/APP ROAD FOCUS AREA

Column A	Column B	Column C*	Column D	Column E	Column F	Column G	Column H
FAR Parcel ID No.	Parcel Owner	Existing Productive Agricultural Land	Productive Agricultural Land Impact				Remaining Land Available for Production (Acres)
			Lost to Right-of-Way (Direct) (Acres)	Left Impractical to Farm (Acres)	Left Inaccessible (Acres)	Total Productive Agricultural Impact (Acres)	
AWH – 1B	Heimbach	2.5	1.2	-	-	1.2	0.3**
AWH – 1C	Heimbach	1.5	1.0	-	-	1.0	0.5
AWH - 2	Heimbach	18.7	3.4	-	-	3.4	15.3
AWH - 5	Heimbach	2.5	0.9	-	-	0.9	1.6
AWH - 6	Heimbach	138.6	2.0	-	-	2.0	123.9***
AWH - 21	Aqua Pennsylvania, Inc.	5.6	3.4	-	-	3.4	2.2
AWH - 33	Heimbach	7.8	4.4	-	-	4.4	3.4
Subtotal – Operator-Owned Land			16.3	0.0	0.0	16.3	--
Total Acreage of Impacted Parcels			**16.3**			**16.3**	

Note: Total productive agricultural land impact (Column G), is derived from Column C minus Columns D, E, and F. The remaining land available for production is shown in Column H.

* *Productive agricultural land totals in Column C represent the total acreage of the farm parcel when intersected by the focus area boundary.*

** *FAR Parcel AWH-1B is intersected by the Mill/App Road Focus Area boundary. Direct acres lost to right-of-way outside the Mill/App Road Focus Area totals 1.0 acre. Rationale (2.5ac existing, minus 1.2 ac direct inside focus area, minus 1.0 ac outside focus area, equals 0.3 ac remaining). As such, the remaining land for available production for the entire parcel is 0.3acre to FAR parcel AWH-1B.*

*** *FAR Parcel AWH-6 is intersected by the Mill/App Road Focus Area boundary. Direct acres lost to right-of-way outside the Mill/App Road Focus Area totals 12.7 acres. Rationale (138.6 ac existing, minus 2.0 ac direct inside focus area, minus 12.7 acre outside focus area, equals 123.9ac}. As such, the remaining land for available production for the entire parcel is 123.9 acres to FAR parcel AWH-6.*

CENTRAL SUSQUEHANNA VALLEY TRANSPORTATION PROJECT

SOUTHERN SECTION

S.R. 0015, SECTION 088

ALCAB HEARING – AUGUST 26, 2020

ERRATA SHEET – FARMLAND ASSESSMENT REPORT, APPENDIX B

CSVT ALCAB ADJUDICATION #2, 2006, Pages 9-13

Appendix B of this handout contains pages 9-13 of the CSVT ALCAB Adjudication #2, in 2006. The pages were not included with all hard copies that were distributed.

CENTRAL SUSQUEHANNA VALLEY TRANSPORTATION PROJECT

SOUTHERN SECTION

S.R. 0015, SECTION 088

ALCAB HEARING – AUGUST 26, 2020

FORMAL REQUEST FOR ALCAB APPROVAL

Accordingly, from all of the evidence and testimony that you have just heard, the Commonwealth of Pennsylvania, Department of Transportation respectfully requests that you grant approval to condemn the productive agricultural lands necessary for the construction of the ALCAB Preferred Alternative within each Focus Area, as set forth and described within the Farmland Assessment Report (FAR) and as shown on FAR Exhibit 13, being as follows:

- In the Mill/App Road Focus Area – Option 3-2
- In the Acid-Bearing Rock Focus Area – ABR Design Refinement
- In the Ash Basin Focus Area – Eastern Alternative

APPENDIX A – CURRICULUM VITAE FOR WITNESSES

SANDRA K. BASEHORE
President

SKELLY AND LOY
A Terracon COMPANY

EDUCATION:
B.S., Environmental Resource Management, 1983, The Pennsylvania State University

PROFESSIONAL AFFILIATIONS:
American Society of Highway Engineers (ASHE)

Pennsylvania Association of Environmental Professionals (PAEP)

American Council of Engineering Companies of Pennsylvania (ACEC/PA)

RELEVANT TRAINING:
"Little NEPA's" and the Environmental Impact Assessment Process sponsored by the American Law Institute

Managing the NEPA Process for Complex Projects sponsored by the AASHTO Center for Environmental Excellence

Managing Small Projects sponsored by Zweig White and Associates

National Transportation Enhancements Workshop sponsored by the FHWA, the Surface Transportation Policy Project and the Rails-to-Trails Conservancy

HEP Certified by the Fish and Wildlife Service

Highway Runoff Water Quality Training Course sponsored by the FHWA

YEARS OF EXPERIENCE:
37 Years

As an President of Skelly and Loy, Inc., responsible for all environmental services offered in each of Skelly and Loy's 6 offices, Ms. Basehore is directly responsible for a staff of approximately 70 environmental professionals and supervising Service Groups with a cumulative budget of over $12 million annually. In this position, Ms. Basehore holds the ultimate responsibility for project budgets, job performance, and client satisfaction. Ms. Basehore's 36-year career has concentrated on the assessment of environmental impacts and the development of cost-effective mitigation actions for transportation projects. As an experienced project manager, she has directed the performance of detailed natural, cultural, and socioeconomic studies in accordance with NEPA as well as applicable local, state, and federal regulations and requirements. These studies have resulted in the completion of all levels of environmental planning documents including Environmental Impact Statements (EISs), Environmental Assessments (EAs), Environmental Evaluation Reports (EERs),and Categorical Exclusion Evaluations (CEEs).

As a result of this experience, Ms. Basehore has developed expertise in managing all levels of transportation projects and addressing the environmental, social, and cultural issues associated with multi-model projects ranging from permitting needed for maintenance work to minor bridge replacements and roadway widenings to rehabilitating or replacing transit facilities to highways and/or railroads planned on new location. Beginning with the needs and concluding with the NEPA clearance, Ms. Basehore works diligently to select the most feasible alternative and then obtains environmental clearance for construction. Ms. Basehore's project experience includes work in the various stages of project development including planning studies, preliminary engineering, final design, and construction. Her work in these various stages has included the development of alternatives, the assessment of impacts and appropriate mitigation measures, and public and agency involvement. Critical to the success of this process has been her direct communication and active negotiation with resource agencies as she serves as a liaison between the project team and the environmental reviewing agencies.

Further evidence of her strong communications skills is her ability to poll public opinion and promote public understanding through the implementation of comprehensive public involvement programs. These campaigns have included facilitating public forums ranging from open public meetings to focus groups as well as producing information pieces including websites, newsletters, brochures, and videos. For these innovative programs, Ms. Basehore has employed today's most advanced computer technology to develop interactive documents, web pages, and three- and four-dimensional computer renderings.

PROFESSIONAL EXPERIENCE

U.S. Department of Transportation, Surface Transportation Board (STB) - Ms. Basehore served as the Project Manager for Beech Creek Railroad Line Reactivation. Ms. Basehore oversaw the development of an EIS for the reactivation of approximately 20 miles of rail line. This work was performed as a third-party contractor to the STB on behalf of R.J. Corman Railroad, the applicant for the rail line reactivation.

Pennsylvania Turnpike Commission (PTC), Open-End Contract, Environmental Services – Systemwide - Ms. Basehore is currently serving as the Project Manager for a $1,000,000, 4-year Open-End Contract to provide environmental services, systemwide. At present, Ms. Basehore is coordinating 15 work orders for the PTC including wetland mitigation site monitoring, permit

preparation, T&E services, and third party permitting assistance.

Pennsylvania Department of Transportation (PennDOT), Bureau of Public Transportation - Ms. Basehore is currently providing QA/QC oversight for a $2,000,000, 5-year Statewide Open-End Agreement to provide environmental support services to the Bureau of Public Transportation (BPT). Ms. Basehore is coordinating 23 work orders for the BPT including NEPA, cultural, and waste work for the Amtrak Keystone Corridor and also noise and other environmental services at bus and intermodal facilities throughout the state. Her work on this agreement has included direct coordination with FTA, FRA, SEPTA, AMTRAK, and PennDOT's BPT staff.

PennDOT, Bureau of Project Delivery, Environmental Policy and Development Section - Ms. Basehore has served as the Contract Manager for three 5-year Statewide Open-End Agreements for the Management of Preliminary and Final Design Activities. As such, she was responsible for managing and reviewing all work order proposals and deliverables for the project team. The first Agreement, for $5,000,000, extended from 2000 to 2005. Under this agreement, Ms. Basehore participated in the development of 32 work orders ranging from report reviews to policy and handbook development to the review and analysis of PennDOT's Highway and Bridge Project Delivery process. The second Agreement (Agreement E00668), for $3,000,000, extended from 2005 to April 2010. Under this agreement, Ms. Basehore participated in the development of 19 work orders including several Project Delivery Streamlining initiatives such as the development of an electronic Wetland Monitoring Report template, Programmatic Consultation for federally and state listed T&E species, and the provision of statewide cultural resources support. Additionally, Ms. Basehore participated in the development of the Environmental Commitment Mitigation Tracking System (ECMTS), a tracking system now being used to ensure that Environmental Mitigation Commitments on projects are being successfully implemented and monitored. The third Agreement (Agreement E02192) for $3,000,000, extended from August 2011 through August 2016. Nineteen work orders were completed under this Agreement ranging from environmental support in Districts 4-0, 6-0, and 8-0 to Right-of-Way support in District 6-0.

PennDOT Open-End Contracts - Ms. Basehore has managed numerous Open-End Agreements for Environmental Services for PennDOT Engineering Districts 2-0, 3-0, and 4-0. Typically, such contracts are used on routine transportation projects such as bridge replacements, intersection improvements, and lane widening projects.

PennDOT Engineering District 3-0 – Ms. Basehore has been actively involved in numerous projects in the District. She most recently served as the Project Manager for the Central Susquehanna Valley Transportation (CSVT) Project. As Project Manager, Ms. Basehore directed the completion of a concise EIS using the integrated 404/NEPA process for this complex highway improvement project. Involving a 20-mile stretch of congested highway and beginning with more than 30 alternatives, this project was in the planning stage for 8 years. During this time, Ms. Basehore has overseen the investigation of more than 400 identified wetlands, the delineation of land use/land cover, the identification of 200 historic properties, the evaluation of archaeological resources, research on farmland issues for the more than 40 farmers in the area, the assessment of waste management concerns which included a municipal landfill, the analyses of socioeconomic issues including potential environmental justice-eligible communities, and coordination with a major utility concerning an electrical power plant. Due to the project's complexity and size, a comprehensive public involvement campaign was developed and spearheaded by Ms. Basehore. This outreach program included the formation of 4 separate working groups, the production of informational videos, the creation of a project Web page, and the facilitation of public meetings that have an average attendance of 500 residents. Ms. Basehore's work on this project also included oversight on the development and design of a comprehensive mitigation site. The site included a total ecosystem approach to natural resource mitigation by incorporating elements of wetland replacement, reconstruction/restoration of streams, and terrestrial and wildlife habitat enhancement in a single, multi-acre facility. Ms. Basehore continues to serve as the Project Manager of Environmental Compliance issues during the final design of CSVT.

Ms. Basehore also served as the Project Manager for numerous CEE for District 3-0 that were outgrowths of the CSVT Project including the Route 147 Widening Project, the Vargo Site CEE, and the Selinsgrove Center Site CEE.

In addition, Ms. Basehore served as the Project Manager for two District 3-0 Environmental and Engineering Open-End Agreements (E00688 and E01724). Twenty-six work orders were completed under E00688 ranging from wetland studies and cultural resources investigations to full bridge replacement design and Indiana Bat surveys, and 17 were completed under E01724. Ms. Basehore currently serves in a QA/QC role for our third award of an Environmental and Engineering Open-End in District 3-0 (Agreement E02491).

Gannett Fleming

Excellence Delivered As Promised

RESUME

David A. Hamlet, PE

Vice President/Highway Design Operations Manager/Project Principal/Senior Project Manager

YEARS EXPERIENCE WITH FIRM: 27

YEARS EXPERIENCE WITH OTHER FIRMS: 0

EDUCATION:
BS, Civil Engineering, Rensselaer Polytechnic Institute, 1992
ME, Engineering Science, The Pennsylvania State University, 1995

CURRENT RESPONSIBILITIES:

Vice President and Highway Design Section Manager overseeing the day-to-day operations of Gannett Fleming's Camp Hill Highway Design Section. Responsibilities include leading staffing meetings, administering staff resource allocation and projections, tracking budgets and performance, interviewing personnel, hiring, overseeing proposals and marketing, leading ISO 2008:9001 conformance and continuous quality improvement processes, and completing other management tasks.

Project Principal overseeing highway projects managed by other project managers. Responsibilities include conducting monthly meetings for project managers to report on their projects' progress with respect to schedule, budget, and project action items.

As **Senior Project Manager**, supervises all aspects of preliminary and final highway design and construction services including horizontal and vertical alignment, drainage, hydrology and hydraulics, erosion and sediment pollution control (E&SPC), right-of-way, utility relocation, constructability, traffic control, cost estimates, and specifications. Also responsible for coordination with clients and internal discipline leaders, studies, agency and public presentations, budget tracking, and project scheduling.

Mr Hamlet has over 27 years experience practicing in the field of Highway Engineering. Over the course of his career, Mr. Hamlet has provided engineering services to clients in Pennsylvania. Mr. Hamlet is well versed in the field of Highway Engineer. His roles in projects has ranged from a design engineer performing the technical design tasks to a project manager responsible for all aspects of the project to project principal who oversees a portfolio of projects. His experience includes data collection, highway design; plans development, preparation, and checking; report preparation, study preparation, cost estimate development, specification development, and public involvement.

PROFESSIONAL REGISTRATION(S):

PE: Pennsylvania - No. PE051351E (1997)

CONTINUING EDUCATION:

Advanced HEC-2 Short Course, The Pennsylvania State University, 1993
Project Management Certificate Program, The Pennsylvania State University, 2001
ACEC/PA 2008 Business of Engineering for New and Emerging Principles, The Pennsylvania State University, 2008
Pennsylvania Department of Transportation (PennDOT) ASTA Training, PennDOT Construction Division, 2015
Leadership Academy, Gannett Fleming, 2015

SUMMARY OF EXPERIENCE:

Central Susquehanna Valley Transportation (CSVT) Southern Section Projects, S.R. 0015, Section 088, Shamokin Dam, Selinsgrove, and Sunbury, PA, *Pennsylvania Department of Transportation, District 3-0 (PennDOT).* Senior Project Manager for the final design of the CSVT Southern Section, a 5.7 mile, four-lane, limited-access highway on new alignment. The project included 3 interchanges and 15 bridges. Unique aspects of the project included acid rock remediation, the study of constructing over top of coal fly ash impoundments followed by an extensive engineering and public involvement effort to move the highway off the impoundments, and designing to minimize impacts to several electric transmission and distribution lines. The project involved extensive coordination with the public, PennDOT, Federal Highway Administration, various resource agencies, municipalities, and utilities. Responsibilities included serving as the main contact with the client; leading a six-firm design team; coordinating with outside agencies, businesses, and other institutions; and leading presentations for public and agency meetings.

S.R. 0322 Realignment – Final Design and Construction Consultation Services, Potters Mills Gap, Centre County, PA, *Pennsylvania Department of Transportation, District 2-0.* Senior Project Manager for the final design of U.S. Route 322 through Potters Mills Gap through a project specific, open-end contract. The project is 3.6 miles long with approximately half on new alignment. The project included two new interchanges, three bridges, three retaining walls, several service roads, and a roundabout. It was bid in two separate contracts. The project was very challenging due to the severe topography and topographical constraints, as well as an aggressive schedule. Responsibilities included serving as the main contact with the client; leading a five-firm design team, coordinating with outside agencies, businesses, and other institutions; leading presentations for public and agency meetings; and managing the schedule, budget, and design.

I-83 Exit 4 Improvements, Shrewsbury, PA, *Pennsylvania Department of Transportation, District 8-0.* Senior Project Manager for the preliminary design, final design, and construction services for

improvements to I-83, Exit 4. The project started with a study of a diverging diamond interchange (DDI) alternative, diamond interchange with reversible lanes alternative, and ramp lengthening alternative; and a presentation to local officials. Preliminary engineering included conceptual design and comparison of the DDI and diamond alternatives followed by the preliminary design of the DDI. Also included were, environmental studies, preparing National Environmental Policy Act (NEPA) documentation for approval, bridge design, culvert design, right-of-way studies, cost estimates, and a public meeting. Responsibilities include coordination with District 8-0; overseeing traffic, highway, bridge, and environmental disciplines and four subconsultants; developing and delivering presentations to municipal officials; and management of schedule, budget, and action items.

Pennsylvania Turnpike Reconstruction and Widening, Milepost 308 to 312, Upper Uwchlan and Uwchlan Townships, Chester County, PA, *Pennsylvania Turnpike Commission.* Senior Project Manager for the preliminary and final design of reconstruction and widening of a 4-mile section of the Pennsylvania Turnpike. The project involves the complete reconstruction of the mainline roadway, widening from four lanes to six lanes, replacing five bridges, lengthening one arch culvert, and constructing several retaining walls. The project involves roadway, traffic, bridge, geotechnical, hydraulics, utilities, and environmental design and coordination with multiple local, state, and federal agencies, as well as other local officials and the public. Three contract bid packages were prepared with one having an accelerated schedule. Aspects of the project included acquiring lands from a state park that involve several years of coordination. Responsibilities included coordinating with the client; managing the designs of the Gannett Fleming disciplines and three subconsultants; coordinating and presenting to local and governmental stakeholders; and managing schedule, budget, and action items.

S.R. 0080, Section 078, I-80 Bridges Project, Columbia County, PA, *Pennsylvania Department of Transportation (PennDOT), District 3-0.* Senior Project Manager for preliminary and final design for the rehabilitation and replacement of several bridges along I-80 and approximately 2 miles of roadway reconstruction. The project involves a replacement of the westbound bridges over the Susquehanna River North Branch and Canadian Pacific Railroad, a superstructure replacement of the westbound bridge of S.R. 0339 and the eastbound bridge over the Susquehanna River North Branch, the redecking of the eastbound structures over the Canadian Pacific Railroad and S.R. 0339, the preservation of the eastbound and westbound bridges over S.R. 0011 northbound, reconstruction of the eastbound and westbound I-80 roadways from the bridges over S.R. 0011 northbound to the bridges over S.R. 2028, the installation of partial interchange lighting, and the replacement of several overhead sign structures. Project duties include coordinating with the client, subconsultants, agencies, local businesses, and municipalities; developing, preparing, and delivering several presentations to the client and project stakeholders; developing and evaluating preliminary alternatives, which will allow four lanes of traffic to be maintained on I-80 for the majority of construction; and leading, monitoring, and managing the preliminary and final design effort. The project also involves an extensive Value Engineering/Accelerated Construction Technology Transfer process and the management and safe disposal of acid-bearing rock.

S.R. 0015, Section C41, Lycoming County, PA, *Pennsylvania Department of Transportation (PennDOT), District 3-0.* Senior Project Manager for a multiphased contract encompassing preliminary design, final design, and construction services to upgrade approximately 10 miles of U.S. Route 15 to meet interstate design standards. The $72 million project involved upgrades to the horizontal and vertical alignments; the design of two interchanges, four bridges, six culverts, and one retaining wall; 3.5 million cubic yards of excavation; and the elimination of several existing access points along the corridor. Mountainous topography, adjacent homes and businesses, adjacent trout streams, and the maintenance of access to adjacent property made this a challenging project, which was scoped as a categorical exclusion. The project was awarded the No. 1 Roadway for 2011 Roads and Bridges Top 10 Roads List. Responsibilities included oversight of roadway and interchange alternatives development and analysis; preparation of a needs report; preliminary and final plans, specifications, and estimates (PS&E); presentations at agency and public meetings; construction services; coordination with PennDOT and other agencies; and project and subconsultant management.

S.R. 6015, Section D52 (U.S. Route 15, Blossburg to Canoe Camp), Tioga County, PA, *Pennsylvania Department of Transportation, District 3-0.* Assistant Project Manager for final design and construction services for a project consisting of 6.2 miles of four-lane, limited-access relocation of S.R. 0015's existing two-lane section. This project included preparation of separate grading, paving, and structures construction bid packages. Numerous site constraints, coupled with sensitive environmental issues and geotechnical conditions, made this a challenging final design project. Disciplines involved in this effort included highway, structural, geotechnical, and environmental. Specific characteristics of this project included approximately 7 million cubic yards of excavation; a bifurcated alignment for northbound and southbound lanes to minimize earthwork; three dual structures and one single structure; six box culverts; and wetland and stream mitigation. Work tasks to complement the disciplines involved field surveys; utility verification; structure and foundation design; boring contract; safety review; hydrologic and hydraulic design; E&SPC; stormwater management; gap and full right-of-way plans; traffic control plans; signing and pavement marking; and completion of a construction bid package that included specifications and construction cost estimates.

S.R. 6015, Section 53B, (U.S. Route 15, Blossburg), Tioga County, PA, *Pennsylvania Department of Transportation, District 3-0.* Project Engineer for the design of dual structures crossing the relocated Lower Arnot Road and Johnson Creek on relocated S.R. 0015, Section 53B. This final design consisted of dual six-span prestressed concrete structures 750 feet in length on a 3 degree horizontal curve and a 4 percent grade. A unique characteristic of this structure is the diversity of foundation types. The south abutment was founded on a spread footing bearing on 80 feet of proposed roadway-zoned embankment consisting of PA 2A aggregate. The north abutment was supported on H-piles driven to bedrock as were piers 1, 2, and 3. Piers 4 and 5 were supported on spread footings bearing on bedrock. In addition to the foundation designs, work tasks

involved the structure design; line, grade, and typical section approval; hydraulic studies; and preparation of a joint permit application. The project required close coordination, as District 3-0 completed the roadway (grading and paving) construction contracts in-house.

S.R. 6015, Section D53 (U.S. Route 15, Bloss Mountain to Blossburg), Tioga County, PA, *Pennsylvania Department of Transportation (PennDOT), District 3-0.* Project Engineer responsible for working on the final design of a four-lane relocation of 6.3 miles of S.R. 0015. Our firm assisted PennDOT with the preparation of a contract bid package for separate grading and paving operations for the limited-access relocation of S.R. 6015's existing two-lane section. Numerous site constraints, coupled with sensitive environmental issues and geotechnical conditions and an aggressive schedule, made this a challenging final design project. Our firm led on the preparation of a full right-of-way (ROW) plan and two gap ROW plans, E&SPC drawings, and the coordination of information to obtain a National Pollutant Discharge Elimination System (NPDES) and Joint Chapter 105/404 permit. Permitting involved the preparation of a mitigation design that included 11.5 acres of wetland replacement, treatment of acid mine drainage, and stream restoration. Disciplines involved in this effort included structural, geotechnical, environmental, and civil; design work included highway, field surveys, utility verification, traffic control, safety review, E&SPC, stormwater management, hydrologic and hydraulic design, ROW plans, and specifications and construction cost estimates.

S.R. 0322, Sections B01 and B02, "Missing Link," Mifflin County, PA, *Pennsylvania Department of Transportation, District 2-0.* Engineer for the preparation of plans, specifications, and estimates (PS&E) for a 5.6-mile, limited-access, four-lane relocation of U.S. Route 322 near Milroy. Responsibilities included design of the drainage system and preparation of several hydrologic and hydraulic (H&H) reports. The H&H reports required the use of HEC-2, HY-8, HEC-14, and HEC-18 and included the modeling of an interconnected stream network. Participated in an agency coordination meeting dealing with hydraulic and mitigation issues.

S.R. 6015, Sections D53, D52, and D54 (U.S. Route 15, Bloss Mountain to Canoe Camp), Tioga County, PA, *Pennsylvania Department of Transportation, District 3-0.* Project Engineer for the preliminary environmental and engineering studies for the improvement of 11.6 miles of S.R. 0015. Responsibilities involved performing preliminary design and preparing plans and estimates for several roadway improvement alternatives including widening, bifurcation, and relocation, which required the use of three-dimensional modeling in CADD. Prepared an alternatives analysis report for the selection of a preferred alternative and pre-Step 9 plans and estimates for the preferred alternative. Also prepared a needs report, final environmental impact statement documents, preliminary hydrologic and hydraulic reports, and a service road justification report. Participated in several agency meetings, including both agency coordination meetings and special agency coordination meetings, to correlate the review process and hearings with the Agricultural Lands Condemnation Approval Board for the farmlands assessment. Also participated in special interest group and public meetings, prepared newsletters, maintained a 1,200-record database of citizen addresses, and maintained the project correspondence files.

S.R. 0078, Section 17M, Berks County, PA, *Pennsylvania Department of Transportation, District 5-0.* Engineer responsible for the ramp and roadway design as part of the preliminary and final design of improvements to 3.1 miles of S.R. 0078 and the reconfiguration of the interchange with Fourth Street in Hamburg. Responsibilities also included cost estimates, deed research, attendance at public and agency meetings, and the preparation of an alternatives analysis and design exception report.

PROFESSIONAL AFFILIATIONS:

American Society of Highway Engineers
American Society of Civil Engineers
Institute of Transportation Engineers

PUBLICATIONS:

Hamlet, David A., and William Gough. "Federal Funds Achieve District 3-0 Milestone." *PE Reporter*, Summer 2013.

Hamlet, David A., and Scott Huebner. "An Alternate Method of Finding the USDA Soil Conservation Service Runoff Curve Number for a Small Watershed." *Advances in Modeling the Management of Stormwater Impacts - Volume 5. Proceedings of the 1996 Stormwater and Water Quality Management Modeling Conference*, Toronto, Canada.

MARVIN H. KLINGER, Director of Environmental Compliance Services

EDUCATION:
B.S., Biology, 1982,
Shippensburg University

M.S., Biology, 1984,
Shippensburg University

PROFESSIONAL REGISTRATIONS AND CERTIFICATIONS:
U.S. FWS Habitat Evaluation Procedures, May 1990

WET 2.0 - Wetland Evaluation Technique, May, 1989

USACE, Baltimore District, Certified Wetland Delineator #WDCP94MD0310134B

YEARS OF EXPERIENCE:
37 Years

Mr. Klinger has more than 37 years of field experience in conducting and managing ecological field assessments including aquatic surveys, wetland assessments, terrestrial habitat analyses, and wildlife species assessments. As Director of Environmental Compliance Services his responsibilities include providing environmental compliance services to ensure state and federal permit conditions and environmental commitments for terrestrial, aquatic, and wetland resources are addressed in project construction and post-construction. He has implemented environmental compliance monitoring programs for public and private projects ranging from highway transportation projects to commercial development.

PROFESSIONAL EXPERIENCE

Environmental Compliance - Mr. Klinger is responsible for the management and coordination of environmental compliance services for transportation and private projects. Mr. Klinger has performed environmental compliance monitoring for the purpose of documenting Department of Transportation environmental commitments included within the FHWA Record of Decision, USACE 404 Permits, and PA DEP 102 and 105 Permits. Compliance monitoring has included construction and post-construction monitoring of erosion and sedimentation controls, surface water quality assessments, abiotic and biotic assessments of streams, groundwater hydrology, long-term wetland mitigation monitoring, endangered species assessments, invasive species monitoring, terrestrial habitat mitigation monitoring, structure assessments, and tracking of environmental commitments to ensure permit compliance. He has more than 25 years of field experience in conducting and managing ecological assessments of aquatic and terrestrial habitats.

Terrestrial Resources - Mr. Klinger is certified in the U.S. Fish and Wildlife Service Habitat Evaluation Procedures (HEP). He has completed HEP and PA Modified HEP studies for several transportation and development projects. These terrestrial habitat assessments were utilized in the comparison of baseline conditions with proposed projects and provided guidance for mitigation of impacts. Mr. Klinger has performed wildlife species assessments that have included avian, amphibian, and large mammal assessments. He has participated in the development of a landscape based assessment (LBA) methodology for terrestrial habitat for the Pennsylvania Department of Transportation. LBA was developed as a tool for use in identifying terrestrial habitats that promote or maintain the biological/ecological diversity of an area and/or provide special societal value.

Aquatic and Wetland Ecosystems - Mr. Klinger has performed aquatic assessments that have included assessment and interpretation of water quality data, identification and assessment of aquatic biota, and evaluation of aquatic habitat. He has experience in the performance of fin fish surveys, benthic sampling and analyses, and evaluation of habitat structure performance. Mr. Klinger has conducted numerous wetland identification and delineation studies utilizing the U.S. Army Corps of Engineer's 1987 Wetland Delineation Manual. He has prepared Wetland Jurisdictional Determination and Wetland Findings Reports, has designed wetland mitigation plans, and has developed and implemented wetland mitigation monitoring plans to assess hydric soil development, water quality, vegetation diversity, functions and values, and wildlife utilization. Mr. Klinger is certified in Wetland Evaluation Technique (WET 2.0) and is a provisionally certified U.S. Army Corps of Engineers wetland delineator. Mr. Klinger was also a member of the A-Team charged with developing hydrogeomorphic (HGM) wetland functional classification models for the valley and ridge physiographic province in the MidAtlantic region.

S.R. 0220 (I-99) Environmental Impact Statement, Centre and Blair Counties, Pennsylvania - Mr. Klinger performed EIS impact assessments for wetlands, terrestrial habitat, and streams. He assisted in the site selection and feasibility assessment for wetland creation sites, wetland mitigation design, and mitigation for terrestrial habitat and has conducted amphibian and neotropical migrant bird assessments. Currently, Mr. Klinger supervises the Environmental Compliance Monitoring program for the I-99 project. Responsibilities have included construction and post-construction monitoring of wetland, stream, and terrestrial mitigation sites. He is also responsible for long term hydrologic monitoring to determine if the project results in impacts to downgradient wetland and aquatic resources. Monitoring tasks include characterizing shallow groundwater with RDS autorecording wells, physiochemical and biological assessments of streams, vegetative characterization and analyses of wetlands, and wildlife useage of constructed travel corridors. He was responsible for the coordination and the development of the watershed-based Natural Resource Compensation Plan (NRCP) that included specific wetland enhancement and terrestrial habitat mitigation measures into a holistic mitigation plan for the project.

S.R. 0220 (I-99) Acid Rock Remediation Project, Centre County, Pennsylvania - Mr. Klinger is the project manager for the I-99 acid rock remediation project. Responsibilities include overburden characterization, groundwater monitoring and modeling, surface water quality impact assessments, benthic surveys, private water supply inventories, NPDES compliance, geotechnical alternative evaluations, development of ARD remediation alternatives, public meetings, agency coordination, PA DEP 105, 102, NPDES, and Water Quality Management Part II permit submissions , remediation construction monitoring services, and final engineering ARD remediation design plans. He is also responsible for managing the long term operations and maintenance of ARD treatment facilities and ensuring compliance with permit conditions and reporting requirements of regulatory agencies.

U.S. 222, Warren Street Extension Project, Lancaster and Berks Counties, Pennsylvania - Mr. Klinger was responsible for developing and implementing an environmental compliance plan specific to ensuring mitigation commitments and state and federal permit conditions were completed. His specific tasks included the completion of a bog turtle biological assessment, permit amendments, and construction inspections for erosion and sedimentation control measures and wetland and stream mitigation.

U.S. 202, Section ES1 Environmental Impact Statement, Chester and Delaware Counties, Pennsylvania - Project Manager for the data collection and production of an EIS. This corridor represents a major urban transportation route that includes historic landmarks among a highly populated area. Environmental aspects of this project have included an assessment of wetland habitats for the presence of an endangered species, the bog turtle. Mr. Klinger performed the bog turtle habitat assessment and participated in the bog turtle survey. Extensive coordination was required for the 4(f) evaluation and Section 106 process.

InterCounty Connector Contract C, Montgomery and Prince George's Counties, Maryland - As Deputy Environmental Manager, Mr. Klinger's responsibilities include assisting the Environmental Manager with the implementation of the Environmental Compliance Plan developed for the ICC project. His specific duties include review of design plans to ensure environmental compliance and construction field reviews of erosion and sedimentation control measures, water quality monitoring, and implementation of mitigation commitments.

Central Susquehanna Valley Transportation Project, Snyder, Union, and Northumberland Counties, Pennsylvania - Mr. Klinger is responsible for the identification and delineation of natural resources including wetlands, streams, and terrestrial habitats. He is a co-developer of a landscape based habitat assessment method designed to assess highway affects on landscape ecological principles (i.e., wildlife corridors, forest fragmentation, interior forest, habitat patches, riparian habitat, species diversity).

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RESUME

Jason M. Gardner, PE

Principal Geotechnical Engineer

YEARS EXPERIENCE WITH FIRM: 19

YEARS EXPERIENCE WITH OTHER FIRMS: 1

EDUCATION:
BS, Civil Engineering, The Pennsylvania State University, 1999
MS, Civil Engineering, The Pennsylvania State University, 2002

CURRENT RESPONSIBILITIES:

Principal Geotechnical Engineer specializing in civil engineering projects with geotechnical requirements. Responsibilities include preparing boring contracts, coordinating subsurface explorations, interpreting laboratory and field test results, designing foundations and retaining walls, conducting slope stability analyses, designing pavements and performing pavement condition surveys, reviewing drawings, inspecting geotechnical aspects of construction projects, and preparing reports and specifications as determined by the scope of the projects. Responsibilities also include managing the geotechnical tasks of transportation projects, leading staff meetings, tracking budgets, interviewing personnel, overseeing proposals and marketing efforts, ensuring work products are in conformance with ISO 9001:2015 guidelines, and leading staff in developing and implementing continuous quality improvement of our work processes.

Mr. Gardner has over 19 years of experience practicing in the field of Geotechnical Engineering. Throughout his career, Mr. Gardner has primarily provided geotechnical engineering services to clients in Pennsylvania. Mr. Gardner has extensive experience in the field of Geotechnical Engineering. His roles in projects has ranged from a geotechnical designer performing the technical design tasks to a principal engineer responsible for the geotechnical aspects of the project.

PROFESSIONAL REGISTRATION(S):

PE: Pennsylvania - No. PE073183 (2006)
Virginia - No. 0402061404 (2019)
North Carolina - No. 049875 (2020)
PennDOT Drilling Inspector - No. 157-03 (2003)

CONTINUING EDUCATION:

Nuclear Density Gauge Training, 2000
40-Hour OSHA Hazardous Waste Operations and Emergency Response (HAZWOPER) Training, All American Environmental Services, Inc., 2010
Project Management Training, Gannett Fleming, 2018

SUMMARY OF EXPERIENCE:

Central Susquehanna Valley Transportation Southern Section Projects, S.R. 0015, Section 088, Shamokin Dam, Selinsgrove, and Sunbury, PA, *Pennsylvania Department of Transportation, District 3-0.* Principal Geotechnical Engineer for the geotechnical aspects of approximately 5.7 mile, four-lane, limited access highway on new alignment and preparing foundation design for 10 new bridges, 4 culverts, and 4 sound barrier walls. Prepared a problem statement and draft exploration program (PSDEP) for the roadway and subsurface exploration planning submissions (SEPS) for structures; supervised the subsurface exploration programs; prepared a geotechnical engineering report for roadway design; and prepared foundation reports for the various structures, including multi-span dual bridges, sound barrier walls, and culverts. Unique geotechnical aspects of the project included designing column-supported highway embankments over the saturated coal fly ash impoundments using soil mixed columns and remediating excavated acid rock and exposed cut slopes. The project also includes limestone geology and designing proposed rock cuts up to approximately 100 feet high.

Total Reconstruction Project - Milepost 308 to 312, Upper Uwchlan and Uwchlan Townships, PA, *Pennsylvania Turnpike Commission (PTC).* Principal Geotechnical Engineer responsible for various geotechnical tasks for a 4-mile section of a major highway roadway reconstruction, which involves widening from four lanes to six lanes, retaining walls, replacing five bridges, lengthening one arch culvert, a noise wall, and subgrade evaluation and pavement design. Specific tasks performed include evaluation of the mainline subgrade and verification that the pavement design provided in preliminary design was adequate, and preparation of geotechnical data reports, geotechnical engineering report for roadway design, and structure foundation reports for the bridges, retaining structures, and noise wall.

Safety Corridor Improvements, Lycoming County, PA, *Pennsylvania Department of Transportation (PennDOT), District 3-0.* Senior Geotechnical Engineer responsible for final design of the geotechnical aspects for the access management improvements on U.S. Route 220 in Lycoming County. Responsibilities included administering a boring contract in accordance with Publication 222 to perform more than 70 borings for roadway, structure and stormwater management purposes and 56 pavement cores, preparing a Geotechnical Engineering Report for the roadway design, and providing foundation design for a widened bridge that is founded on soil and two integral abutment bridges. Unique geotechnical aspects of the project include developing a settlement monitoring program to assist with mitigating the soft organics and

construction debris that was encountered along proposed Front Street during the subsurface exploration program.

S.R. 0080, Section 078, Columbia County, PA, *Pennsylvania Department of Transportation, District 3-0*. Geotechnical Engineer providing foundation design recommendations for two new bridges, one rehabilitated bridge, one widened bridge, and highway lights. One new structure carries S.R. 0080 westbound over the North Branch of the Susquehanna River and has 17 spans extending approximately 2,000 feet. The eastbound structure was rehabilitated with a widened superstructure, which required footing replacement or retrofit of most of the 19 piers. Provided foundation recommendations for spread footings bearing on bedrock, H-piles driving to bedrock, and a spread footing bearing on soil. Acid-bearing bedrock was encountered beneath the river bridges, and recommendations for both on-site disposal and hauling off-site were provided. Also provided foundation recommendations for a single-span mechanically stabilized earth (MSE) abutment bridge carrying S.R. 0080 over the Canadian Pacific railroad. Additional responsibilities included preparation of the Reconnaissance Soils and Geological Engineering Report and oversight of the subsurface investigation and laboratory testing program.

InterCounty Connector (ICC) Contract B Design-Build, Montgomery County, MD, *Maryland State Highway Administration.* Geotechnical Engineer for our firm's final design elements for this estimated $500 million project connecting I-270 in Montgomery County with I-95 in Prince George's County north of Washington, DC. Responsible for providing foundation recommendations for four bridges, numerous retaining walls, and a culvert and providing geotechnical design recommendations for approximately 1.5 miles of roadway. The bridges include two overhead structures and two dual mainline structures. These two dual mainline structures are the longest bridges in Contract B, one being a 1,140-foot-long curved steel plate girder bridge and the other a 1,300-foot-long prestressed-concrete Bulb-tee beam bridge. Many of the two-column piers for these two bridges are supported by 6.5-foot-diameter drilled shafts socketed into mainly schist bedrock. A few piers are supported on spread footings bearing on bedrock, with H-piles used to support the abutments. Also responsible for preparing geotechnical planning reports and geotechnical interim reports for the bridges and roadway, assigning laboratory-testing work orders, and providing foundation design recommendations for two temporary bridges.

S.R. 0015, Section C41, Steam Valley, PA, *Pennsylvania Department of Transportation, District 3-0.* Geotechnical Designer responsible for preliminary and final geotechnical design to upgrade approximately 11 miles of S.R. 0015 through Steam Valley as part of this multi-phased agreement. Responsible for layout and oversight of the drilling program that consisted of approximately 260 borings for structures and roadway. Implemented a geophysical survey consisting of seismic refraction at approximately 20 cross sections along the proposed alignment. Developed a laboratory testing program that included direct and triaxial shear-strength testing, compaction and California Bearing Ratio testing, and index property tests. Analyzed and provided roadway geotechnical recommendations for cuts and fills on the order

of 100 feet in height and depth. Designed foundations for numerous structures including four bridges, a soldier pile and lagging retaining wall, and three box culverts.

PROFESSIONAL AFFLIATIONS:

American Society of Civil Engineers (ASCE)
Organizing Committee Member for the Central Pennsylvania Geotechnical Conference

PRESENTATIONS:

Gardner, Jason. "Micropiles in Karst – The New Central Utility Plant at Shippensburg University." Presented at the 66th Highway Geology Symposium, Sturbridge, MA, September 2015.

Gardner, Jason. "Remediation of the S.R. 0087 Landslide." Presented at the 27th Central Pennsylvania Geotechnical Conference, Hershey, PA, April 2014.

Gardner, Jason. "A Bump in the Road¬Remediation of the SR 87 Landslide." Presented at the 64th Highway Geology Symposium, North Conway, NH, September 2013.

ERIC R. BRUGGEMAN, Environmental Specialist

EDUCATION:
B.S., Geography Land-Use, 2004, Shippensburg University

Minor, Business, 2004, Shippensburg University

PROFESSIONAL REGISTRATIONS AND CERTIFICATIONS:
Geographic Information Systems, PA, 2004

NEPA and Transportation Decision Making, 2005

Shaping Natural Surface Trails, 2007

PROFESSIONAL AFFILIATIONS:
National Off-Highway Vehicle Conservation Council - Pennsylvania Associate State Partner

Pennsylvania Off-Highway Vehicle Association - Environmental Correspondent

Pennsylvania Snowmobile/ ATV Advisory Committee - Secretary (2015-Current)

Pennsylvania Trails Advisory Committee (2012-2017)

YEARS OF EXPERIENCE:
16 Years

Mr. Bruggeman has a diverse background with experience in land use, transportation, environmental planning, trail planning, and environmental resources. He has in-depth familiarity with National Environmental Protection Act (NEPA) environmental documentation procedures for transportation projects and permitting requirements and is serving as the Environmental Project Manager for three dozen transportation projects where he is responsible for overseeing the completion of detailed natural, cultural, and socioeconomic resource studies; noise quality, hazardous waste assessments, and environmental justice assessments; indirect and cumulative effects analyses; public outreach; and permit applications (including both Clean Water Act Section 404 permits and state waterway and wetland permits).

PROFESSIONAL EXPERIENCE

NEPA Documentation/Alternatives Analysis – Mr. Bruggeman serves as the Environmental Project Manager for over 35 projects and has served as the Assistant Environmental Manager for three Environmental Assessment projects which included the U.S. Route 322 project, the South Valley Parkway project and the Juniata River Bridge project. Preparation of environmental documentation in compliance with NEPA requirements is a common occurrence for these projects. Mr. Bruggeman is also responsible for the completion of nearly 50 Categorical Exclusion (CE) documents in Adams, Berks, Chester, Columbia, Delaware, Franklin, Monroe, Lackawanna, Lehigh, Northampton, Tioga, Warren and York Counties, Pennsylvania. These projects are primarily bridge replacement projects and the following eight trail projects: Chester Creek Trail, Chester Creek Trail Phase II, Brandywine Trail, Enola Low Grade Trail, Muhlenberg Trail, Park Road Pedestrian Trail, Lebanon Valley Rail Trail, and Marsh Creek Greenway.

Agricultural Impact Analyses and Farmland Assessments – Mr. Bruggeman applies his knowledge of farmland resources, agricultural preservation initiatives, state and federal farmland legislation, and policies to the evaluation of farmland resource impact analyses. He is familiar with the Census of Agriculture and commonly documents trends and analyzes the effect of suburban growth on productive farmland. Mr. Bruggeman is instrumental in the preparation of Farmland Assessment Reports, which document the detailed investigations including farmer interview meetings, agency personnel meetings, organizational representatives statements, and public officials statements. For these projects, he prepares presentation materials, including detailed mapping and impact analyses of protected farmland resources.

Senior Land Conversion Specialist: Pennsylvania Department of Conservation and Natural Resources (DCNR), Bureau of Recreation and Conservation – Mr. Bruggeman has been working as a Land Conversion Specialist in the Acquisitions Section of the Bureau of Recreation and Conservation. Mr. Bruggeman began as a Junior Land Conversion Specialist in July 2014 for DCNR and continued support in July 2016 as the Senior Land Conversion Specialist. In this capacity, he has been involved in approximately 150 parkland conversions ranging in complexity from non-surface impact oil and gas leasing, review of gas pipeline surface impacts, Pennsylvania Department of Transportation (PennDOT) projects affecting parkland and various site inspection related conversions. The abovementioned conversions have involved federal, state and recreation grant funding legislation, including: Section 6(f)(3) of the Federal Land and Water Conservation Fund Act (Public Law 88-578, Title 16 Act 1965); Project 70 Land Acquisition and Borrowing Act (PA Act 8 of 1964); Project 500 Land and Water Conservation and Reclamation Act (PA Act 443 of

1968); Recreational Improvement and Rehabilitation Act (PA Act 106 of 1984); Keystone Recreation, Park and Conservation Fund Act (PA Act 50 of 1993); Growing Greener Environmental Stewardship and Watershed Protection Act (PA Act 68 of 1999); the Growing Greener II Environmental Stewardship and Watershed Protection Enhancement Authorization Act (PA Act 45 of 2005); Snowmobile and All-Terrain Vehicle Law; and the Conservation and Natural Resources Act (i.e., Heritage Areas and Other Parks). Mr. Bruggeman has a myriad of experience completing title research for parcels and reviewing restrictive covenants. Mr. Bruggeman has gained experience analyzing legal descriptions, property deeds, subdivision plans and parcel surveys. Mr. Bruggeman has been required to review DCNR's internal Geographical Information Systems (GIS) files to verify protected park boundaries of restricted land. Research of project files, title reports, appraisals as well as other project related information is required to identify potential conversion issues. Mr. Bruggeman regularly communicates on behalf of the DCNR with PennDOT, various owners of the protected lands, non-profit organizations, land trust organizations, for-profit organizations, and local governments to acquire necessary information related to conversion- related research. Mr. Bruggeman has prepared more than 50 written letters on behalf of the Bureau related to conversions. Based on this experience, he has developed the necessary requirements to research, evaluate, and resolve conversions.

Project Management – Mr. Bruggeman serves as a Senior Project Manager for nearly three dozen transportation projects. He oversees the task assignments and project deliverables to achieve environmental clearance for PennDOT.

PROJECT EXPERIENCE

Farmland Assessment Report, S.R. 0015, Section 088, Central Susquehanna Valley Transportation (CSVT) Project, Snyder, Union, and Northumberland Counties, Pennsylvania – Mr. Bruggeman compiled the third Farmland Assessment Report (FAR) for CSVT as it pertains to the agricultural resource impacts. Project team members completed farmer interviews with the four farm operators within three focus areas of the southern section of the CSVT. GIS was used to determine Agricultural Security Area impacts in Monroe Township, Snyder County in accordance with Pennsylvania Act 1981-43, Agricultural Area Security Law. Additional impacts were determined for state and federal governing policies associated with 4 PA Code, Chapter 7, Section 7.301 et seq., Agricultural Land Preservation Policy (ALPP) and conformance with the Federal Farmland Protection Policy Act (FPPA) (7 U.S.C. §4201).

Farmland Assessment Report (February 2005), S.R. 0015, Section 088, Central Susquehanna Valley Transportation (CSVT) Project, Snyder, Union and Northumberland Counties, Pennsylvania – Mr. Bruggeman assisted with the preparation of the original FAR, including the Farmland Conversion Impact Rating and research for the indirect impacts to surrounding Agricultural Security Areas. Mr. Bruggeman also assisted with the preparation of the exhibits for the March 31, 2005 Agricultural Lands Condemnation Approval Board (ALCAB) hearing

Farmland Assessment Report, S.R. 0081, Section 075, Guilford Springs Road Interchange, Franklin County, Pennsylvania – Mr. Bruggeman was responsible for the agricultural resource analyses for the proposed Exit 12 interchange along S.R. 0081 in Franklin County. Three farmer interviews were completed to assess the proposed impacts to productive agricultural farmland. Detailed analysis was completed for indirect impacts to the surrounding Agricultural Security Area in Guilford Township in accordance with Pennsylvania Act 1981-43, Agricultural Area Security Law. Additional impacts were determined for state and federal governing policies associated with 4 PA Code, Chapter 7, Section 7.301 et seq., Agricultural Land Preservation Policy and conformance with the Federal Farmland Protection Policy Act (7 U.S.C. §4201). Project impacts to the farm operations were determined with the use of GIS analyses as presented in figure illustrations within the FAR. The FAR was drafted in December 2019; however, a formal date for the ALCAB has not been set.

Farmland Operations and Access Memorandum, S.R. 0222, Section 059, Manheim Township, Lancaster County, Pennsylvania – Mr. Bruggeman interviewed five farm operators to determine if the proposed S.R. 0222 and S.R. 0030 interchange improvements would result in significant access loss during the construction phase of the project. A technical memorandum was prepared in 2019 to document that no hardships were anticipated due to disrupted access to productive agricultural lands. A formal FAR was not prepared for this project, but conformity with ALPP and FPPA was required.

ERIC R. BRUGGEMAN, Environmental Specialist

ALPP and FPPA Compliance for various Categorical Evaluation NEPA documents in Pennsylvania – Mr. Bruggeman has completed background research and has achieved environmental clearance for nearly 50 CE documents and two Environmental Assessments for transportation projects in Pennsylvania. Assessment of impacts to farmland resources and compliance with ALPP and FPPA federal and state laws is a requirement for CE clearance.

S.R. 0035, Sections A02 and Z05, and S.R. 3002, Section N19 Juniata River Bridge Replacement Project, Juniata County – As the Environmental Technical Manager on this multiple-phased PennDOT bridge replacement project,Mr. Bruggeman was responsible for technical research and coordination of all environmental resources, including Section 4(f) Resources. Existing Section 4(f) Resources within Mifflin and Mifflintown Boroughs and Fermanagh Township included the National Register-eligible Main Line of the Pennsylvania Railroad, National Register-eligible Juniata Division of the Pennsylvania Canal, National Register-eligible Mifflintown Historic District, Mifflin Park, Moist Run Park, Myers Park, Juniata River Water Trail, Tuscarora Junior High/Juniata High School Athletic fields, Fermanagh-Mifflintown Elementary School Athletic Fields, and Mountain View Elementary School Athletic Fields. Mr. Bruggeman was responsible for technical research and coordination with municipal and state managers of the Section 4(f) resources. Mr. Bruggeman worked with the project engineering team to minimize and/or avoid impacts to these Section 4(f) Resources. As a result, the selection of the Preferred Alternative only required the De Minimis Use of five resources: Mifflin Park, Juniata River Water Trail, National Register-eligible Main Line of the Pennsylvania Railroad, National Register-eligible Juniata Division of the Pennsylvania Canal, and the National Register-eligible Mifflintown Historic District.

Marsh Creek Greenway to Pine Creek Rail-Trail, Tioga County, Pennsylvania – Mr. Bruggeman currently serves as the Environmental and Trail Project Manager to complete a three-mile trail connection from Wellsboro, Pennsylvania, to the northern terminus of the Pine Creek Rail-Trail in Tioga County, Pennsylvania. This project includes a proposed 1.5-mile new alignment corridor through forested, mountainous topography, and the remainder of the trail is proposed as a 1.5-mile active rail with trail. Skelly and Loy is completing the alternatives analysis and all of the environmental studies necessary for NEPA clearance.

S.R. 0042, Section 060 Bridge Replacement, Columbia County, Pennsylvania – As the Environmental Project Manager on this PennDOT bridge replacement project, Mr. Bruggeman was responsible for identifying, assessing, and coordinating the proposed project's use of property from the Weiser State Forest – Roaring Creek Tract. Mr. Bruggeman was required to prepare the project compliance documents to obtain the necessary environmental approvals from the DCNR District Forest Manager (Mark Deibler). Mr. Bruggeman worked with the project team to avoid permanent right-of-way acquisition of the Roaring Creek Tract and to accommodate the future construction of the Roaring Creek Trail under the bridge span. Based on the preliminary coordination efforts to avoid permanent impacts to the Weiser State Forest, Mr. Bruggeman prepared a Section 4(f) temporary use occupancy document for the temporary use of the Weiser State Forest.

S.R. 0016, Section 036 Bridge Replacement, Franklin County, Pennsylvania – As the Environmental Project Manager for this Franklin County PennDOT bridge replacement project, Mr. Bruggeman was required to coordinate with the Buchanan Birthplace State Park Manager (Ryan Donovan). Coordination with the Park Manager confirmed the bridge replacement project will not directly impact the Buchanan Birthplace State Park, but would require the temporary relocation of the entrance sign resulting in no permanent or temporary Section 4(f) use of this property.

Recreation Resource Management Plan, Allegheny, Monongahela, and Ohio Rivers Hydroelectric Project – Mr. Bruggeman served as the Recreation Resource Manager for the Free Flow Power Hydroelectric project. As a sub-consultant to Chester Engineers, Mr. Bruggeman managed a team of recreation surveyors to complete recreational demand usage surveys for ten hydroelectric projects on the referenced “Three Rivers” located in Pennsylvania and West Virginia. Extensive coordination was completed with the Pennsylvania Fish and Boat Commission, West Virginia Division of Natural Resources and the U.S. Army Corps of Engineers Lock Operation Managers at each site to identify known recreational use. As part of the detailed recreation studies, weekday and weekend surveys were completed to identify formal and informal recreational usage at each facility along the named rivers. The information gathered was used as part of a Federal Energy Regulatory Commission permit submission.

APPENDIX B – CSVT ALCAB ADJUDICATION #2, 2006, Pages 9-13 from the Farmland Assessment Report, Appendix B

and all persons involved "made a reasonable decision to use the DA Modified alternative as the most economical and shortest distance to traverse [the affected] area. (N.T. 55-56; Heimbach Exhibit 1)

31. The DA Modified Avoidance alternative is no longer the most prudent and reasonable alternative that exists in the southern interchange focus area. (N.T. 31)

32. The DA Modified alternative is the only prudent and reasonable alternative that exists in the southern interchange focus area (Section 1). (N.T. 31)

CONCLUSIONS OF LAW

1. The Agricultural Lands Condemnation Approval Board (ALCAB) has jurisdiction over this matter. 3 P.S. §913(a) and 71 P.S. §106.

2. In the case of condemnation for highway purposes, ALCAB is authorized to approve a proposed condemnation of land within an agricultural security area that is being used for productive agricultural purposes only if ALCAB determines that there is no reasonable and prudent alternative to the utilization of the land within the ASA for the project. 3 P.S. §913(d)(2)(i).

3. The Board is required to consider the Governor's Agricultural Land Preservation Policy (ALPP) (Executive Order 2003-2), in its review of agricultural lands proposed for condemnation. 4 Pa. Code §7.304.

4. The DA Modified alternative is the only prudent and reasonable alternative that exists in the southern interchange focus area of the CSVT Project. (Findings of Fact Nos. 1-32)

DISCUSSION

When the Board first granted its approval of the DA Modified Avoidance alternative in 2005, it considered the exhaustive analysis and evaluation conducted by PennDOT and representatives of the CSVT Project consultant team. The Board recognized then that PennDot appropriately advanced the DA Modified Avoidance alternative as the preferred alternative in Section 1 due to restrictions imposed against it by the National Historic Preservation Act and the U.S. Department of Transportation Act of 1996, which limits PennDOT from impacting an historic property if there is a prudent and feasible alternative to not taking the historic property.

However, as reflected in the Board's April 22, 2005 Adjudication and Order,[3] the Board had strong concerns with PennDOT's Section 1 recommendation because the DA Modified Avoidance alternative was advanced as the preferred alternative for Section 1 instead of the DA Modified alternative solely because the DA Modified alternative would have impacted approximately nine acres of the Simon P. App farm which, *at the time,* was eligible for registration as an historic farmstead. The App farm was not then currently used for farming purposes and was contemplated for proposed development.

With the exception of the impact on this historic farmstead, the DA Modified alternative appeared, in all respects, to be the more reasonable and prudent alternative because it meets the Project needs, has no negative constructability issues, impacts less land in agricultural security areas and, as reflected in the findings of this decision, had less environmental impacts on all major resources when compared to the DA Modified Avoidance alternative. In addition, the DA Modified alternative directly impacts only

[3] As noted in footnote 2, the Board incorporates by reference its April 22, 2005 Adjudication and Order in its entirety in this decision.

17.8 acres of productive farmland owned and leased by A.W. Heimbach and Sons as compared to 48 acres under the DA Modified Avoidance alternative and has no indirect impact on any remaining acres of the Heimbach land.

In granting its approval to the entire CSVT Project in 2005, the Board stated in its Adjudication and Order:

> Should conditions with respect to the historical nature of the App farm change from those currently present at any point prior to the construction of the CSVT project, the Board encourages PennDOT to re-evaluate the area of impact and to re-visit the DA Modified alternative as the preferred Section 1 alternative.
> (PennDOT Exhibit 1, Appendix A, p. 37)

As the record reflects, three months after this Board issued its Adjudication and Order, the Keeper of the National Register for the United States Department of the Interior concluded that the Simon App farm was *not eligible* for the National Register of Historic Places and rescinded its prior determination of eligibility. No longer faced with the restrictions imposed by the National Historic Preservation Act and the U.S. Department of Transportation Act of 1996, PennDOT now seeks approval by this Board of the DA Modified alternative as the most prudent and reasonable alternative for Section 1.

Having expressed its preference one year ago for the DA Modified alternative, the Board has no difficulty today granting approval to PennDOT to condemn the productive agricultural lands necessary for the construction of the DA Modified alternative alignment in the Project's southern focus area.

Accordingly, the following Order is entered:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF AGRICULTURE
AGRICULTURAL LANDS CONDEMNATION
APPROVAL BOARD

IN RE:	**Central Susquehanna Valley Transportation Project in Snyder, Union and Northumberland Counties**	: : : : :	**Docket No. AG-2006-2**

ORDER

AND NOW, this 8th day of May 2006, upon consideration of the testimony and exhibits of record, and in accordance with the vote taken by the Board during a public meeting held on May 4, 2006 at the Crossroads Church of the Nazarene, Milton, PA, the Board, by unanimous vote, **APPROVES** PennDOT's request to condemn productive agricultural lands necessary for the construction of the DA Modified alternative alignment in the Project's southern focus area as further described in the Farmland Assessment Report (PennDOT Exhibit 1) and as set forth in PennDOT Exhibit 7.

AGRICULTURAL LANDS CONDEMNATION APPROVAL BOARD

BY: Cheryl L. Cook

Cheryl L. Cook, Chairperson
Deputy Secretary
Department of Agriculture