



ATTACHMENT I – General Qualifications
**ANNUAL REQUEST FOR QUALIFICATIONS AND EXPERIENCE NO:
ADSP015-00004729**

STATE PROCUREMENT OFFICE
Department of Administration
100 North 15th Avenue, Suite 201
Phoenix, Arizona 85007

(If a firm has branch offices, complete for each specific branch office seeking work.)

1. **Annual Request for Qualifications**

a. FIRM (OR BRANCH OFFICE) NAME:	Applied Pavement Technology, Inc.
b. FIRM (OR BRANCH OFFICE) STREET:	115 W. Main Street, Suite 400
c. FIRM (OR BRANCH OFFICE) CITY:	Urbana
d. FIRM (OR BRANCH OFFICE) STATE:	Illinois
e. FIRM (OR BRANCH OFFICE) ZIP CODE:	61801
f. YEAR ESTABLISHED:	1994
(g1). OWNERSHIP - TYPE:	Corporation
(g2) OWNERSHIP - SMALL BUSINESS STATUS:	AZ UTRACS SBC
h. POINT OF CONTACT NAME AND TITLE:	Casey Brooks, Business Development Coordinator
i. POINT OF CONTACT TELEPHONE NUMBER:	217-398-3977
j. POINT OF CONTACT E-MAIL ADDRESS:	prequal@appliedpavement.com
k. NAME OF FIRM (If block 1a is a branch office):	



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2. EMPLOYEES BY DISCIPLINE

a. Discipline Title	b. Function: Primary (P) or Secondary (S)	c. No. of Employees - Firm	d. No. of Employees - Branch
Civil Engineer	P	29	
Technician/Analyst	P	7	
Other – Administrative	P	12	
Total		48	



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4. Resumes of Key Personnel Proposed for this Contract *(Complete one Section 4 for each key person.)*

a. NAME Margaret R. Covalt, P.E.	b. ROLE IN THIS CONTRACT Principal-In-Charge / Project Manager	c. YEARS EXPERIENCE	
		1. TOTAL 30	2. WITH CURRENT FIRM 18

d. LOCATION *(City and State)* **Applied Pavement Technology, Inc. (Urbana, IL)**

e. EDUCATION <i>(DEGREE AND SPECIALIZATION)</i> M.S., Civil Engineering, University of Illinois, 1986	f. PROFESSIONAL TRAINING - REGISTRATIONS Professional Engineer AZ, CO, CT, GA, IL, KS, KY, MA, MN, NJ, NM, PA, SC, VA, WA
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g. OTHER PROFESSIONAL QUALIFICATIONS *(Organizations, Awards, etc.)*
Co-Author of ASCE's The Arizona Airport Pavement Management System: History and Innovation; Co-Author of Strategies for Allocation Limited Airport Pavement Funds; Member Transportation Research Board (TRB); Member Airport Consultants Council (ACC); Member ASTM

H. RELEVANT PROJECTS

	(1) TITLE AND LOCATION <i>(City and State)</i>	(2) YEAR COMPLETED	
		Professional Services	Construction (if applicable)
1.	2013 Arizona Statewide APMS Update (Statewide, AZ)		
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Project Manager for this Airfield and Testing project. This project, which involves sixty-three airports, includes the collection of inventory and condition data, preparation of maps, conduction of Pavement Condition Index (PCI) surveys, development of an 8-year maintenance and rehabilitation (M&R) plan, report generation, and development of an APMS procedures manual. It also includes the development of a web-based Interactive Data Exchange Application (IDEA). Ms. Covalt also served as the Project Manager on the 1999 initial implementation of the APMS and its 2002, 2006, and 2010 updates. Project in progress, projected completion date of 2015. \$625,656.	<input checked="" type="checkbox"/> Check if project performed with current firm	
2.	Phoenix Sky Harbor International APMS Update (Phoenix, AZ)	2014	
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Principal-In-Charge for this Airfield and Testing project. The project included records review; map updates; PCI inspections; PAVER™ update and customization; development of M&R recommendations; preparation of a project report; and creation of a geographic information system (GIS) link within PAVER™. In addition, it included the determination of Pavement Classification Numbers (PCNs) and the development of an IDEA. \$260,394.	<input checked="" type="checkbox"/> Check if project performed with current firm	
3.	Tucson Airport Authority APMS Update (Tucson, AZ)	2013	
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Principal-In-Charge for this Airfield and Testing project. Project included the airside and landside pavements at Tucson International Airport and the landside pavements at Ryan Field Airport. The project included records review; map updates; PCI inspections; PAVER™ update and customization; development of M&R recommendations; preparation of a project report; and creation of a GIS link within PAVER™. In addition, it included the determination of PCNs for the airside pavements and training on the use of PAVER™. \$156,983.	<input checked="" type="checkbox"/> Check if project performed with current firm	
4.	New Mexico Statewide APMS Update (Statewide, New Mexico)		
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Project Manager for this Airfield and Testing project. Ms. Covalt is responsible for overseeing all aspects of this project, which includes the collection of inventory data, PCI inspections, update of PAVER™ database, analysis to produce multi-year M&R plan, reports, and the development of a web-based IDEA. In addition, PCN values are being calculated for the airport runways. Training on the use of the PAVER™ software will be provided. Project in progress, projected completion date of 2017. \$673,508.	<input checked="" type="checkbox"/> Check if project performed with current firm	
5.	Nevada Statewide APMS Update		
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Principal-In-Charge for this Airfield and Testing Project. This project involves twenty-one airports and includes customizing the PAVER™ database, evaluating the pavement, calculating PCNs, a developing a multi-year capital improvement plan (CIP), writing an APMS procedures manual, and developing a web-based IDEA. APTech is serving as a subcontractor to Jacobs Engineering, Inc. Project in progress, projected completion date of 2015. \$180,104.	<input checked="" type="checkbox"/> Check if project performed with current firm	



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a. NAME Kathryn A. Zimmerman, P.E.	b. ROLE IN THIS CONTRACT Principal-In-Charge / Project Manager	c. YEARS EXPERIENCE	
		1. TOTAL 30	2. WITH CURRENT FIRM 19

d. LOCATION *(City and State)* **Applied Pavement Technology, Inc. (Urbana, IL)**

e. EDUCATION <i>(DEGREE AND SPECIALIZATION)</i> M.S., Civil Engineering, University of Illinois, 1985	f. PROFESSIONAL TRAINING - REGISTRATIONS Professional Engineer: AZ; AL; AR; CO; CT; FL; HI; ID; IL; IN; IA; KS; KY; LA; MD; MI; MS; MO; MT; NE; NV; NJ; NM; NY; NC; OH; OR; SC; SD; TN; TX; UT; WA; WV; WI; WY
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g. OTHER PROFESSIONAL QUALIFICATIONS *(Organizations, Awards, etc.)*
Co-Author of AASHTO's Pavement Management Guide, Co-Author of The Asphalt Handbook: 7th Edition, Member TRB, Member ASCE, Recipient of the National Highway Institute Instructor of Excellence Award, Recipient of TRB Blue Ribbon Award

H. RELEVANT PROJECTS

1.	(1) TITLE AND LOCATION <i>(City and State)</i> Nevada DOT Transportation Asset Management Plan (TAMP) Development (Statewide, NV)	(2) YEAR COMPLETED	
		Professional Services	Construction (if applicable)
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Project Manager for this Value Analysis and Highway project. Directing the development of a TAMP that includes pavements, bridges, and ancillary assets. Facilitating project meetings and technical work group activities to obtain the information needed to complete the TAMP. Project in progress with estimated completion date of 2016. \$383,728.	<input checked="" type="checkbox"/> Check if project performed with current firm	
2.	(1) TITLE AND LOCATION <i>(City and State)</i> Ohio DOT TAMP Development (Statewide, OH)	(2) YEAR COMPLETED	
		Professional Services	Construction (if applicable)
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Project Manager for this Value Analysis and Highway project. Developing a TAMP for pavements, bridges, and culverts that exceeds the requirements outlined in MAP-21 and leads to effective long-term investment decisions. Also reviewing existing business processes and recommending changes to enhance asset management decisions. Project in progress with estimated completion date of 2015. \$399,813.	<input checked="" type="checkbox"/> Check if project performed with current firm	
3.	(1) TITLE AND LOCATION <i>(City and State)</i> Minnesota DOT TAMP Development (Statewide, MN)	(2) YEAR COMPLETED	
		Professional Services 2014	Construction (if applicable)
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Project Manager for this Value Analysis and Highway Project. Responsible for developing a comprehensive TAMP that exceeds the expectations of MAP-21, that coordinates with the FHWA pilot program, that is aligned with AASHTO guidance, that is accepted by key stakeholders, and that formalizes and documents key information. Responsible for facilitating meetings, directing work efforts, and writing the plan. \$250,000.	<input checked="" type="checkbox"/> Check if project performed with current firm	
4.	(1) TITLE AND LOCATION <i>(City and State)</i> FHWA Sustainable Pavements Program IDIQ (Nationwide)	(2) YEAR COMPLETED	
		Professional Services	Construction (if applicable)
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Principal-In-Charge for this Indefinite Delivery Indefinite Quantity (IDIQ) Transportation Research Project. The Sustainable Pavements program is a major initiative with the overarching goal of advancing the knowledge and implementation of sustainability considerations in pavements and pavement materials. Responsible for coordinating the Technical Working Group, developing a reference document, and facilitating technology transfer of information on sustainable pavements and materials. This project is ongoing with a projected completion date of 2015. \$1,434,914.	<input checked="" type="checkbox"/> Check if project performed with current firm	
5.	(1) TITLE AND LOCATION <i>(City and State)</i> Transportation Asset Management (TAM) Gap Analysis Took (Nationwide)	(2) YEAR COMPLETED	
		Professional Services 2014	Construction (if applicable)
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Principal Investigator for this Transportation Research Project. Analyzed the need for revisions to the Gap Analysis Tool included in the AASHTO Transportation Asset Management Guide – A Focus on Implementation and developed a spreadsheet tool that met those requirements. Developed a gap analysis tool that was user-friendly and applicable for transportation practitioners and decision makers in the United States. \$150,000.	<input checked="" type="checkbox"/> Check if project performed with current firm	



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4. Resumes of Key Personnel Proposed for this Contract (Complete one Section 4 for each key person.)

a. NAME	b. ROLE IN THIS CONTRACT	c. YEARS EXPERIENCE	
David G. Peshkin, P.E.	Principal-In-Charge / Project Manager	1. TOTAL	2. WITH CURRENT FIRM
		29	18

d. LOCATION (City and State) Applied Pavement Technology, Inc. (Urbana, IL)

e. EDUCATION (DEGREE AND SPECIALIZATION)	f. PROFESSIONAL TRAINING - REGISTRATIONS
M.S., Civil Engineering, University of Illinois, 1987	Professional Engineer DE, GA, IL, ME, MA, MI, NV, NH, NY, ND, OK, RI, TX, VT, VA

g. OTHER PROFESSIONAL QUALIFICATIONS (Organizations, Awards, etc.)
Co-Author of the SHRP's Preservation Approaches for High Traffic Volume Roadways, Member TRB, Member FMWPPP, Member FHWA Pavement Preservation Expert Task Group, Vice Chair of the ACC Board of Directors, Recipient of the ACC Board of Governors Chair Award

H. RELEVANT PROJECTS

	(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
		Professional Services	Construction (if applicable)
1.	Douglas County Forensic Pavement Analysis (Douglas County, CO)	2013	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE	<input checked="" type="checkbox"/> Check if project performed with current firm	
	Principal-In-Charge for this Forensic Engineering project. Responsible for overseeing the project which included conducting a records review, overseeing pavement condition surveys and materials testing, and developing recommendations for pavement rehabilitation. Also served as an Expert Witness during litigation. \$76,487.		
2.	Lincoln Land Community College Forensic Pavement Analysis (Springfield, IL)	2014	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE	<input checked="" type="checkbox"/> Check if project performed with current firm	
	Project Manager for this Forensic Engineering project. Conducted a records review, performed a site visit, conducted sampling and testing, and developed a long-term solution to the pavement performance problems. \$11,091.		
3.	City of Goodyear Pavement Management System Evaluation (Goodyear, AZ)	2014	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE	<input checked="" type="checkbox"/> Check if project performed with current firm	
	Principal-In-Charge for this Streets project. Evaluated the pavement management system and treatment strategies. Provided recommendations for possible areas of improvement. \$61,514.		
4.	Gravel Surfacing Guidelines for South Dakota (Statewide, SD)		
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE	<input checked="" type="checkbox"/> Check if project performed with current firm	
	Project Manager for this Transportation Research project. Overseeing all aspects of this project which includes identifying best practices, assessing performance and costs, developing guidelines for cost-effective gravel surfacing, and developing training materials. Project in progress with an estimated completion date of 2015. \$89,939.		
5.	Virginia State Route 895 Pocahontas Parkway Pavement Evaluation and Treatment Plan (VA)	2014	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE	<input checked="" type="checkbox"/> Check if project performed with current firm	
	Principal-In-Charge for this Highway project. Reviewed pavement condition and analyzed historical data to assist in the development of a multi-year M&R plan and cost projection. \$23,956.		



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4. Resumes of Key Personnel Proposed for this Contract *(Complete one Section 4 for each key person.)*

a. NAME Stephen B. Seeds, P.E.	b. ROLE IN THIS CONTRACT Project Manager/Senior Engineer	c. YEARS EXPERIENCE	
		1. TOTAL 36	2. WITH CURRENT FIRM 14

d. LOCATION *(City and State)* **Applied Pavement Technology, Inc. (Urbana, IL)**

e. EDUCATION <i>(DEGREE AND SPECIALIZATION)</i> M.S., Civil Engineering, University of Texas at Austin, 1980	f. PROFESSIONAL TRAINING - REGISTRATIONS Professional Engineer Nevada and California
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g. OTHER PROFESSIONAL QUALIFICATIONS *(Organizations, Awards, etc.)*
Member TRB; Member of the California Pavement Preservation Task Group; Member of the International Association for Asphalt Pavements; Member of the American Society of Civil Engineers (ASCE); Recipient of the NHI Instructor of Excellence Award

H. RELEVANT PROJECTS

	(1) TITLE AND LOCATION <i>(City and State)</i>	(2) YEAR COMPLETED	
		Professional Services	Construction (if applicable)
1.	Pavement M&R for Jefferson County Parking Lots (Jefferson County, CO)	2014	
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Project Manager for this Parking Lot project. Oversaw all aspects of the project which included conducting a visual inspection, reviewing data, developing a parking lot database, developing M&R recommendations, and preparing a report. \$22,000.	<input checked="" type="checkbox"/>	Check if project performed with current firm
2.	Pavement Engineering Support for Arrow Creek Homeowners Association (Reno, NV)	2014	
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Project Manager for this Streets project. Oversaw all aspects of the project, which included conducting pavement condition surveys, providing construction oversight, preparing bid packages, and developing annual M&R programs, as well as long-term pavement management plans used in developing the reserve study. Annual project since 2004. \$123,861 (most recent project).	<input checked="" type="checkbox"/>	Check if project performed with current firm
3.	Douglas County Forensic Pavement Analysis (Douglas County, CO)	2013	
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Project Manager for this Forensic Engineering project. Managed the project which included conducting a records review, overseeing pavement condition surveys and materials testing, and developing recommendations for pavement rehabilitation. Also served as an Expert Witness during litigation. \$76,487.	<input checked="" type="checkbox"/>	Check if project performed with current firm
4.	Town of Cave Creek Pavement Management System (Cave Creek, AZ)	2014	
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Senior Engineer for this Streets and Testing project. Assisted in developing a maintenance and rehabilitation plan as part of the pavement management system implementation. \$70,810.	<input checked="" type="checkbox"/>	Check if project performed with current firm
5.	City of Goodyear Pavement Management System (Goodyear, AZ)	2014	
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Senior Engineer for this Streets and Testing project. Assisted in developing a maintenance and rehabilitation plan as part of the pavement management system implementation. \$61,514.	<input checked="" type="checkbox"/>	Check if project performed with current firm



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4. Resumes of Key Personnel Proposed for this Contract *(Complete one Section 4 for each key person.)*

a. NAME	b. ROLE IN THIS CONTRACT	c. YEARS EXPERIENCE	
Linda M. Pierce, Ph.D., P.E.	Project Manager/Senior Engineer	1. TOTAL	2. WITH CURRENT FIRM
		26	6
d. LOCATION <i>(City and State)</i> Applied Pavement Technology, Inc. (Urbana, IL)			
e. EDUCATION <i>(DEGREE AND SPECIALIZATION)</i> Ph.D., Civil Engineering, University of Washington, 2009		f. PROFESSIONAL TRAINING - REGISTRATIONS Professional Engineer Washington and New Mexico	
g. OTHER PROFESSIONAL QUALIFICATIONS <i>(Organizations, Awards, etc.)</i> Co-Author or TRB's "Evaluating Pavement Strategies and Barriers for Noise Mitigation," Co-Author of TRB's Handbook for Pavement Design, Construction, and Management; Co-Author of the FHWA's Pavement Management Roadmap; Member of the Transportation Research Board			

H. RELEVANT PROJECTS

	(1) TITLE AND LOCATION <i>(City and State)</i>	(2) YEAR COMPLETED	
		Professional Services	Construction (if applicable)
1.	Design-Build RFP Preparation for US-36 (Denver, CO)	2013	
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Project Manager for this Design-Build RFP Preparation project. APTEch provided pavement and material expertise for the Design Teams' proposal for the US-36 Design-Build Project. Dr. Pierce oversaw all aspects of this project. \$9,900.	<input checked="" type="checkbox"/>	Check if project performed with current firm
2.	Town of Gila Bend Pavement Management Implementation (Gila Bend, AZ)	2012	
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Project Manager for this Streets and Testing project. Developed and implemented a pavement management system which included defining the roadway network, conducting a pavement condition assessment, developing a pavement management database, developing pavement performance prediction models, determining an M&R program, and assisting with the implementation of PAVER and associated training for the Town staff. \$59,283.	<input checked="" type="checkbox"/>	Check if project performed with current firm
3.	Assessment of Washington County Transportation System Preservation and Maintenance Program (Washington County, OR)	2013	
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Senior Engineer for this Transportation project. Assisted with a comprehensive review of the transportation system preservation and maintenance program including comparison with industry practices, review of long-term needs compared with revenue expected, and the development of the project report. \$77,872.	<input checked="" type="checkbox"/>	Check if project performed with current firm
4.	Design-Build RFP Preparation for I-64 Daniel Boone Bridge Project (St. Louis County, MO)	2012	
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Senior Engineer for this Design-Build RFP Preparation project. Provided pavement design and consulting services for a design-build bid project. The designs maximize performance while minimizing construction, maintenance, and rehabilitation costs and were prepared using AASHTO's Mechanistic-Empirical Pavement Design Guide (MEPDG). \$5,869.	<input checked="" type="checkbox"/>	Check if project performed with current firm
5.	Development of Pavement Quality Index (PQI) and Determination of Remaining Life for Al Ain Municipality (Al Ain, United Arab Emirates)	2013	
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Project Manager for this Design-Build RFP Preparation Project, as a subcontractor to CH2M HILL. Reviewed and provided input on proposed design alternatives for both rigid and flexible pavements. \$19,050.	<input checked="" type="checkbox"/>	Check if project performed with current firm



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a. NAME Mark P. Gardner, P.E.	b. ROLE IN THIS CONTRACT Project Manager/Senior Engineer	c. YEARS EXPERIENCE	
		1. TOTAL 26	2. WITH CURRENT FIRM 6

d. LOCATION *(City and State)* **Applied Pavement Technology, Inc. (Urbana, IL)**

e. EDUCATION <i>(DEGREE AND SPECIALIZATION)</i> B.S., Civil Engineering, Texas A&M University, 1982	f. PROFESSIONAL TRAINING - REGISTRATIONS Professional Engineer Texas
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g. OTHER PROFESSIONAL QUALIFICATIONS *(Organizations, Awards, etc.)*
Co-Author of the FHWA's Local Calibration of the MEPDG Using Pavement Management Systems; Member of the Transportation Research Board; Member ASCE, Recipient of the National Highway Institute Instructor of Excellence Award

H. RELEVANT PROJECTS

	(1) TITLE AND LOCATION <i>(City and State)</i>	(2) YEAR COMPLETED	
		Professional Services	Construction (if applicable)
1.	Town of Cave Creek Pavement Management System (Cave Creek, AZ)	2014	
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Project Manager for this Streets and Testing project. Oversaw all aspects of the project which included performing network definition, developing a database, conducting a condition inspection, and developing an M&R program. \$70,810.	<input checked="" type="checkbox"/>	Check if project performed with current firm
2.	City of Goodyear Pavement Management System (Goodyear, AZ)	2014	
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Project Manager for this Streets and Testing project. Oversaw all aspects of the project which included evaluating the pavement management system and the treatment strategies. \$61,514.	<input checked="" type="checkbox"/>	Check if project performed with current firm
3.	Assessment of Washington County Transportation System Preservation and Maintenance Program (Washington County, OR)	2013	
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Project Manager for this Transportation project. Oversaw the day-to-day activities of a comprehensive review of the transportation system preservation and maintenance program including comparison with industry practices, review of long-term needs compared with revenue expected, and the development of the project report. \$77,872.	<input checked="" type="checkbox"/>	Check if project performed with current firm
4.	Line 6B Haul Road Evaluation (Michigan and Indiana)		
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Project Manager for this Streets and Testing and Inspection project. Responsible for overseeing the evaluation of the impact of an energy company's heavy equipment on pavement sections during the construction of a pipeline, through the collection and analysis of pre- and post-construction condition data. Project in process with an anticipated completion date of 2015. \$421,700.	<input checked="" type="checkbox"/>	Check if project performed with current firm
5.	Development of Pavement Quality Index (PQI) and Determination of Remaining Life for Al Ain Municipality (Al Ain, United Arab Emirates)	2013	
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Project Manager for this Streets project. Responsible for establishing a PQI relationship and calculating PQI values using FWD, traffic, International Roughness Index (IRI), and PCI data provided by Engineering Consultants International LTD (ECIL). \$82,000.	<input checked="" type="checkbox"/>	Check if project performed with current firm



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5. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT

(Present no more than five (5) projects. Complete one Section 5 for each project.)

a. TITLE AND LOCATION <i>(City and State)</i>	b. YEAR COMPLETED	
Arizona Statewide APMS Update (Statewide, AZ)	PROFESSIONAL SERVICES	CONSTRUCTION <i>(If applicable)</i> N/A

23. PROJECT OWNER'S INFORMATION

c. PROJECT OWNER ADOT Aeronautics Group	d. ORIGINAL BUDGET/NTE AMOUNT OF PROJECT \$654,774	e. TOTAL COST OF PROJECT \$625,656
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f. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(include scope, size, and length of project)*

In 2000, Applied Pavement Technology, Inc. (APTech) established the Arizona airport pavement management system (APMS) for the Arizona Department of Transportation (ADOT) Aeronautics Group to provide them with a tool to proactively manage the pavement infrastructure at fifty-three Arizona airports (the system now includes sixty-six airports).

The initial study performed in 2000 indicated that state-funding levels were insufficient to sponsor all necessary pavement M&R projects. Based on the results of the pavement management study conducted by APTech, the Aeronautics Group initiated the Airport Pavement Preservation Program (APPP) (recipient of the Arizona State Quality Award). The APPP allows the state to make the best use of its limited budget by funding those work types that have historically proven to provide the most benefit per dollar expended. Because it is a state-level program, the Aeronautics Group can provide airports with funding for crack sealing, slurry seals, thin overlays, and concrete restoration. This is especially important for smaller facilities or those located in sparsely-populated areas which could not otherwise afford extensive maintenance efforts.

Due to ADOT's satisfaction with APTech's work, the Aeronautics Group retained APTech to update its APMS again in 2003, 2006, 2010, and 2013 to 2014. During these projects, APTech updated the systems inventory and maps, and conducted pavement inspections using the PCI methodology. APTech also produced an 8-year M&R plan, a statewide report, individual airport reports, an APMS procedures manual, and an executive summary. During the 2010 project, APTech also developed an IDEA that is accessed via ADOT's web page. This has greatly facilitated the access and use of the pavement management information. To view the program, please visit: http://www.azdot.gov/applications/Airports/APTech_DAP/index.html. In addition, a training course on the PCI procedure and the PAVER™ pavement management software was conducted.

During the ongoing 2013 to 2014 project, the APMS is being expanded to include the Tribal airports. In addition, the 2013 to 2014 project includes testing using APTech's falling weight deflectometer (FWD) and the analysis of the FWD data to determine the structural condition of the pavements and to calculate PCNs. To supplement this effort, a coring program is also underway. This project is expected to be completed in early 2015.

The APMS and the APPP have been highly successful, as evidenced by its receipt of the 2011 National Association of State Aviation Officials (NASAO) Most Innovative State Program Award. The Aeronautics Group is now able to proactively manage the pavement infrastructure at airports around the state with software that can help to identify pavement-related needs and develop prioritized lists of pavement-related projects. Individual airports have reported that it is much easier to plan ahead for pavement M&R using the results of the APMS.

This project is ongoing, with an estimated completion date of 2015.



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ADSP015-00004729**

**STATE PROCUREMENT OFFICE
Department of Administration
100 North 15th Avenue, Suite 201
Phoenix, Arizona 85007**

5. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT

(Present no more than five (5) projects. Complete one Section 5 for each project.)

a. TITLE AND LOCATION <i>(City and State)</i>	b. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION <i>(If applicable)</i>
Phoenix Sky Harbor International Airport Airfield Pavement Assessment (Phoenix, AZ)	2014	N/A

23. PROJECT OWNER'S INFORMATION

c. PROJECT OWNER	d. ORIGINAL BUDGET/NTE AMOUNT OF PROJECT	e. TOTAL COST OF PROJECT
City of Phoenix Aviation Department	\$260,394	\$260,394

f. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (include scope, size, and length of project)

The Phoenix Sky Harbor International Airport has an extensive pavement network, which represents a major infrastructure investment to the City of Phoenix (City). In order to protect this investment, the City contracted with APTech to develop a pavement maintenance management program (PMMP) that will allow the pavements to be managed in a cost efficient manner.

To develop the PMMP, APTech conducted an airfield pavement assessment which included a records review, mapping, PCI inspections, PAVER™ database customization, and developing APMS reports. The data collected during the assessment was used to determine M&R needs and to develop the PMMP. APTech performed the PCI inspections on the runways and taxiways at night so as not to interfere with regular traffic at the airport.

In addition to the mainline pavements, APTech incorporated the shoulders, blast pads, and infield pavements into the APMS. APTech also performed a cursory visual evaluation and providing general M&R recommendations for the airside service roads.

APTech performed nondestructive testing (NDT) using its FWD on select airfield pavement, such as those identified during the PCI inspections as requiring further investigation. APTech also developed PCNs for the airside pavements in accordance with the requirements in Federal Aviation Administration (FAA) Advisory Circular 150/5335-5B, Standardized Method of Reporting Airport Pavement Strength – PCN and FAA's COMFAA software. The resulting PCNs were converted to allowable loads for each gear type (single, dual, dual tandem, and so on) using the FAA's supporting spreadsheet.

Finally, APTech developed an IDEA program, which is an interactive web-formatted program used to disseminate the results and recommendations of the pavement management update without requiring knowledge of the use of PAVER™.



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(Present no more than five (5) projects. Complete one Section 5 for each project.)

a. TITLE AND LOCATION (City and State)	b. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Town of Cave Creek Pavement Management System (Cave Creek, AZ)	2014	N/A

23. PROJECT OWNER'S INFORMATION

c. PROJECT OWNER	d. ORIGINAL BUDGET/NTE AMOUNT OF PROJECT	e. TOTAL COST OF PROJECT
Town of Cave Creek, AZ	\$70,810	\$70,810

f. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (include scope, size, and length of project)

The Town of Cave Creek, Arizona includes approximately 80 centerline miles of paved roadway in its pavement network. The Town wished to protect its capital investment in the pavement network by promoting efficient and effective pavement maintenance and management. To meet this goal, the Town selected APTEch to implement a pavement management system.

APTEch determined that PAVER™, a structured pavement management system, would provide the best functionality at the most reasonable cost. To implement this system, APTEch performed a pavement network definition and condition assessment, developed a pavement database, calculated pavement deterioration estimates, developed a maintenance and rehabilitation plan, installed the PAVER™ software, and trained the City staff in the use of the system.



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5. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT

(Present no more than five (5) projects. Complete one Section 5 for each project.)

a. TITLE AND LOCATION <i>(City and State)</i>	b. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION <i>(If applicable)</i>
Design-Build RFP Preparation for US-36 (Devner, CO)	2013	N/A

23. PROJECT OWNER'S INFORMATION

c. PROJECT OWNER	d. ORIGINAL BUDGET/NTE AMOUNT OF PROJECT	e. TOTAL COST OF PROJECT
Shannon & Wilson, Inc.	\$12,754	\$9,900

f. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (include scope, size, and length of project)

As a subconsultant for Shannon & Wilson, Inc., APTEch provided pavement and material expertise for the design team's (comprised of Shannon & Wilson, Atkins, Kiewit, and Isolux as the concessionaire) proposal for this Colorado Department of Transportation (CDOT) and Colorado High Performance Transportation Enterprise Public-Private Partnership Design- Build Project for US Route 36.

APTEch was responsible for the evaluation and design of alternative pavement sections using the American Association of State Highway and Transportation Officials (AASHTO) Guide for Design of Pavement Structures (1993) and the AASHTO Mechanistic-Empirical Pavement Design Guide—Manual of Practice (2008). APTEch was also responsible for developing and reviewing applicable portions of the project proposal, as well as responding to design team and CDOT requests.



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5. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT

(Present no more than five (5) projects. Complete one Section 5 for each project.)

a. TITLE AND LOCATION <i>(City and State)</i>	b. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION <i>(If applicable)</i>
Douglas County Pavement Forensic Analysis (Douglas County, CO)	2014	N/A

23. PROJECT OWNER'S INFORMATION

c. PROJECT OWNER	d. ORIGINAL BUDGET/NTE AMOUNT OF PROJECT	e. TOTAL COST OF PROJECT
Douglas County Department of Public Works	\$84,607	\$84,607

f. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (include scope, size, and length of project)

In 2006, the Douglas County Department of Public Works selected a contractor to construct two new street segments on Chambers Road and West Mainstreet in Parker, Colorado. In 2008, personnel from both Douglas County and the Town of Parker observed significant stripping and rapid deterioration occurring in the top hot-mix asphalt (HMA) layer. After more sampling, testing, and negotiations, the County and Contractor reached an agreement to remove and replace certain portions of both Chambers Road and Mainstreet under the original performance bond and to extend the performance bond through May 1, 2012. In April 2012, before the end of the extended warranty, Douglas County completed another pavement evaluation, which noted the presence of stripping, cracking, raveling, and segregation. In October 2012, Douglas County contracted with APTEch to inspect the streets, identify the cause(s) of the observed distresses, and make appropriate recommendations for the rehabilitation of both streets.

APTEch conducted a records review, PCI survey, materials sampling, and lab testing to evaluate pavement conditions on Chambers Road, Mainstreet, and Hilltop Road (for comparison purposes). APTEch used the collected data to develop recommendations for repairs in accordance with the terms of the County's agreement with their contractor. In addition, APTEch provided expert witness support to Douglas County and its attorneys.



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6. ADDITIONAL INFORMATION

a. PROVIDE ANY ADDITIONAL INFORMATION YOU FEEL MAY BE NECESSARY TO DESCRIBE YOUR FIRMS QUALIFICATIONS. (ATTACH ADDITIONAL SHEETS AS NEEDED.)

APTech owns and operates testing equipment used as part of its pavement evaluation and construction inspection services. APTech owns a Dynatest 8081 heavyweight model falling weight deflectometer (FWD), which is a specialized pavement testing device that facilitates the rapid, accurate, and nondestructive characterization of the structural condition of all types of pavements. The FWD is used in both the routine and specialized testing of airfield and highway pavements. This state-of-the-art device is capable of applying loadings to a pavement that are similar in magnitude and duration to those produced by moving wheel loads, including those of even the heaviest aircraft. It is able to apply loads up to 55,000 pounds. FWD testing allows for the evaluation of multiple locations in a short period of time without disturbing the pavement structure.

APTech also owns and operates a trailer-mounted material sampling device that can be used to obtain core and auger samples of the pavement and subsurface layers. The coring apparatus is applicable for both HMA and portland cement concrete (PCC) surfaced pavements. Using diamond-tipped core barrels of various sizes, the device can obtain core samples up to 24-inches long and with diameters ranging from 3 to 12-inches. The mast of the apparatus is omnidirectional, meaning it can be used to obtain cores from walls and low-lying ceilings in addition to pavements. Samples obtained by the device can be tested in a number of ways to determine layer thickness, unit weight, strength, stiffness, and other intrinsic material properties. The auger apparatus provides a means of obtaining samples of all unbound layer materials that exist below the pavement surface, up to a depth of 10-feet. Tests can then be performed on the extracted samples to determine moisture content, gradation, densities, California Bearing Ratios (CBRs), and overall material classification.

APTech owns a drop cone penetrometer (DCP), which is a simple device used to obtain in situ subgrade strength measurements in conjunction with a coring program. APTech also owns a pachometer, which is used to detect the presence of ferromagnetic materials, such as steel and iron, embedded in concrete. Its primary function is to determine the thickness of the concrete cover over a steel reinforcement. Additionally, APTech owns a digital faultmeter, air meter, slump cones, beam and cylinder moldings, handheld computers for data collection, and GPS cameras.

APTech most recently added to its equipment the portable seismic pavement analyzer (PSPA). The PSPA is a nondestructive testing device that measures the seismic modulus of concrete pavements. It also identifies transitions between asphalt lifts and changes in modulus depth. Using the PSPA, APTech is able to estimate thickness via the impact echo method.

7. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS

a.	Percentage of Total Work Attributable to State, Federal and Municipal Government Work:	69%
b.	Percentage of Total Work Attributable to Non-Government Work:	31%

8. AUTHORIZED REPRESENTATIVE. The foregoing is a statement of facts.

Signature: David G. Peshkin Date: December 9, 2014
Name: David G. Peshkin, P.E. Title: Vice President