



Statement of Qualifications for
**2015 Annual Professional
Services List**

December 30, 2014

Attachment I



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:	Stantec Consulting Services Inc.
b.	FIRM (OR BRANCH OFFICE) STREET:	8211 South 48th Street
c.	FIRM (OR BRANCH OFFICE) CITY:	Phoenix
d.	FIRM (OR BRANCH OFFICE) STATE:	Arizona
e.	FIRM (OR BRANCH OFFICE) ZIP CODE:	85044
f.	YEAR ESTABLISHED:	1991
(g1).	OWNERSHIP - TYPE:	Public
(g2)	OWNERSHIP - SMALL BUSINESS STATUS:	N/A
h.	POINT OF CONTACT NAME AND TITLE:	Scot Schlund
i.	POINT OF CONTACT TELEPHONE NUMBER:	(602) 707-4620
j.	POINT OF CONTACT E-MAIL ADDRESS:	scot.schlund@stantec.com
k.	NAME OF FIRM <i>(If block 1a is a branch office):</i>	Stantec Inc.



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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
Architect	P	757	5
CADD Technician	P	725	11
Chemical Engineer	P	111	0
Civil Engineer	P	956	13
Construction Inspector	P	32	2
Electrical Engineer	P	511	3
Environmental Scientist	P	1041	2
Geologist	P	161	1
Landscape Architect	P	179	1
Mining Engineer	P	151	0
Project Manager	P	999	13
Mechanical Engineer	P	527	0
Structural Engineer	P	446	0
Technical Analyst	P	1998	12
Transportation Engineer	P	207	6
Water Resources Engineer	P	42	3
Other	P	5853	68
Total		14,696	141



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1. Annual Request for Qualifications

a. FIRM (OR BRANCH OFFICE) NAME:	Stantec Consulting Services Inc.
b. FIRM (OR BRANCH OFFICE) STREET:	1438 West Broadway Road #101
c. FIRM (OR BRANCH OFFICE) CITY:	Tempe
d. FIRM (OR BRANCH OFFICE) STATE:	Arizona
e. FIRM (OR BRANCH OFFICE) ZIP CODE:	85282
f. YEAR ESTABLISHED:	
(g1). OWNERSHIP - TYPE:	Public
(g2). OWNERSHIP - SMALL BUSINESS STATUS:	N/A
h. POINT OF CONTACT NAME AND TITLE:	Walt Cooper
i. POINT OF CONTACT TELEPHONE NUMBER:	(480) 831-0310
j. POINT OF CONTACT E-MAIL ADDRESS:	walt.cooper@stantec.com
k. NAME OF FIRM (If block 1a is a branch office):	Stantec Inc.



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a. Discipline Title	b. Function: Primary (P) or Secondary (S)	c. No. of Employees - Firm	d. No. of Employees - Branch
Architect	P	757	0
CADD Technician	P	725	10
Chemical Engineer	P	111	0
Civil Engineer	P	956	1
Construction Inspector	P	32	1
Electrical Engineer	P	511	4
Environmental Scientist	P	1041	0
Geologist	P	161	1
Landscape Architect	P	179	0
Mining Engineer	P	151	20
Project Manager	P	999	20
Mechanical Engineer	P	527	4
Structural Engineer	P	446	2
Technical Analyst	P	1998	43
Transportation Engineer	P	207	0
Water Resources Engineer	P	42	0
Other	P	5853	19
Total		14,696	125



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1. Annual Request for Qualifications

a.	FIRM (OR BRANCH OFFICE) NAME:	Stantec Consulting Services Inc.
b.	FIRM (OR BRANCH OFFICE) STREET:	1553 West Elna Rae Street Suite 101
c.	FIRM (OR BRANCH OFFICE) CITY:	Tempe
d.	FIRM (OR BRANCH OFFICE) STATE:	Arizona
e.	FIRM (OR BRANCH OFFICE) ZIP CODE:	85281
f.	YEAR ESTABLISHED:	
(g1).	OWNERSHIP - TYPE:	Public
(g2)	OWNERSHIP - SMALL BUSINESS STATUS:	N/A
h.	POINT OF CONTACT NAME AND TITLE:	Louis Thanukos
i.	POINT OF CONTACT TELEPHONE NUMBER:	(480) 829-0457 ext. 211
j.	POINT OF CONTACT E-MAIL ADDRESS:	louis.thanukos@stantec.com
k.	NAME OF FIRM <i>(If block 1a is a branch office):</i>	Stantec Inc.



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a. Discipline Title	b. Function: Primary (P) or Secondary (S)	c. No. of Employees - Firm	d. No. of Employees - Branch
Architect	P	757	0
CADD Technician	P	725	0
Chemical Engineer	P	111	0
Civil Engineer	P	956	0
Construction Inspector	P	32	0
Electrical Engineer	P	511	0
Environmental Scientist	P	1041	8
Geologist	P	161	1
Landscape Architect	P	179	0
Mining Engineer	P	151	0
Project Manager	P	999	1
Mechanical Engineer	P	527	0
Structural Engineer	P	446	0
Technical Analyst	P	1998	0
Transportation Engineer	P	207	0
Water Resources Engineer	P	42	0
Other	P	5853	8
Total		14,696	18



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a. FIRM (OR BRANCH OFFICE) NAME:	Stantec Consulting Services Inc.
b. FIRM (OR BRANCH OFFICE) STREET:	5151 E Broadway Boulevard Suite 400
c. FIRM (OR BRANCH OFFICE) CITY:	Tucson
d. FIRM (OR BRANCH OFFICE) STATE:	Arizona
e. FIRM (OR BRANCH OFFICE) ZIP CODE:	85711
f. YEAR ESTABLISHED:	
(g1). OWNERSHIP - TYPE:	Public
(g2). OWNERSHIP - SMALL BUSINESS STATUS:	N/A
h. POINT OF CONTACT NAME AND TITLE:	Warren Thompson
i. POINT OF CONTACT TELEPHONE NUMBER:	(520) 545-7491
j. POINT OF CONTACT E-MAIL ADDRESS:	warren.thompson@stantec.com
k. NAME OF FIRM (If block 1a is a branch office):	Stantec Inc.



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a. Discipline Title	b. Function: Primary (P) or Secondary (S)	c. No. of Employees - Firm	d. No. of Employees - Branch
Architect	P	757	0
CADD Technician	P	725	2
Chemical Engineer	P	111	0
Civil Engineer	P	956	5
Construction Inspector	P	32	0
Electrical Engineer	P	511	1
Environmental Scientist	P	1041	0
Geologist	P	161	0
Landscape Architect	P	179	0
Mining Engineer	P	151	0
Project Manager	P	999	4
Mechanical Engineer	P	527	1
Structural Engineer	P	446	0
Technical Analyst	P	1998	6
Transportation Engineer	P	207	2
Water Resources Engineer	P	42	1
Other	P	5853	13
Total		14,696	35



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3. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST YEAR

a. Approximate No. of Projects	b. Experience	c. Revenue Index Number <i>(see below)</i>
317	Airports; Terminals and Hangars	8
356	Construction Management	8
110	Dams (Earth; Rock); Dikes; Levees	8
327	Electrical Studies and Design	7
4275	Environmental Remediation	10
976	Highways; Streets	10
71	Irrigation; Drainage	5
587	Landscape Architecture	8
287	Mining & Mineraology	10
190	Railroad; Rapid Transit	8
50	Rivers; Canals; Waterways; Flood Control	8
754	Sewage Collection; Treatment and Disposal	9
743	Surveying; Platting; Mapping	8
1890	Traffic and Transportation Engineering	10
1362	Water Supply; Treatment and Distribution	10

PROFESSIONAL SERVICES REVENUE INDEX NUMBER

- | | |
|---|---|
| 1. Less than \$100,000 | 6. \$2 million to less than \$5 million |
| 2. \$100,000 to less than \$250,000 | 7. \$5 million to less than \$10 million |
| 3. \$250,000 to less than \$500,000 | 8. \$10 million to less than \$25 million |
| 4. \$500,000 to less than \$1 million | 9. \$25 million to less than \$50 million |
| 5. \$1 million to less than \$2 million | 10. \$50 million or greater |

Information represents combined projects and revenue from Stantec firm-wide.



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

a. NAME Scot Schlund, PE	b. ROLE IN THIS CONTRACT Principal-in-Charge	c. YEARS EXPERIENCE	
		1. TOTAL 31	2. WITH CURRENT FIRM 17
d. LOCATION (City and State) Stantec (Phoenix, Arizona)			
e. EDUCATION (DEGREE AND SPECIALIZATION) MS, Watershed Management/Surface Water Hydrology, University of Arizona, Tucson, Arizona, 1982		f. PROFESSIONAL TRAINING - REGISTRATIONS Professional Engineer #22910, State of Arizona Professional Engineer #9262, State of Nevada	
g. OTHER PROFESSIONAL QUALIFICATIONS (Organizations, Awards, etc.) 2006 WESTMARC Best of the West Awards Honor Award, El Rio Watercourse Master Plan & Area Drainage Master Plan 2006 Valley Forward Environmental Excellence Awards Crescordia Award, El Rio Watercourse Master Plan & Area Drainage Master Plan 2006 Arizona Planning Association's State Planning Awards Best Regional Plan, El Rio Watercourse Master Plan & Area Drainage			

H. RELEVANT PROJECTS

1.	(1) TITLE AND LOCATION (City and State) Powerline, Vineyard Road, and Rittenhouse Flood Retarding Structures; Phoenix, Arizona	(2) YEAR COMPLETED	
		Professional Services Ongoing	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Stantec is currently working with the Flood Control District of Maricopa County to design the rehabilitation of the Vineyard Road and Rittenhouse FRSs (earthen dam) in order to maintain flood control benefits, correct the dam safety deficiencies, and comply with State dam safety requirements.	<input checked="" type="checkbox"/> Check if project performed with current firm	
2.	(1) TITLE AND LOCATION (City and State) Horse Mesa Dam; Phoenix, Arizona	(2) YEAR COMPLETED	
		Professional Services 2012-2013	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE In June 2012, a 50-ton piece of concrete broke free and fell into the intake at Horse Mesa Dam. The resulting damage forced a complete shutdown of the hydroelectric Unit #4, a loss of 97,000 kW in the middle of peak season, summer in Arizona. Working within an aggressive deadline to restore generating capacity, we partnered with SRP and construction subconsultants, to develop a design that was both flexible, and could be constructed by the four man team. The replacement vane was built in 15 prefabricated steel components, totaling more than 100,000 pounds.	<input checked="" type="checkbox"/> Check if project performed with current firm	
3.	(1) TITLE AND LOCATION (City and State) Central Phoenix/East Valley Light Rail Transit Project - Line Section 3; Phoenix, Arizona	(2) YEAR COMPLETED	
		Professional Services 2002-2005	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Supervised the drainage design for Line Segment 3, which included approximately eight miles of track (double) through central Phoenix. Designs were prepared for review by the City of Phoenix in accordance with their requirements for the 2-year and 100-year flood conditions. Used a unique "flow-through" guideway curb to keep stormwater from flooding adjacent properties.	<input checked="" type="checkbox"/> Check if project performed with current firm	
4.	(1) TITLE AND LOCATION (City and State) Horseshoe Dam River Outlet Works; Phoenix, Arizona	(2) YEAR COMPLETED	
		Professional Services Ongoing	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE The gate to the River Outlet Works (ROW) tower at the Horseshoe Dam was leaky and needed repair. This feature of the dam a crucial element to its functionality, as it controls the flow of water to surrounding communities for irrigation and other uses. Stantec designed an inflatable plug that was inserted through the gate at the tower. It sealed the leaky gate, and allowed the tunnel to be dewatered. This innovative approach saved time and ultimately saved SRP \$11M.	<input checked="" type="checkbox"/> Check if project performed with current firm	
5.	(1) TITLE AND LOCATION (City and State) Gillespie Area Drainage Master Study; Maricopa County, Arizona	(2) YEAR COMPLETED	
		Professional Services 2010-2010	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Principal-in-Charge for the study of this 148-square-mile area southwest of Phoenix. The effort identified and mitigated flood hazards through analysis and development guidelines. The watershed contains a sizeable amount of agricultural land, key infrastructure, and public facilities, as well as portions of the Sonoran Desert National Monument.	<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 Annette Zacherson, RA, NCARB, AIA, LEED® AP BD+C		b. ROLE IN THIS CONTRACT Architect		c. YEARS EXPERIENCE	
				1. TOTAL 23	2. WITH CURRENT FIRM 5
d. LOCATION (City and State) Stantec (Phoenix, Arizona)					
e. EDUCATION (DEGREE AND SPECIALIZATION) London Design and Research Study, University of Nebraska, Lincoln, Nebraska, 1990			f. PROFESSIONAL TRAINING - REGISTRATIONS Registered Architect #46053, State of Arizona LEED® Accredited Professional #1018154, U.S. Green Building Council		
g. OTHER PROFESSIONAL QUALIFICATIONS (Organizations, Awards, etc.)					
<ul style="list-style-type: none"> • Member, Preservation Association of Lincoln • Member, National Council of Architectural Registration Boards • Member, American Institute of Architects 					

H. RELEVANT PROJECTS

1.	(1) TITLE AND LOCATION (City and State) Safari Green School House; Phoenix, Arizona	(2) YEAR COMPLETED	
		Professional Services 2009	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE As part of the Green School House team, Annette’s responsibilities as project manager included participating in the design of the building, putting together construction documents, coordinating the LEED® requirements, and overseeing construction administrative duties, as well as coordination with the suppliers of donated materials.	<input checked="" type="checkbox"/> Check if project performed with current firm	
2.	(1) TITLE AND LOCATION (City and State) Education Management Corporation (EDMC) - Brown Mackie College, Phases I,II,III; Phoenix, Arizona	(2) YEAR COMPLETED	
		Professional Services 2008 - 2011	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE As architect of record and project architect, Annette’s responsibilities for all three phases included coordination of construction documents with the owner and consultants, permitting submittal and responses, construction administration, requests for information (RFIs), submittals, construction punch lists, and project close out.	<input checked="" type="checkbox"/> Check if project performed with current firm	
3.	(1) TITLE AND LOCATION (City and State) Maricopa County On-Call Three Year Contract; Maricopa County, Arizona	(2) YEAR COMPLETED	
		Professional Services 2010 - 2013	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE As project manager, Annette provided a variety of architectural services on an on-call basis for the County of Maricopa.	<input checked="" type="checkbox"/> Check if project performed with current firm	
4.	(1) TITLE AND LOCATION (City and State) Luke Air Force Base - Bridging Documents, Buildings 431 and 983/985; Glendale, Arizona	(2) YEAR COMPLETED	
		Professional Services 2011 - 2013	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE A key member of the Stantec architectural team, Annette was responsible for design development and the production of the construction documents for the design build bidding of buildings 431 and 983/985.	<input checked="" type="checkbox"/> Check if project performed with current firm	
5.	(1) TITLE AND LOCATION (City and State) ADOT Truck Weigh and Credential Processing Facility, Mariposa Land Port of Entry; Nogales, Arizona	(2) YEAR COMPLETED	
		Professional Services 2010 - 2011	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Provided architectural design and support services, as well as oversaw sustainable design/LEED® elements of the facility. Although the final facility is not LEED® certified, it was designed to meet LEED® Silver standards with 10% alternative energy consumption.	<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 Brian McClure, RA, CSI, CDT	b. ROLE IN THIS CONTRACT Architect	c. YEARS EXPERIENCE	
		1. TOTAL 28	2. WITH CURRENT FIRM 4
d. LOCATION (City and State) Stantec (Phoenix, Arizona)			
e. EDUCATION (DEGREE AND SPECIALIZATION) Architectural Accessibility, Gateway Community College, Phoenix, Arizona, 1992		f. PROFESSIONAL TRAINING - REGISTRATIONS Registered Architect #48002, State of Arizona	
g. OTHER PROFESSIONAL QUALIFICATIONS (Organizations, Awards, etc.)			
<ul style="list-style-type: none"> Phoenix Chapter President, Construction Specifications Institute Certified Construction Documents Technologist, Construction Specifications Institute Member, Construction Specifications Institute 			

H. RELEVANT PROJECTS

1.	(1) TITLE AND LOCATION (City and State) Pinnacle High School; Paradise Valley, Arizona	(2) YEAR COMPLETED	
		Professional Services 1999	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Provided working drawings for two, 2-story academic buildings, totaling 142,000 square feet and all architectural site plans and details for the 65-acre site.	<input type="checkbox"/> Check if project performed with current firm	
2.	(1) TITLE AND LOCATION (City and State) Apollo Group (University of Phoenix) Data Center Expansions; Phoenix, Arizona	(2) YEAR COMPLETED	
		Professional Services 2010	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Served as the lead Architect for the design of their secondary data center, as well as the expansion of the primary data center. The Primary data center expansion doubled the raised floor area of the facility, increased efficiencies while connecting it the existing facility, and providing totally separate support facilities for the expansion.	<input type="checkbox"/> Check if project performed with current firm	
3.	(1) TITLE AND LOCATION (City and State) Basha High School; Chandler, Arizona	(2) YEAR COMPLETED	
		Professional Services 2003	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Oversaw the completion of Contract Documents for the eight building campus, totaling 290,000 square feet. Contract documents were completed in a 7-month period with minimal staff. This was one of the first CM-at-Risk projects approved by the Arizona Schools Facility Board.	<input type="checkbox"/> Check if project performed with current firm	
4.	(1) TITLE AND LOCATION (City and State) Port of Entry; Evanston, Wyoming	(2) YEAR COMPLETED	
		Professional Services 1991	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Completed the design for a new state port of entry facility, including an enclosed inspection area, scales, and office area.	<input type="checkbox"/> Check if project performed with current firm	
5.	(1) TITLE AND LOCATION (City and State) Arizona Public Service; Arizona	(2) YEAR COMPLETED	
		Professional Services 2010	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Provided ongoing facilities architecture, studies and reports for numerous facilities throughout Arizona. Work included assessments and renovations at Palo Verde NGS, APS Corporate Headquarters, their other primary support facilities in Phoenix. Design of new LEED® certified service centers.	<input checked="" type="checkbox"/> Check if project performed with current firm	



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a. NAME Paul Mullins, RA	b. ROLE IN THIS CONTRACT Architect	c. YEARS EXPERIENCE	
		1. TOTAL 35	2. WITH CURRENT FIRM 15
d. LOCATION (City and State) Stantec (Phoenix, Arizona)			
e. EDUCATION (DEGREE AND SPECIALIZATION) B-Arch, Architecture, Arizona State University, Tempe, 1979		f. PROFESSIONAL TRAINING - REGISTRATIONS Registered Architect, #14362, State of Arizona Registered Architect, #C21642, State of California	
g. OTHER PROFESSIONAL QUALIFICATIONS (Organizations, Awards, etc.)			

H. RELEVANT PROJECTS

1.	(1) TITLE AND LOCATION (City and State) ADOT Truck Weigh and Credential Processing Facility Mariposa Land Port of Entry; Nogales, Arizona	(2) YEAR COMPLETED	
		Professional Services 2010	Construction (if applicable) 2011
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE New Administration and Weigh-in-Motion scale facilities for the \$8M facility for the Arizona Department of Transportation. Design Architect, design team coordinator, and Construction Administrator.	<input checked="" type="checkbox"/> Check if project performed with current firm	
2.	(1) TITLE AND LOCATION (City and State) Laughlin/Bullhead International Airport Aircraft Rescue and Fire Fighting Building; Bullhead City, Arizona	(2) YEAR COMPLETED	
		Professional Services 2011	Construction (if applicable) 2013
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE This was a new Fire Station, airside, for the airport. The new, \$6M facility is 14,000SF, constructed into the hillside, overlooking the center point of the runway. Design team coordinator, and full time, on-site construction administrator.	<input checked="" type="checkbox"/> Check if project performed with current firm	
3.	(1) TITLE AND LOCATION (City and State) Luke Air Force Base: Hangars, Maintenance Bays, and Administration Offices; Glendale, Arizona	(2) YEAR COMPLETED	
		Professional Services Ongoing	Construction (if applicable) Ongoing
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE The F-35 Joint Strike Fighter mission at Luke Air Force Base has demanded that many of the older hangar, maintenance, and support buildings be re-purposed for the new mission. Mr. Mullins has been the lead design architect for many of these facilities, ranging in cost from \$300K to \$2.5M.	<input checked="" type="checkbox"/> Check if project performed with current firm	
4.	(1) TITLE AND LOCATION (City and State) Monsanto Cotton Equipment Storage Facility; Casa Grande, Arizona	(2) YEAR COMPLETED	
		Professional Services 2013	Construction (if applicable) 2013
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Monsanto is a repeat client for Mr. Mullins. This is his third project for this international client. The on-site equipment required a facility to keep the harsh Arizona weather and sun from deteriorating. As Project Manager, Mr. Mullins lead the design team and provided construction administration services for the \$800K facility.	<input checked="" type="checkbox"/> Check if project performed with current firm	
5.	(1) TITLE AND LOCATION (City and State) Proctor and Gamble Material Warehouse; Phoenix, Arizona	(2) YEAR COMPLETED	
		Professional Services Ongoing	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE This warehouse facility will incorporate all of the existing off-site material storage into the new location for the processing, manufacturing, and packaging of their product. The 66,000SF facility is estimated to cost \$10M, and scheduled for completion in late 2015.	<input checked="" type="checkbox"/> Check if project performed with current firm	



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a. NAME Maria Brady, PE	b. ROLE IN THIS CONTRACT Water/Wastewater	c. YEARS EXPERIENCE	
		1. TOTAL 29	2. WITH CURRENT FIRM 29
d. LOCATION (City and State) Stantec (Phoenix, Arizona)			
e. EDUCATION (DEGREE AND SPECIALIZATION) MS, Agricultural Engineering, Colorado State University, Fort Collins, Colorado, 1984		f. PROFESSIONAL TRAINING - REGISTRATIONS Professional Engineer #29313 - Civil, State of Arizona Professional Engineer #22841 - Agricultural, State of Arizona	
g. OTHER PROFESSIONAL QUALIFICATIONS (Organizations, Awards, etc.) Member, Society of American Military Engineers, Phoenix Post Member, Water Environment Federation Member, AZ Water Association			

H. RELEVANT PROJECTS

1.	(1) TITLE AND LOCATION (City and State) Nogales International Wastewater Treatment Plant; Nogales, Arizona	(2) YEAR COMPLETED	
		Professional Services 2007 - 2008	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Design and construction services for a new 14.74 MGD upgrade of the Nogales International Wastewater Treatment Plant. The facility design was completed in a compressed six month schedule with close coordination between designers and contractor in order to meet the City's fixed "not to exceed" \$53 million project budget.	<input checked="" type="checkbox"/>	Check if project performed with current firm
2.	(1) TITLE AND LOCATION (City and State) Ocotillo Road Water Mains; Gilbert, Arizona	(2) YEAR COMPLETED	
		Professional Services 2007 - 2008	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE The project includes a City of Chandler 4-mile, 36-inch water main from Higley Road to Gilbert Road; a 1-mile, 24-inch water main from Higley Road to Greenfield Road; and a 1-mile, 16-inch water main from Greenfield Road to Val Vista Drive. Objectives of the project include designing the alignment of waterlines to match existing stub-outs and ensuring proper pipe alignment to avoid conflicts when future road reconstruction occurs.	<input checked="" type="checkbox"/>	Check if project performed with current firm
3.	(1) TITLE AND LOCATION (City and State) Avenue B&C Colonia Wastewater Collection System; Yuma, Arizona	(2) YEAR COMPLETED	
		Professional Services 2009 - 2010	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Completed plans and specifications for the installation of approximately 8.5 miles of sewer collection system in an area of Yuma County bounded by Avenues B and C and 1st and 8th Streets. The installation of the sewer collection system included on-site connections of over 600 residential properties.	<input checked="" type="checkbox"/>	Check if project performed with current firm
4.	(1) TITLE AND LOCATION (City and State) Central Arizona Project Pipeline to San Tan Vista Water Treatment Plant; Gilbert, Arizona	(2) YEAR COMPLETED	
		Professional Services 2006 - 2008	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Design-build project for approximately 14 miles of 48-inch raw water pipeline connecting the CAP Canal with about 200 feet of elevation drop to the Town of Gilbert South Water Treatment Plant.	<input checked="" type="checkbox"/>	Check if project performed with current firm
5.	(1) TITLE AND LOCATION (City and State) Luke Air Force Base On-Call Engineering Services (Wastewater, Water, Stormwater, Planning); Glendale, Arizona	(2) YEAR COMPLETED	
		Professional Services 1998 - Ongoing	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Maria has led design efforts for Luke AFB since 1988 through on-call contracts. Projects have included Luke AFB Sewer Study, Luke AFB Water Study, Luke AFB 400 and 900 Area Chill Facilities Design, and Luke AFB Water Storage Tank and Arsenic Treatment System.	<input checked="" type="checkbox"/>	Check if project performed with current firm



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

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

a. NAME Noel Guercio, PE	b. ROLE IN THIS CONTRACT Water/Wastewater	c. YEARS EXPERIENCE	
		1. TOTAL 11	2. WITH CURRENT FIRM 8
d. LOCATION (City and State) Stantec (Phoenix, Arizona)			
e. EDUCATION (DEGREE AND SPECIALIZATION) MS, Construction Management, Arizona State University, Tempe, Arizona, 2003		f. PROFESSIONAL TRAINING - REGISTRATIONS Professional Engineer #44168, State of Arizona Professional Engineer #78176, State of California	
g. OTHER PROFESSIONAL QUALIFICATIONS (Organizations, Awards, etc.) Member, Water Environment Federation; Member, AZ Water Association; Member Representative, Society of American Military Engineers, Phoenix Post; Member, North American Society for Trenchless Technology; Member, American Society of Civil Engineers; 2001 George E. Poole Memorial Leadership Award in Construction Engineering			

H. RELEVANT PROJECTS

1.	(1) TITLE AND LOCATION (City and State) Avenue B&C Colonia Wastewater Collection System; Yuma, Arizona	(2) YEAR COMPLETED
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Noel served as Project Engineer, responsible for designing the conversion of 2,190 dwellings from septic tanks and drainfields to a collection system connecting 697 residential properties and 84 commercial properties via 8.5 miles of 8" to 15" diameter gravity sewer and 600 feet of force main with a lift station pumping to the existing City of Yuma collection system. The \$23M project was funded by 5 different funding agencies.	Professional Services 2012
		<input checked="" type="checkbox"/> Check if project performed with current firm
2.	(1) TITLE AND LOCATION (City and State) Adaman Irrigation Water Delivery District, ADOT Loop 303, Segments 2, 3, and 4; Litchfield Park, Arizona	(2) YEAR COMPLETED
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE The Adaman Irrigation Water Delivery District (AIWDD) and Stantec provided predesign coordination, plan review, final designs, construction specifications, bid documents and construction administration for relocating three segments of the Adaman canal delivery system in conjunction with the construction of the new ADOT Loop 303 (SR303L) freeway.	Professional Services 2013
		<input checked="" type="checkbox"/> Check if project performed with current firm
3.	(1) TITLE AND LOCATION (City and State) Central Mesa LRT Extension; Mesa Arizona	(2) YEAR COMPLETED
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Stantec is currently providing design services for this 3.1-mile LRT extension through downtown Mesa. This project consists of a center running, concrete embedded guideway in semi-exclusive right-of-way with pocket storage track and OCS, four station platforms, three traction power substations, and a park and ride facility. Our services include design management, survey, civil design, track, systems, and systems interface/integration.	Professional Services Ongoing
		<input checked="" type="checkbox"/> Check if project performed with current firm
4.	(1) TITLE AND LOCATION (City and State) Irrigation Inspection and Rehabilitation; Tempe, Arizona	(2) YEAR COMPLETED
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Stantec assisted the City of Tempe with an inspection and engineering analysis of their flood irrigation program. Since the 1920s, the City of Tempe has been operating a program providing irrigation and maintenance services to a portion of the City's flood irrigated residence and business properties.	Professional Services 2011
		<input checked="" type="checkbox"/> Check if project performed with current firm
5.	(1) TITLE AND LOCATION (City and State) Wal Vista Water Transmission Main, Phase 2; Mesa, Arizona	(2) YEAR COMPLETED
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Stantec's team of professionals are providing design services for Phase 2 of the pipeline alignment and will consist of a 60-inch water transmission main that conveys potable water for 14,500 linearfeet at 100 psi. The design will require utility coordination, Salt River Project canal crossing, corrosion control design, transportation system analysis, isolation valves, and a 7,500 gallon hydropneumatic tank system at one of the reservoir/booster facilities.	Professional Services Ongoing
		<input checked="" type="checkbox"/> Check if project performed with current firm



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

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

a. NAME John Take, PE		b. ROLE IN THIS CONTRACT Water/Wastewater		c. YEARS EXPERIENCE	
				1. TOTAL 23	2. WITH CURRENT FIRM 20
d. LOCATION (City and State) Stantec (Tucson, Arizona)					
e. EDUCATION (DEGREE AND SPECIALIZATION) M.Eng., Civil Engineering (Water Resources), University of Alberta, Edmonton, Alberta, 1996			f. PROFESSIONAL TRAINING - REGISTRATIONS Professional Engineer #52192, State of Arizona Envision Sustainability Professional (ENV SP), Institute for Sustainable Infrastructure		
g. OTHER PROFESSIONAL QUALIFICATIONS (Organizations, Awards, etc.) Member, International Water Association Member, Water Environment Federation Member, Association of Professional Engineers and Geoscientists of Alberta					
H. RELEVANT PROJECTS					
1.	(1) TITLE AND LOCATION (City and State) Permanent Canal Closures and Pumps Project; New Orleans, Louisiana			(2) YEAR COMPLETED	
				Professional Services 2013 - 2016	Construction (if applicable)
(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE A \$614 million design-build project to help protect the City of New Orleans from storm surges from Lake Pontchartrain. The pumps have a combined capacity of 24,200 cubic feet per second. Pumping is accomplished with 24, 2.6 megawatt generators backed up by six redundant units for a total of 78 megawatts across all three sites.			<input checked="" type="checkbox"/> Check if project performed with current firm		
2.	(1) TITLE AND LOCATION (City and State) Southwest Infrastructure Plan, Phase I and II; Pima County, Arizona			(2) YEAR COMPLETED	
				Professional Services 2007 - 2008	Construction (if applicable)
(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Assisted with the development of a comprehensive infrastructure servicing plan and costing analysis for this key targeted growth area in Pima County.			<input checked="" type="checkbox"/> Check if project performed with current firm		
3.	(1) TITLE AND LOCATION (City and State) Neighborhood Water Harvesting Guideline Manual; Pima County, Arizona			(2) YEAR COMPLETED	
				Professional Services 2012	Construction (if applicable)
(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE John Take participated in the development of the Neighborhood Water Harvesting Guideline Manual, providing consulting services to the PCRFC and the City of Tucson. In addition, we are participating on the Tucson Roadway Green Infrastructure Policy Committee, which is developing a draft Road/Street Water Harvesting Ordinance per Mayor and Council direction.			<input checked="" type="checkbox"/> Check if project performed with current firm		
4.	(1) TITLE AND LOCATION (City and State) Green Valley Water District Master Plan; Green Valley, Arizona			(2) YEAR COMPLETED	
				Professional Services 2004	Construction (if applicable)
(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Supported comprehensive water supply and distribution master plan addressing system capacity constraints and future growth.			<input checked="" type="checkbox"/> Check if project performed with current firm		
5.	(1) TITLE AND LOCATION (City and State) City of Somerton Wastewater Master Plan; Somerton, Arizona			(2) YEAR COMPLETED	
				Professional Services 2005 - 2008	Construction (if applicable)
(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Supported delivery of wastewater master plan addressing system capacity constraints and future growth.			<input checked="" type="checkbox"/> Check if project performed with current firm		



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

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

a. NAME John Wise, PE, CFM	b. ROLE IN THIS CONTRACT Drainage	c. YEARS EXPERIENCE	
		1. TOTAL 37	2. WITH CURRENT FIRM 31

d. LOCATION (City and State)
Stantec (Tucson, Arizona)

e. EDUCATION (DEGREE AND SPECIALIZATION) MS, Civil Engineering, University of Michigan, Ann Arbor, Michigan, 1977	f. PROFESSIONAL TRAINING - REGISTRATIONS Certified Floodplain Manager #US-09-04299, Assoc. of State Floodplain Managers Professional Engineer #16738, State of Arizona
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g. OTHER PROFESSIONAL QUALIFICATIONS (Organizations, Awards, etc.)
 Member, Southern Arizona Architects and Engineers Marketing Association
 Member, Tucson Stormwater Advisory Committee
 Member, Arizona Floodplain Management Association

H. RELEVANT PROJECTS

1.	(1) TITLE AND LOCATION (City and State) Downtown Tucson Infrastructure Improvements; Tucson, Arizona	(2) YEAR COMPLETED	
		Professional Services 2008	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Mr. Wise is the Task Leader for the drainage improvements, which includes assessment of existing hydrologic conditions, storm drain and street capacity, and recommendations for upgrades to the existing drainage system to collect and convey the 10-year storm event.	<input checked="" type="checkbox"/> Check if project performed with current firm	

2.	(1) TITLE AND LOCATION (City and State) Expansion and Modernization of the Mariposa Land Port of Entry; Nogales, Arizona	(2) YEAR COMPLETED	
		Professional Services 2010	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Provided drainage design for the expansion of the Mariposa Land Port of Entry, the largest commercial border crossing in Arizona. Drainage design for the 55 acre site included hydrologic and hydraulic analyses, on-site storm drain and extension of cross-drainage culverts, including an existing culvert at the Ephraim Wash.	<input checked="" type="checkbox"/> Check if project performed with current firm	

3.	(1) TITLE AND LOCATION (City and State) ROMP Water and Energy Sustainability Center; Tucson, Arizona	(2) YEAR COMPLETED	
		Professional Services 2011 - 2012	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Mr. Wise led hydrology efforts for the design of the Pima County Regional Wastewater Reclamation Department's Water and Energy Sustainability Center. The Drainage Master Plan for the project site included HEC-RAS modeling of a proposed man-made channel discharging through the existing Santa Cruz levee.	<input checked="" type="checkbox"/> Check if project performed with current firm	

4.	(1) TITLE AND LOCATION (City and State) Lee Moore Wash Basin Management Study; Tucson, Arizona	(2) YEAR COMPLETED	
		Professional Services 2006 - 2010	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Provided a comprehensive flood control protection program and floodplain management protocol HEC-1/HMS, HEC-2/RAS, and FLO-2D modeling were employed for the study, GIS platform exhibits, and public/stakeholder involvement.	<input checked="" type="checkbox"/> Check if project performed with current firm	

5.	(1) TITLE AND LOCATION (City and State) Davis Road Drainage Improvements Project; Cochise County, Arizona	(2) YEAR COMPLETED	
		Professional Services 2011-ongoing	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Provided roadway and drainage improvements at three mile posts along Davis Road between SR 80 near Tombstone and SR 191 near McNeal. Constructed reinforced concrete arch culverts to convey a 25-year storm event under the roadway in order to increase safety and decrease the frequency of road closures. ADOT and Local Government process and associated ADOT review/approval was incorporated into this project. An initial Project Assessment was conducted to evaluate six crossing locations.	<input checked="" type="checkbox"/> Check if project performed with current firm	



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

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

a. NAME Patrick Ellison, PE	b. ROLE IN THIS CONTRACT Drainage	c. YEARS EXPERIENCE	
		1. TOTAL 31	2. WITH CURRENT FIRM 17
d. LOCATION (City and State) Stantec (Phoenix, Arizona)			
e. EDUCATION (DEGREE AND SPECIALIZATION) MS, Geology, Washington State University, Pullman, Washington, 1982		f. PROFESSIONAL TRAINING - REGISTRATIONS Professional Engineer #31680, State of Arizona	
g. OTHER PROFESSIONAL QUALIFICATIONS (Organizations, Awards, etc.) Member, Arizona Floodplain Management Association 2006 Arizona Planning Association's State Planning Awards, Best Regional Plan, El Rio Watercourse Master Plan & Area Drainage Master Plan			

H. RELEVANT PROJECTS

1.	(1) TITLE AND LOCATION (City and State) Gillespie Area Drainage Master Study; Maricopa County, Arizona	(2) YEAR COMPLETED	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Project Manager for an extensive study of the Gillespie/Woolsey watershed, a 148 square mile area southwest of Phoenix, Arizona. The study provided a high level of flood safety for area residents by establishing guidelines to address current and potential flood hazards in the watershed.	Professional Services 2010 - 2012	Construction (if applicable)
<input checked="" type="checkbox"/>		Check if project performed with current firm	
2.	(1) TITLE AND LOCATION (City and State) El Rio Watercourse Master Plan and Area Drainage Master Plan; Maricopa County, Arizona	(2) YEAR COMPLETED	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Project Engineer on a multi discipline team that provided ecological, biological, water quality, scenic multi-use recreational assessments, hydrologic, hydraulic, sediment transport, and groundwater evaluations that were used to develop a flood control management plan for an 18-mile reach of the Gila River that extends from the confluence with the Agua Fria River to the SR-85 Bridge (approximately 17.5 miles long).	Professional Services 2006	Construction (if applicable)
<input checked="" type="checkbox"/>		Check if project performed with current firm	
3.	(1) TITLE AND LOCATION (City and State) Salt River Hydraulic Master Plan; Maricopa County, Arizona	(2) YEAR COMPLETED	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Evaluated an eight-mile reach of the Salt River. The purpose of the Salt River HMP is to determine the amount of flow that can be conveyed between the levees along the Salt River from the Interstate 10 Bridge to Alma School Road Bridge.	Professional Services 2010	Construction (if applicable)
<input checked="" type="checkbox"/>		Check if project performed with current firm	
4.	(1) TITLE AND LOCATION (City and State) Lynx Creek Levee and Sedona Shadows Levee Certification; Yavapai County, Arizona	(2) YEAR COMPLETED	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Oversaw levee certification submittal for levees classified as Certifiable by the Federal Emergency Management Agency (FEMA) in Yavapai County.	Professional Services 2008	Construction (if applicable)
<input checked="" type="checkbox"/>		Check if project performed with current firm	
5.	(1) TITLE AND LOCATION (City and State) Upper New River Area Drainage Master Plan; Maricopa County, Arizona	(2) YEAR COMPLETED	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ADMP for 169 square miles located in Phoenix, Peoria, and unincorporated Maricopa County. Work included the identification of drainage problems, hydrology, hydraulics, geomorphic analysis, erosion setbacks, FEMA floodplain delineations, stakeholder and public coordination, survey, environmental resources, scenery resource assessment, recreation multi-use assessment, development of alternative solutions, and preparation of preliminary design plans based on a preferred alternative that includes 8 miles of levees.	Professional Services 2008	Construction (if applicable)
<input checked="" type="checkbox"/>		Check if project performed with current firm	



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

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

a. NAME Michael Gerlach, PE	b. ROLE IN THIS CONTRACT Drainage	c. YEARS EXPERIENCE	
		1. TOTAL 21	2. WITH CURRENT FIRM 20
d. LOCATION (City and State) Stantec (Phoenix, Arizona)			
e. EDUCATION (DEGREE AND SPECIALIZATION) BS, Civil Engineering, Arizona State University, Tempe, Arizona, 1994		f. PROFESSIONAL TRAINING - REGISTRATIONS Professional Engineer #19011, State of New Mexico Professional Engineer #35150, State of Arizona	
g. OTHER PROFESSIONAL QUALIFICATIONS (Organizations, Awards, etc.) Member, Chi Epsilon National Civil Engineering Honor Society Member/Treasurer, Arizona Floodplain Management Association Member, American Society of Civil Engineers			

H. RELEVANT PROJECTS

1.	(1) TITLE AND LOCATION (City and State) Powerline, Vineyard Road, and Rittenhouse Flood Retarding Structures; Phoenix, Arizona	(2) YEAR COMPLETED	
		Professional Services Ongoing	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Stantec is currently working with the Flood Control District of Maricopa County to design the rehabilitation of the Vineyard Road and Rittenhouse FRSs (earthen dam) in order to maintain flood control benefits, correct the dam safety deficiencies, and comply with State dam safety requirements.	<input checked="" type="checkbox"/> Check if project performed with current firm	
2.	(1) TITLE AND LOCATION (City and State) City of Phoenix and Maricopa County Storm Drainage Design Manual; Maricopa County, Arizona	(2) YEAR COMPLETED	
		Professional Services 2004	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Primary author for hydrology volume of the new storm drainage design manual for Maricopa County and the City of Phoenix. Major tasks included the research and development of a methodology and procedure for the development of rainfall-runoff models for more frequent flooding events and revisions to procedures for the methodologies in the previous Maricopa County Manual.	<input checked="" type="checkbox"/> Check if project performed with current firm	
3.	(1) TITLE AND LOCATION (City and State) Permanent Canal Closures and Pumps Project; New Orleans, Louisiana	(2) YEAR COMPLETED	
		Professional Services 2013 - 2016	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Hydrolic Lead for a \$614 million design-build project to help protect the City of New Orleans from storm surges from Lake Pontchartrain. The pumps have a combined capacity of 24,200 cubic feet per second. Pumping is accomplished with 24, 2.6 megawatt generators backed up by six redundant units for a total of 78 megawatts across all three sites.	<input checked="" type="checkbox"/> Check if project performed with current firm	
4.	(1) TITLE AND LOCATION (City and State) Palo Verde Watershed Floodplain Delineation Study; Maricopa County, Arizona	(2) YEAR COMPLETED	
		Professional Services 2010	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE This hydrologically complex 275-square-mile watershed involved analysis of 15 crossings of the CAP canal, numerous flow splits due to the distinctive nature of the watershed, and more than 100 culverts crossing I-10.	<input checked="" type="checkbox"/> Check if project performed with current firm	
5.	(1) TITLE AND LOCATION (City and State) Gillespie Area Drainage Master Study; Maricopa County, Arizona	(2) YEAR COMPLETED	
		Professional Services 2010 - 2012	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Project Engineer for an extensive study of the Gillespie/Woolsey watershed, a 148 square mile area southwest of Phoenix, Arizona. The study provided a high level of flood safety for area residents by establishing guidelines to address current and potential flood hazards in the watershed.	<input checked="" type="checkbox"/> Check if project performed with current firm	



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

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

a. NAME Chuck Williams, PE	b. ROLE IN THIS CONTRACT Drainage	c. YEARS EXPERIENCE	
		1. TOTAL 28	2. WITH CURRENT FIRM 2
d. LOCATION <i>(City and State)</i> Stantec (Tucson, Arizona)			
e. EDUCATION <i>(DEGREE AND SPECIALIZATION)</i> BS, Civil Engineering, University of Arizona, Tucson, Arizona, 1986		f. PROFESSIONAL TRAINING - REGISTRATIONS Professional Engineer #39614, State of Colorado; Professional Engineer #6024487-2202, State of Utah; Professional Engineer #24447, State of Arizona	
g. OTHER PROFESSIONAL QUALIFICATIONS <i>(Organizations, Awards, etc.)</i> Member, American Society of Civil Engineers Member, Arizona Association of County Engineers Member, Arizona Floodplain Management Association			

H. RELEVANT PROJECTS

1.	(1) TITLE AND LOCATION <i>(City and State)</i> Gila County Courthouse ADA/Access Improvement Project; Globe, Arizona	(2) YEAR COMPLETED	
		Professional Services 2008	Construction (if applicable)
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Developed construction improvement plans and bidding documents to improve access for disabled persons and traffic conditions at the main entrance into the Gila County Courthouse.	<input type="checkbox"/>	Check if project performed with current firm
2.	(1) TITLE AND LOCATION <i>(City and State)</i> Box Culvert Design, 16th Avenue at Rodeo Wash; Tucson, Arizona	(2) YEAR COMPLETED	
		Professional Services 2013 - 2014	Construction (if applicable)
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE This project provides for an all-weather crossing between South 16th Avenue just north of West District Avenue where Rodeo Wash crosses South 16th Avenue. The project included modification of the hydraulic model and design of the new crossing.	<input checked="" type="checkbox"/>	Check if project performed with current firm
3.	(1) TITLE AND LOCATION <i>(City and State)</i> Apache County Storm Water Pollution Prevention Plan (SWPPP) Project; Apache County, Arizona	(2) YEAR COMPLETED	
		Professional Services 2006 - 2007	Construction (if applicable)
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Developed Storm Water Pollution Prevention Plans for nine County roadyards and two existing material source pits. The roadyards were spread across the entire county and included locations in: Chambers, Chinle, Eagar, Fort Defiance, Ganado, Rock Point, St. Johns, Teec Nos Pos and Wheatfields. The two material pits were located in Concho and near Saint Johns.	<input type="checkbox"/>	Check if project performed with current firm
4.	(1) TITLE AND LOCATION <i>(City and State)</i> Bridge Embankment Protection Project at Two Locations; Santa Cruz County, Arizona	(2) YEAR COMPLETED	
		Professional Services 2009	Construction (if applicable)
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Project to develop erosion/scour countermeasures to repair failed bridge abutment protection at two bridges. Scope was to evaluate bridge scour, river lateral migration, environmental constraints, prepare a Design Concept Report, and construction improvement plans.	<input type="checkbox"/>	Check if project performed with current firm
5.	(1) TITLE AND LOCATION <i>(City and State)</i> Lake Montezuma - Rimrock Wash and Beaver Creek School Wash Design Concept Study; Yavapai County, Arizona	(2) YEAR COMPLETED	
		Professional Services 2013 - 2014	Construction (if applicable)
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Mr. Williams is managing the design of flood control structures that will remove residents from the 100-year floodplain. He is developing conceptual design alternatives for two separate watercourses in unincorporated Yavapai County: Rimrock Wash and Beaver Creek School Wash. The scope includes hydrologic and floodplain analysis, Design Concept Report, 404 permit application, design, and submittal of a LOMR to FEMA.	<input checked="" type="checkbox"/>	Check if project performed with current firm



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

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

a. NAME Warren Thompson, PE, RLS	b. ROLE IN THIS CONTRACT Site Civil	c. YEARS EXPERIENCE	
		1. TOTAL 43	2. WITH CURRENT FIRM 32
d. LOCATION (City and State) Stantec (Tucson, Arizona)			
e. EDUCATION (DEGREE AND SPECIALIZATION)		f. PROFESSIONAL TRAINING - REGISTRATIONS Registered Land Surveyor #16908, State of Arizona Professional Engineer #14854, State of Arizona	
g. OTHER PROFESSIONAL QUALIFICATIONS (Organizations, Awards, etc.) Member, Environmental Advisory Council Member, Tucson Metropolitan Chamber of Commerce Member, Northern Pima County Chamber of Commerce			

H. RELEVANT PROJECTS

1.	(1) TITLE AND LOCATION (City and State) ROMP Water and Energy Sustainability Center; Tucson, Arizona	(2) YEAR COMPLETED	
		Professional Services 2010	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Stantec is providing site civil, hydrology, traffic, landscape, electric site lighting, onsite and offsite utilities for water and sewer, and paving for the Pima County Regional Wastewater Reclamation Department Water and Energy Sustainability Center six-acre parcel.	<input checked="" type="checkbox"/> Check if project performed with current firm	
2.	(1) TITLE AND LOCATION (City and State) Ajo Customs and Border Protection Housing; Ajo, Arizona	(2) YEAR COMPLETED	
		Professional Services 2011	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Project Manager responsible for the Stantec team which provided survey, land development engineering, concept planning, hydrology, landscaping, irrigation, mechanical/electrical, and LEED planning for the 35% design bridging documents and specifications for a new US Customs and Border Protection home development on an 11-acre site in Ajo, Arizona.	<input checked="" type="checkbox"/> Check if project performed with current firm	
3.	(1) TITLE AND LOCATION (City and State) Rancho Sahuarita; Sahuarita, Arizona	(2) YEAR COMPLETED	
		Professional Services	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Topographic survey, boundary survey, ALTA survey, and hydrology constraints report for 2,300-acre mixed-use development.	<input checked="" type="checkbox"/> Check if project performed with current firm	
4.	(1) TITLE AND LOCATION (City and State) Sierra Morado Units 3 and 4 (Civano); Tucson, Arizona	(2) YEAR COMPLETED	
		Professional Services 2008	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Civil engineering, platting and processing, and hydrology, services for this single-family residential development for 306 single family lots comprising 56 acres, into 6 phases.	<input checked="" type="checkbox"/> Check if project performed with current firm	
5.	(1) TITLE AND LOCATION (City and State) Mountain Vail Estates; Tucson, Arizona	(2) YEAR COMPLETED	
		Professional Services 2008	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Civil engineering, platting and processing, hydrology, and construction observation services for this single-family residential development. 501 single family lots comprising 150 acres. Engineering design services included tentative plat final platting, grading, drainage, paving and sewer and water for residential development and main spine roads and adjacent roads, including a neighborhood park of 5 acres.	<input checked="" type="checkbox"/> Check if project performed with current firm	



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

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

a. NAME Tricia Cook, PE	b. ROLE IN THIS CONTRACT Site Civil	c. YEARS EXPERIENCE	
		1. TOTAL 32	2. WITH CURRENT FIRM 14

d. LOCATION (City and State)
Stantec (Phoenix, Arizona)

e. EDUCATION (DEGREE AND SPECIALIZATION) MBA, University of British Columbia, Vancouver, British Columbia, 1991	f. PROFESSIONAL TRAINING - REGISTRATIONS Professional Engineer #34417, State of Arizona Professional Engineer #47519, State of Washington
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g. OTHER PROFESSIONAL QUALIFICATIONS (Organizations, Awards, etc.)
 Member, Association of Professional Engineers of Yukon
 Member, Association of Professional Engineers and Geoscientists of British Columbia

H. RELEVANT PROJECTS

	(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
		Professional Services	Construction (if applicable)
1.	Ocotillo Road Water Mains; Gilbert, Arizona	2008	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Part of the team for designing the alignment of waterlines to match existing stub-outs and ensuring proper pipe alignment to avoid conflicts when future road reconstruction occurs. Other tasks include coordination with local utilities, obtaining permits and temporary easements in advance, and quality review.	<input checked="" type="checkbox"/>	Check if project performed with current firm
2.	Central Arizona Project Pipeline to San Tan Vista Water Treatment Plant; Gilbert, Arizona	2006 - 2008	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Design-build project for approximately 14 miles of 48-inch raw water pipeline connecting the CAP Canal with about 200 feet of elevation drop to the Town of Gilbert South Water Treatment Plant.	<input checked="" type="checkbox"/>	Check if project performed with current firm
3.	Luke Air Force Base On-Call Engineering Services (Wastewater, Water, Stormwater, Planning); Glendale, Arizona	1998 - Ongoing	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Tricia has provided design services for Luke AFB since 1988 through on-call contracts. Projects have included Luke AFB Sewer Study, Luke AFB Water Study, Luke AFB 400 and 900 Area Chill Facilities Design, and Luke AFB Water Storage Tank and Arsenic Treatment System.	<input checked="" type="checkbox"/>	Check if project performed with current firm
4.	ADOT Meteor Crater Rest Area Wastewater Collection and Disposal System; Meteor Crater, Arizona	2008 - 2009	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Tricia was the lead designer for a new on-site wastewater collection and disposal system serving the Meteor Crater Rest Area, including permitting through ADEQ.	<input checked="" type="checkbox"/>	Check if project performed with current firm
5.	Central Phoenix/East Valley Light Rail Transit Project - Line Section 3; Phoenix, Arizona	2002	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Managed the design for relocated water, sanitary sewer, and storm mains to avoid conflicts with new track and roadway improvements. The Light Rail Transit, Line Segment 3 project, covers approximately 8 miles through the downtown core of Phoenix, from McDowell Rd., down Central Ave. and 1st Ave. along Washington St. and Jefferson St. to 27th St.	<input checked="" type="checkbox"/>	Check if project performed with current firm



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

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

a. NAME Bill Ferris, Jr., PE		b. ROLE IN THIS CONTRACT Transportation		c. YEARS EXPERIENCE	
				1. TOTAL 27	2. WITH CURRENT FIRM 26
d. LOCATION (City and State) Stantec (Phoenix, Arizona)					
e. EDUCATION (DEGREE AND SPECIALIZATION) BS, Civil and Environmental Engineering, Clarkson University, Potsdam, New York, 1988			f. PROFESSIONAL TRAINING - REGISTRATIONS Professional Engineer #43292, State of Arizona		
g. OTHER PROFESSIONAL QUALIFICATIONS (Organizations, Awards, etc.) Member, American Society of Civil Engineers 2010 GSA Design Excellence Award, Mariposa LPOE 2009 Roads & Bridges Magazine – Top 10 Roads, #8 Nationally I86/US 15 System Interchange					

H. RELEVANT PROJECTS

	(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
		Professional Services	Construction (if applicable)
1.	Central Mesa LRT Extension; Mesa, Arizona	2012 - Ongoing	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Principal-in-Charge for this 3.2-mile LRT extension through the city of Mesa's downtown central business district, Stantec's services include survey, roadway, trackway, drainage, overhead contact system (OCS), rail signals, communications, and systems integration.	<input checked="" type="checkbox"/> Check if project performed with current firm	
2.	Arizona-Sonora Border Master Plan; San Luis to Douglas, Arizona	2012 - 2013	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Project Manager for this comprehensive study, funded by FHWA, focused on developing and implementing a plan to identify, prioritize and promote Land Port of Entry and multi-modal transportation infrastructure projects in close proximity to the border that improve cross border travel efficiencies.	<input checked="" type="checkbox"/> Check if project performed with current firm	
3.	ADOT Truck Weigh and Credential Processing Facility – Mariposa Land Port of Entry; Nogales, Arizona	2011	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Served as Principal-in-Charge for the design of a new Truck Weigh and Credential Processing Facility for ADOT adjacent to the Mariposa Land Port of Entry.	<input checked="" type="checkbox"/> Check if project performed with current firm	
4.	SR 189 - International Border to MP 1.0; Nogales, Arizona	2010	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Principal-in-Charge for this small, but intensely complicated project that required intricate geometric alignments, detailed grading due to the need to keep all improvements within the existing ROW, traffic signals (2), and drainage.	<input checked="" type="checkbox"/> Check if project performed with current firm	
5.	Expansion and Modernization of the Mariposa Land Port of Entry; Nogales, Arizona	2007 - 2009	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Managed multidisciplinary team to completely redesign the extremely constrained site. Responsible for survey, site civil, utility, traffic, drainage, land acquisition mapping, building information modeling, communication systems, and transportation design for the demolition of the existing facilities (43-acre site) and expansion (12.6 acres) necessary to accommodate the growth in cross border traffic.	<input checked="" type="checkbox"/> Check if project performed with current firm	



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

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

a. NAME Douglas Moseke, PE	b. ROLE IN THIS CONTRACT Transportation	c. YEARS EXPERIENCE	
		1. TOTAL 19	2. WITH CURRENT FIRM 19
d. LOCATION (City and State) Stantec (Tucson, Arizona)			
e. EDUCATION (DEGREE AND SPECIALIZATION) BS, Civil Engineering, University of Arizona, Tucson, Arizona, 1994		f. PROFESSIONAL TRAINING - REGISTRATIONS Professional Engineer #34006, State of Arizona	
g. OTHER PROFESSIONAL QUALIFICATIONS (Organizations, Awards, etc.) Member, Women's Transportation Seminar Member, American Society of Civil Engineers			

H. RELEVANT PROJECTS

	(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
		Professional Services	Construction (if applicable)
1.	Santa Cruz Shared Use Path; Marana, Arizona	2012	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Mr. Moseke managed the design of 3,400 feet of Shared Use Path from Cortaro Road north along the west side of the Santa Cruz River. This project was completed as part of a Town of Marana On-Call Contract.	<input checked="" type="checkbox"/>	Check if project performed with current firm
2.	Golf Links and Kolb Intersection Design; Tucson, Arizona	2012	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Mr. Moseke's responsibilities include overseeing the preparation of construction documents for the ultimate widening of the intersection. The project entails adding additional travel lanes, turn lanes, bus bays, and bicycle lanes on all quadrants of the intersection. The project includes new traffic signals, storm drain, raised medians, street lighting, sidewalks, retaining walls, and improvements to existing parking lots on the corners of the intersection.	<input checked="" type="checkbox"/>	Check if project performed with current firm
3.	Downtown Tucson Infrastructure Improvements; Tucson, Arizona	2008 - 2012	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Mr. Moseke oversaw the preparation of construction drawings for roadway, streetscape, utility, and signal and lighting plans in downtown Tucson in preparation for the modern streetcar. He participated in public presentations to both residents in the area as well as council members.	<input checked="" type="checkbox"/>	Check if project performed with current firm
4.	Scott Avenue Streetscape Improvements - Broadway Boulevard to 14th Street; Tucson, Arizona	2009	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Mr. Moseke was responsible for plan production on this exciting project in downtown Tucson. The Scott Avenue Streetscape project narrowed the existing roadway to provide a more pedestrian friendly environment as you enter into the Tucson Arts District.	<input checked="" type="checkbox"/>	Check if project performed with current firm
5.	96th Street - Shea Boulevard to Thunderbird Road; Scottsdale, Arizona	2003 - 2006	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Mr. Moseke managed a multi-disciplined design team responsible for preparing final construction documents for almost two miles of road. Roadway improvements included lane shifts and two roundabouts to assist in traffic calming. The project also included multi-modal design. Multi-use Paths, Multi-use trails and bike lanes were included in the design. Intersection Improvements included widening to three through lanes in each direction, dual left turn lanes, designated right turn lanes and bus bays.	<input checked="" type="checkbox"/>	Check if project performed with current firm



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

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

a. NAME Sheina Hughes, PE	b. ROLE IN THIS CONTRACT Transportation	c. YEARS EXPERIENCE	
		1. TOTAL 29	2. WITH CURRENT FIRM 17
d. LOCATION <i>(City and State)</i> Stantec (Phoenix, Arizona)			
e. EDUCATION <i>(DEGREE AND SPECIALIZATION)</i> BS, Civil Engineering, University Of Alberta, Edmonton, Alberta, 1985		f. PROFESSIONAL TRAINING - REGISTRATIONS Professional Engineer, #4119, Arizona; Professional Engineer, Alberta Canada, M43084	
g. OTHER PROFESSIONAL QUALIFICATIONS <i>(Organizations, Awards, etc.)</i>			

H. RELEVANT PROJECTS

1.	(1) TITLE AND LOCATION <i>(City and State)</i> Quebradas Backcountry Byway Roadway Improvements; San Antonio, New Mexico	(2) YEAR COMPLETED	
		Professional Services 2014	Construction (if applicable)
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Principal in Charge on the development of rural roadway improvements to roadway drainage and gravel roadway surface.	<input checked="" type="checkbox"/> Check if project performed with current firm	
2.	(1) TITLE AND LOCATION <i>(City and State)</i> Porter Park Pathway; Mesa, Arizona	(2) YEAR COMPLETED	
		Professional Services 2014	Construction (if applicable)
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Principal in Charge On the development of design plans for a multi-use pathway that will be used for Safe Routes to School. The pathway is along the SRP easement and includes signalized crossing on a minor arterial.	<input checked="" type="checkbox"/> Check if project performed with current firm	
3.	(1) TITLE AND LOCATION <i>(City and State)</i> South Arizona Avenue Improvements; Chandler, Arizona	(2) YEAR COMPLETED	
		Professional Services 2010	Construction (if applicable)
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE City Engineer – An awarding winning Complete Street Project in Downtown Chandler that accommodated existing stakeholder needs by phasing construction. The improvement narrowed the existing roadway, added wider pedestrian and bicycle facilities.	<input type="checkbox"/> Check if project performed with current firm	
4.	(1) TITLE AND LOCATION <i>(City and State)</i> Intel On-site and Roadway improvements; Chandler Arizona	(2) YEAR COMPLETED	
		Professional Services 2013	Construction (if applicable)
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE City Engineer – Roadway improvements associated with a 6 Billion site expansion that included the phased improvement of the on-site roadway network and connections to the adjacent Arterial roadway network. Including the installation of new and temporary signalized intersections.	<input type="checkbox"/> Check if project performed with current firm	
5.	(1) TITLE AND LOCATION <i>(City and State)</i> Alma School and Ray Road; Chandler Arizona	(2) YEAR COMPLETED	
		Professional Services 2012	Construction (if applicable)
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE City Engineer – Federally funded intersection widening project that included the addition of dual left turn bays and right turn.	<input checked="" type="checkbox"/> Check if project performed with current firm	



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

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

a. NAME Martin Armenta, PE, RCDD, LEED® AP	b. ROLE IN THIS CONTRACT Electrical	c. YEARS EXPERIENCE	
		1. TOTAL 25	2. WITH CURRENT FIRM 11
d. LOCATION <i>(City and State)</i> Stantec (Phoenix, Arizona)			
e. EDUCATION <i>(DEGREE AND SPECIALIZATION)</i> BS, Electrical Engineering, University of Arizona, Tucson, Arizona, 1989		f. PROFESSIONAL TRAINING - REGISTRATIONS Professional Engineer #29346, State of Arizona; Professional Engineer #E16438, State of California; Professional Engineer #15192, State of Nevada	
g. OTHER PROFESSIONAL QUALIFICATIONS <i>(Organizations, Awards, etc.)</i> LEED Accredited Professional, U.S. Green Building Council Member, Building Industry Consulting Service International (BICSI) #06050, Registered Communications Distribution Designer			

H. RELEVANT PROJECTS

	(1) TITLE AND LOCATION <i>(City and State)</i>	(2) YEAR COMPLETED	
		Professional Services	Construction (if applicable)
1.	Luke Air Force Base Buildings 542 and 584; Luke Air Force Base, Arizona	2014	
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Lead electrical engineer in the preparation of 30% complete design documents to be used in an RFP to solicit a design build contractor. The electrical systems addressed were power, grounding, lighting, security and telecommunications. The documents consisted of drawings, specifications, a cost estimate and project narrative.	<input checked="" type="checkbox"/>	Check if project performed with current firm
2.	Roosevelt Irrigation District Pump Station Relocation; Phoenix, Arizona	2014	
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Electrical engineer of record for the pump station relocation project required to accommodate the reconfiguration of 107th Avenue in Phoenix, Arizona. The relocation involved designing a new 12470V and 480V power distribution system and grounding system. It also included a motor control system that implemented reduced voltage motor starters.	<input checked="" type="checkbox"/>	Check if project performed with current firm
3.	City of Mesa Sulfide Control Station Rehabilitation; Mesa, Arizona	2014	
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Electrical engineer of record for the station rehabilitation. The rehabilitation involved partial demolition of the existing system and the addition of new equipment. The new system improvements included increased electrical utility service capacity and changing the motor control method along with other miscellaneous improvements.	<input checked="" type="checkbox"/>	Check if project performed with current firm
4.	I-10 Deck Park Tunnel Inspection; Phoenix, Arizona	2012	
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Electrical engineer of record for the testing and inspection project. The tunnel's power distribution system, motor control system, standby power system and lighting system were tested and inspected. The inspections included infrared thermography of all the power distribution equipment and the examination of the 500 plus light fixtures in the tunnel. All inspections were documented in a report with recommended corrective measures.	<input checked="" type="checkbox"/>	Check if project performed with current firm
5.	Santa Cruz County Landfill Gas to Energy; Santa Cruz County, Arizona	2011	
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Electrical engineer of record for the use of landfill methane gas to power electric generators whose electricity was to be sold back to the utility company. The electrical system involve medium (15kV) and low voltage (480V) power distribution, grounding, lighting, security and power system protection. The project required careful and comprehensive coordination with the electric utility company.	<input checked="" type="checkbox"/>	Check if project performed with current firm



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

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

a. NAME John Theiss, IAEI	b. ROLE IN THIS CONTRACT Electrical	c. YEARS EXPERIENCE	
		1. TOTAL 32	2. WITH CURRENT FIRM 22
d. LOCATION (City and State) Stantec (Tucson, Arizona)			
e. EDUCATION (DEGREE AND SPECIALIZATION) AS, General Studies, Pima Community College, Tucson, Arizona, 1987		f. PROFESSIONAL TRAINING - REGISTRATIONS	
g. OTHER PROFESSIONAL QUALIFICATIONS (Organizations, Awards, etc.) Member, Society of American Military Engineers, Southern Arizona Chapter Member, International Association of Electrical Inspectors			

H. RELEVANT PROJECTS

1.	(1) TITLE AND LOCATION (City and State) James A. Walsh Federal Courthouse Energy Audit; Tucson, Arizona	(2) YEAR COMPLETED
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Project Manager for the analysis of the existing energy consumption of the building and to identify possible modifications that would enable the building to use less energy.	Professional Services 2009 - 2010 <input checked="" type="checkbox"/> Check if project performed with current firm
2.	(1) TITLE AND LOCATION (City and State) City of Scottsdale Energy Analysis; Scottsdale, Arizona	(2) YEAR COMPLETED
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Energy audits for 29 City owned buildings totaling 912,500 square feet. The audit will identify the energy conservation potential, catalogue existing energy performance and end-uses (baseline conditions), and generate a list of Energy Conservation Measures (ECM) that can be implemented. A description of the work, opinion of probable costs, annual energy saving potential per system, and expected economic return in the aforementioned report will be documented for each ECM.	Professional Services 2010 - 2011 <input checked="" type="checkbox"/> Check if project performed with current firm
3.	(1) TITLE AND LOCATION (City and State) Expansion and Modernization of the Mariposa Land Port of Entry; Nogales, Arizona	(2) YEAR COMPLETED
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Responsible for electrical engineering for the demolition of the existing facilities (43-acre site) and expansion (12.6 acres) necessary to accommodate the growth in cross border traffic.	Professional Services 2009 - Ongoing <input checked="" type="checkbox"/> Check if project performed with current firm
4.	(1) TITLE AND LOCATION (City and State) University of Arizona 6th Street Residence Halls; Tucson, Arizona	(2) YEAR COMPLETED
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE John provided utility and electrical design on this new residence hall with 1,000 beds. The facility is certified LEED Platinum.	Professional Services 2009 - 2011 <input checked="" type="checkbox"/> Check if project performed with current firm
5.	(1) TITLE AND LOCATION (City and State) Tucson International Airport: Terminal Expansion; Tucson, Arizona	(2) YEAR COMPLETED
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Provided construction administration services for the mechanical, electrical, and civil engineering tasks for this 60,000 sf expansion. Mr. Theiss was the architect's and TAA's single point of contact for the civil, mechanical, plumbing, and electrical engineering portions of this \$50 million dollar project.	Professional Services 2002 - 2005 <input checked="" type="checkbox"/> Check if project performed with current firm



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

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

a. NAME Patrick McKenna, PE, LEED® AP		b. ROLE IN THIS CONTRACT Mechanical		c. YEARS EXPERIENCE	
		1. TOTAL 15	2. WITH CURRENT FIRM 5		
d. LOCATION (City and State) Stantec (Tucson, Arizona)					
e. EDUCATION (DEGREE AND SPECIALIZATION) BS, Architectural Engineering, Wentworth Institute of Technology, Boston, Massachusetts, 1999			f. PROFESSIONAL TRAINING - REGISTRATIONS Professional Engineer #45696, State of Arizona; Professional Engineer #21129, State of Nevada; Professional Engineer #20115, State of New Mexico		
g. OTHER PROFESSIONAL QUALIFICATIONS (Organizations, Awards, etc.) Member, American Society of Heating, Refrigerating & Air-Conditioning Engineers LEED Accredited Professional, U.S. Green Building Council Member, Society of American Military Engineers, Southern Arizona Chapter					
H. RELEVANT PROJECTS					
1.	(1) TITLE AND LOCATION (City and State) Laughlin/Bullhead International Airport: Baggage Claim Enclosure; Bullhead City, Arizona		(2) YEAR COMPLETED		
			Professional Services 2009 - 2010	Construction (if applicable)	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Mechanical and plumbing design services for a 3,700 SF baggage claim expansion for the existing terminal building. The mechanical system consisted of split-system air handling units. There were also modifications to the existing mechanical and plumbing systems to accommodate the expansion.		<input checked="" type="checkbox"/> Check if project performed with current firm		
2.	(1) TITLE AND LOCATION (City and State) City of Scottsdale Energy Analysis; Scottsdale, Arizona		(2) YEAR COMPLETED		
			Professional Services 2010 - 2011	Construction (if applicable)	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Energy audits for 29 City owned buildings totaling 912,500 square feet. The audit will identify the energy conservation potential, catalogue existing energy performance and end-uses (baseline conditions), and generate a list of Energy Conservation Measures (ECM) that can be implemented. A description of the work, opinion of probable costs, annual energy saving potential per system, and expected economic return in the aforementioned report will be documented for each ECM.		<input checked="" type="checkbox"/> Check if project performed with current firm		
3.	(1) TITLE AND LOCATION (City and State) Pedestrian Expansion – San Luis I Land Port of Entry; San Luis, Arizona		(2) YEAR COMPLETED		
			Professional Services 2013 - 2014	Construction (if applicable)	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Mechanical and plumbing design services for expansion of existing pedestrian crossing at the San Luis I Land Port of Entry. The pedestrian crossing was expanded from 3,000 SF to 6,000 SF to support CBP mission. The quantity of people using the facility has increased steadily and the existing facility was inadequate to process the volume.		<input checked="" type="checkbox"/> Check if project performed with current firm		
4.	(1) TITLE AND LOCATION (City and State) SR 189 Pedestrian Undercrossing; Nogales, Arizona		(2) YEAR COMPLETED		
			Professional Services 2014	Construction (if applicable)	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Mechanical design services for a new 3,500 SF pedestrian undercrossing at the Mariposa Port of Entry. The pedestrian undercrossing will allow for pedestrians to walk safely below the busy port of entry. Currently pedestrians have to walk on the roadway surface and negotiate vehicular traffic.		<input checked="" type="checkbox"/> Check if project performed with current firm		
5.	(1) TITLE AND LOCATION (City and State) I-10 Deck Park Tunnel Inspection; Phoenix, Arizona		(2) YEAR COMPLETED		
			Professional Services 2012	Construction (if applicable)	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Inspection services for the highway tunnel running through downtown Phoenix, which serves over 260,000 vehicles per day. The items inspected included the tunnel ventilation system (eight 400 HP fans), carbon monoxide sensors, and fire protection piping and hydrants. The inspection identified the current condition of the equipment, as well as deficiencies that required immediate attention.		<input checked="" type="checkbox"/> Check if project performed with current firm		



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

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

a. NAME Bert Stone, CBO	b. ROLE IN THIS CONTRACT Plan Review/Code Compliance	c. YEARS EXPERIENCE	
		1. TOTAL 26	2. WITH CURRENT FIRM 8
d. LOCATION (City and State) Stantec (Phoenix, Arizona)			
e. EDUCATION (DEGREE AND SPECIALIZATION) AS, Building Technology, Chemeketa Community College, Salem, Oregon, 1988		f. PROFESSIONAL TRAINING - REGISTRATIONS Certified Building Official, International Code Council Certified, Arizona Building Officials	
g. OTHER PROFESSIONAL QUALIFICATIONS (Organizations, Awards, etc.) Residential Mechanical Inspector, International Code Council; Residential Plumbing Inspector, International Code Council; Residential Building Inspector, International Code Council; Residential Electrical Inspector, International Code Council			

H. RELEVANT PROJECTS

1.	(1) TITLE AND LOCATION (City and State) Arizona State University Business School Facility; Tempe, Arizona	(2) YEAR COMPLETED	
		Professional Services 2012	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Performed building, mechanical, plumbing, and electrical plan review management for a four-story, 129,245 square foot business school facility. Worked with architects, engineers and stockholders to resolve County adopted code issues to assure completion of the project without major delays.	<input checked="" type="checkbox"/> Check if project performed with current firm	
2.	(1) TITLE AND LOCATION (City and State) Banner Canyon Springs Medical Center; Gilbert, Arizona	(2) YEAR COMPLETED	
		Professional Services 2012 - 2013	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Performed building, mechanical, plumbing plan reviews for an Outpatient Medical Center located in Gilbert, Arizona. Worked with architects, engineers and City staff to assure code compliance with City adopted codes.	<input checked="" type="checkbox"/> Check if project performed with current firm	
3.	(1) TITLE AND LOCATION (City and State) Phoenix Premium Outlets; Chandler, Arizona	(2) YEAR COMPLETED	
		Professional Services 2013	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Performed building, mechanical, and plumbing plan reviews for a \$290-million Mall Complex on the Gila River Indian Community property located in Chandler, Arizona. The project consisted of 9-major buildings and over 100 tenant space for a total square footage of 425,422.	<input checked="" type="checkbox"/> Check if project performed with current firm	
4.	(1) TITLE AND LOCATION (City and State) Red Rock Correctional Center; Eloy, Arizona	(2) YEAR COMPLETED	
		Professional Services 2012 - 2013	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Performed building, mechanical, plumbing, and electrical plan review management for new additions and tenant improvements to the existing correctional facility. Worked closely with architects, engineer, contractor and owner for code compliance and constructability.	<input checked="" type="checkbox"/> Check if project performed with current firm	
5.	(1) TITLE AND LOCATION (City and State) Maricopa County Sheriff Headquarters Building; Phoenix, Arizona	(2) YEAR COMPLETED	
		Professional Services 2012 - 2013	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Performed building, mechanical, plumbing, and electrical plan review management for new 5-story sheriff headquarters facility with holding cells, offices and 911 center. The total project valuation was \$45-million. Worked closely with all contacts for code compliance and constructability.	<input checked="" type="checkbox"/> Check if project performed with current firm	



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

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

a. NAME Theresa Jones	b. ROLE IN THIS CONTRACT Environmental	c. YEARS EXPERIENCE	
		1. TOTAL 22	2. WITH CURRENT FIRM 9
d. LOCATION (City and State) Stantec (Phoenix, Arizona)			
e. EDUCATION (DEGREE AND SPECIALIZATION) BS, Geology; Minor, Environmental Science, James Madison University, Harrisonburg, Virginia, 1992		f. PROFESSIONAL TRAINING - REGISTRATIONS	
g. OTHER PROFESSIONAL QUALIFICATIONS (Organizations, Awards, etc.)			

H. RELEVANT PROJECTS

1.	(1) TITLE AND LOCATION (City and State) Salt River Pima-Maricopa Indian Community Fueling Facility; Scottsdale, Arizona	(2) YEAR COMPLETED	
		Professional Services 2005	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Responsible for planning, managing, and implementing UST system removal, subsequent site characterization assessments, and remedial actions.	<input checked="" type="checkbox"/>	Check if project performed with current firm
2.	(1) TITLE AND LOCATION (City and State) Aquifer Protection Permitting for Drywells at Petroleum Bulk Storage Terminal; Phoenix, Arizona	(2) YEAR COMPLETED	
		Professional Services 2005 - 2008	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Prepared and secured Aquifer Protection Permits (APP) and directed cleanout when necessary for existing drywells at active petroleum bulk storage terminal. Planned and implemented a subsurface assessment in the vicinity of each dry well to determine whether historical activities associated with the drywells had resulted in impact.	<input checked="" type="checkbox"/>	Check if project performed with current firm
3.	(1) TITLE AND LOCATION (City and State) Soil Vapor Extraction/Air Sparge Remediation Associated With Gasoline Release; Phoenix, Arizona	(2) YEAR COMPLETED	
		Professional Services 2007 - 2014	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Managed and prepared feasibility studies, corrective action plans, remedial system design and permitting, bid preparation, operation and maintenance activities, and prepared supporting documentation and reports to secure leaking underground storage tank (LUST) closure.	<input checked="" type="checkbox"/>	Check if project performed with current firm
4.	(1) TITLE AND LOCATION (City and State) Light Industrial/Commercial Facilities; Phoenix, Arizona	(2) YEAR COMPLETED	
		Professional Services 2001 - 2005	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Conducted Phase I and Phase II ESAs in the Phoenix area. Primary sites include former contracting facilities, residential facilities, retail gasoline facilities, and vacant properties pending development.	<input type="checkbox"/>	Check if project performed with current firm
5.	(1) TITLE AND LOCATION (City and State) Arizona Underground Storage Tank Portfolio Management; Various, Arizona	(2) YEAR COMPLETED	
		Professional Services 2005 - 2014	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Responsible for management of statewide portfolios including retail gasoline-dispensing facilities. Projects include UST system upgrades, replacements, and closures; immediate response; release reporting; site characterizations; feasibility testing; remediation system installation, construction management, remedial system operation-and-maintenance (O&M); risk analysis; and hazardous and non-hazardous waste disposal	<input checked="" type="checkbox"/>	Check if project performed with current firm



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

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

a. NAME Bob Larkin, RPA, AICP	b. ROLE IN THIS CONTRACT Environmental	c. YEARS EXPERIENCE	
		1. TOTAL 41	2. WITH CURRENT FIRM 21

d. LOCATION (City and State)
Stantec (Phoenix, Arizona)

e. EDUCATION (DEGREE AND SPECIALIZATION) MA, Archaeology, Anthropology, Arizona State University, Tempe, Arizona, 1988; MS, Environmental Planning, University of Arizona, Tucson, Arizona, 1977	f. PROFESSIONAL TRAINING - REGISTRATIONS Certified Planner #100913, American Institute of Certified Planners; Registered Professional Archaeologist #11302, Register of Professional Archaeologists
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g. OTHER PROFESSIONAL QUALIFICATIONS (Organizations, Awards, etc.)
 Member, American Institute of Certified Planners
 Member, Arizona Historical Advisory Commission
 Member, Arizona Archaeological Council

H. RELEVANT PROJECTS

1.	(1) TITLE AND LOCATION (City and State) El Rio Watercourse Master Plan and Area Drainage Master Plan; Maricopa County, Arizona	(2) YEAR COMPLETED	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Oversaw the internal Stantec environmental efforts for the El Rio Watercourse Master Plan (an effort to investigate the feasibility of restoring portions of a 17-mile reach of the Gila River.	Professional Services 2005	Construction (if applicable)
		<input checked="" type="checkbox"/> Check if project performed with current firm	

2.	(1) TITLE AND LOCATION (City and State) East-West Corridor Project; Bullhead City, Arizona	(2) YEAR COMPLETED	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Prepared the jurisdictional delineation, Section 404 permit application, archaeology report, managed the biology report preparation, and coordinated the project with the US Army Corps of Engineers and the Bureau of Land Management for compensatory mitigation.	Professional Services 2006	Construction (if applicable)
		<input checked="" type="checkbox"/> Check if project performed with current firm	

3.	(1) TITLE AND LOCATION (City and State) Ocotillo Road Water Mains; Gilbert, Arizona	(2) YEAR COMPLETED	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Prepared the Section 404 application for the proposed construction of four miles of 36" water main extending from Gilbert Road to Higley Road.	Professional Services 2008	Construction (if applicable)
		<input checked="" type="checkbox"/> Check if project performed with current firm	

4.	(1) TITLE AND LOCATION (City and State) B&C Colonia Environmental Assessment; Yuma, Arizona	(2) YEAR COMPLETED	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Oversaw the Environmental Assessment (EA) for B&C Colonia in Yuma, Arizona. The EA will describe the impacts of three viable alternatives for providing wastewater service to 838 house lots that currently rely on septic tanks and outhouses.	Professional Services 2006	Construction (if applicable)
		<input checked="" type="checkbox"/> Check if project performed with current firm	

5.	(1) TITLE AND LOCATION (City and State) Tempe Town Lake New Rubber Dam; Tempe, Arizona	(2) YEAR COMPLETED	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Coordinated the project with the Corps of Engineers and with ADEQ, communicated with both agencies, and drafted the project description letters to both agencies for Tempe's signature. The rubber dam replacement was therefore allowed to occur under the existing Section 404 and 401 permits.	Professional Services 2010	Construction (if applicable)
		<input checked="" type="checkbox"/> Check if project performed with current firm	



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

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

a. NAME Kim Marsh	b. ROLE IN THIS CONTRACT Environmental	c. YEARS EXPERIENCE	
		1. TOTAL 22	2. WITH CURRENT FIRM 2
d. LOCATION <i>(City and State)</i> Stantec (Phoenix, Arizona)			
e. EDUCATION <i>(DEGREE AND SPECIALIZATION)</i> MS, Geology, Northern Arizona University, Flagstaff, Arizona, 1996		f. PROFESSIONAL TRAINING - REGISTRATIONS Geologist-In-Training #07965, State of Arizona	
g. OTHER PROFESSIONAL QUALIFICATIONS <i>(Organizations, Awards, etc.)</i>			

H. RELEVANT PROJECTS

1.	(1) TITLE AND LOCATION <i>(City and State)</i> Arizona Underground Storage Tank Portfolio Management; Arizona	(2) YEAR COMPLETED	
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Responsible for planning and managing soil and groundwater assessment and remediation for the statewide portfolio. Project activities include client maintenance, budget development and management, regulatory reporting, selection of remedial technologies, soil vapor assessments, implementation of site remediation, evaluation of remediation system performance, and coordination of water disposal. Remedial technologies used include air sparging, soil vapor extraction, sulfate addition, surfactant injection/extraction, and monitored natural attenuation.	Professional Services 2013-ongoing	Construction (if applicable)
<input checked="" type="checkbox"/>		Check if project performed with current firm	
2.	(1) TITLE AND LOCATION <i>(City and State)</i> Leaking Underground Storage Tank (LUST) Projects	(2) YEAR COMPLETED	
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Responsible for client maintenance and project management of ongoing soil and remediation occurring at three LUST sites. Project activities include scheduling and coordination of remedial system operation-and-maintenance, risk analysis, and groundwater monitoring and sampling. Responsible for budget development and management, regulatory reporting, selection of remedial technologies, implementation of site remediation, and evaluation of remedial system performance.	Professional Services 2013-ongoing	Construction (if applicable)
<input checked="" type="checkbox"/>		Check if project performed with current firm	
3.	(1) TITLE AND LOCATION <i>(City and State)</i> State Assurance Fund (SAF) Underground Storage Tank (UST) Assurance Account	(2) YEAR COMPLETED	
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Ms. Marsh was responsible for management of the SAF claim and fiscal unit at the ADEQ. Management activities included supervising program staff responsible for the evaluation of applicant eligible and verification of application completeness, evaluation and assessment of the reasonableness of project costs and verification of payments accuracy, assurance that the SAF claims processing occurred within the required statutory deadline, and verification of financial calculations regarding SAF claim payments and resolution of any issues.	Professional Services 2001-2007	Construction (if applicable)
<input type="checkbox"/>		Check if project performed with current firm	
4.	(1) TITLE AND LOCATION <i>(City and State)</i> State UIC Class II and Production Well Requirements vs. Federal UIC and Diesel Fuel Hydraulic Fracturing Guidance Requirements	(2) YEAR COMPLETED	
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Responsible for review and comparison of various state UIC and oil and gas regulations, including existing hydraulic fracturing provisions, to the federal UIC requirements and EPA's Diesel Fuel Hydraulic Fracturing (DFHF) guidance. Project activities involved the correlation of the state regulations to various analysis questions covering a range of topics that included: application and permitting, public notice, disclosure, well construction, monitoring and well closure requirements; state protected resources; and public statements made regarding DFHF.	Professional Services 2010-2012	Construction (if applicable)
<input type="checkbox"/>		Check if project performed with current firm	
5.	(1) TITLE AND LOCATION <i>(City and State)</i> Literature Review on Hydraulic Fracturing	(2) YEAR COMPLETED	
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Responsible for conducting a hydraulic fracturing literature review for the USEPA Office of Research and Development as part of a study plan on hydraulic fracturing and drinking water resources in the context of shale (unconventional) gas operations. Project activities included research and a written summary of information regarding water management, management of risks, management of fluids post-fracturing, and potential contaminants and exposure pathways.	Professional Services 2010-2012	Construction (if applicable)
<input type="checkbox"/>		Check if project performed with current firm	



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

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

a. NAME Louis Thanukos, PhD	b. ROLE IN THIS CONTRACT Environmental	c. YEARS EXPERIENCE	
		1. TOTAL 41	2. WITH CURRENT FIRM 41

d. LOCATION (City and State)
 Stantec (Tempe - Elna Rae, Arizona)

e. EDUCATION (DEGREE AND SPECIALIZATION) Ph.D., Physics, Arizona State University, Tempe, Arizona, 1974	f. PROFESSIONAL TRAINING - REGISTRATIONS
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g. OTHER PROFESSIONAL QUALIFICATIONS (Organizations, Awards, etc.)
 Thanukos, L. C., T. Miller, C. V. Mathai, D. Reinholdt, and J. Bennett 1992. *Intercomparison of PM10 Samplers and Source Apportionment of Ambient PM10 Concentrations in the Rillito, Arizona Group I Area*. International Specialty Conference on PM10 Standards and Nontraditional Particulate Source Controls. AWMA/EPA Conference, January 12-15, Scottsdale, Arizona.

H. RELEVANT PROJECTS

1.	(1) TITLE AND LOCATION (City and State) Abengoa Solar: Solana Generating Station - Application for First Non-Title V Air Permit; Gila Bend, Arizona	(2) YEAR COMPLETED	
		Professional Services 2012-2013	Construction (if applicable)

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE
 Check if project performed with current firm
 Abengoa Solar planned to build, operate, and maintain a 250 MW concentrating solar power (CSP) electrical generating plant, Solana Generating Station (Solana) near Gila Bend, Arizona. The innovative nature of Abengoa Solar's CSP and thermal energy storage technology required updates to the design of the facility as new information from research and pilot plants was obtained. Dr. Thanukos managed all of the personnel and resources for first non-Title V air permit for the site and subsequent revision, based on new information.

2.	(1) TITLE AND LOCATION (City and State) Nucor Corporation, Nucor Steel, Norfolk Nebraska Preparation of a PSD Application; Norfolk, Nebraska	(2) YEAR COMPLETED	
		Professional Services 2012-2013	Construction (if applicable)

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE
 Check if project performed with current firm
 Nucor manufactures high quality steel by recycling scrap metal via a twin-shell electric arc furnace. In support of Nucor's PSD application to increase production, Dr. Thanukos managed all of the personnel and resources for preparation of the PSD Application, including discussions with the Nebraska Department of Environmental Quality to ensure agreement with the methodology.

3.	(1) TITLE AND LOCATION (City and State) Freeport-McMoRan Morenci Inc. Preparation of a Title V Renewal Application; Morenci, Arizona	(2) YEAR COMPLETED	
		Professional Services 2012-2013	Construction (if applicable)

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE
 Check if project performed with current firm
 The Freeport-McMoRan Morenci copper mine, considered the largest copper mine in the U.S., operates under a Title V Air Quality Permit. The facility is a non-categorical source with a PSD combined cycle power plant and minor PSD boiler operations embedded within the source. Managed all of the personnel and resources for preparation of the Title V Air Permit Renewal Application. Preparation of the application included collaboration with the client to incorporate alternate operating scenarios for operational flexibility.

4.	(1) TITLE AND LOCATION (City and State) Rosemont Copper Project Preparation of a Class II Air Quality Permit Application; Tucson, Arizona	(2) YEAR COMPLETED	
		Professional Services 2012-2013	Construction (if applicable)

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE
 Check if project performed with current firm
 Rosemont Copper Company plans to develop an open pit copper mine and processing operation 30 miles southeast of Tucson, Arizona. The Arizona Department of Environmental Quality (ADEQ) issued an air quality permit for this facility in January 2013. Dr. Thanukos managed all of the personnel and resources for the preparation of the air quality permit application.

5.	(1) TITLE AND LOCATION (City and State) Freeport-McMoRan Bagdad Inc. Preparation of a Significant Permit Revision Application; Bagdad, Arizona	(2) YEAR COMPLETED	
		Professional Services 2012-2013	Construction (if applicable)

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE
 Check if project performed with current firm
 Freeport-McMoRan Bagdad Inc. planned to add an additional operating scenario to its air quality permit in order to increase sulfide ore processing. Dr. Thanukos managed all personnel and resources for preparation of the Significant Permit Review that was submitted to the ADEQ.



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

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

a. NAME Mannie Carpenter, PE	b. ROLE IN THIS CONTRACT Environmental	c. YEARS EXPERIENCE	
		1. TOTAL 36	2. WITH CURRENT FIRM 6

d. LOCATION (City and State)
 Stantec (Tempe - Elna Rae, Arizona)

e. EDUCATION (DEGREE AND SPECIALIZATION) B.S., Nuclear Engineering, University of Arizona, Tucson, Arizona, 1979	f. PROFESSIONAL TRAINING - REGISTRATIONS Professional Engineer (Environmental) #40264, Arizona
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g. OTHER PROFESSIONAL QUALIFICATIONS (Organizations, Awards, etc.)
 Carpenter, M. L., and J. Nockleby. 2012. *In-Stack Measurements of NO2 Partitions from Various Combustion Sources*. Presented at 2012 Gatekeeper Regulatory Roundup Conference, April 2-3, Scottsdale, Arizona.

H. RELEVANT PROJECTS

	(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
		Professional Services	Construction (if applicable)
1.	Apache Nitrogen ; Benson, Arizona	Ongoing	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Mr. Carpenter oversaw the performance testing of multiple air emissions sources and control equipment.	<input checked="" type="checkbox"/>	Check if project performed with current firm
2.	Intel, Semi- Conductor Manufacturing Facility ; Chandler, Arizona	Ongoing	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Mr. Carpenter oversaw the performance testing of acid scrubbers and thermal oxidizers. He also prepared the test reports.	<input checked="" type="checkbox"/>	Check if project performed with current firm
3.	Freeport-McMoRan ; Bagdad, Arizona	2013	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Mr. Carpenter oversaw the engineering testing of acid emissions from facility equipment.	<input checked="" type="checkbox"/>	Check if project performed with current firm
4.	HEXCEL ; Casa Grande, Arizona	Ongoing	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Mr. Carpenter oversaw the emission testing of 3 thermal oxidizers. He also prepared the test reports.	<input checked="" type="checkbox"/>	Check if project performed with current firm
5.	Confidential Copper Mine ; Tucson, Arizona	2013	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Mr. Carpenter oversaw the engineering testing of acid emissions from facility equipment.	<input checked="" type="checkbox"/>	Check if project performed with current firm



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

STATE PROCUREMENT OFFICE
Department of Administration
100 North 15th Avenue, Suite 101
Phoenix, Arizona 85007

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

a. NAME Marty Minter, PG, RG, CRS, CEM	b. ROLE IN THIS CONTRACT Environmental	c. YEARS EXPERIENCE	
		1. TOTAL 25	2. WITH CURRENT FIRM 3

d. LOCATION (City and State)
 Stantec (Tempe - Elna Rae, Arizona)

e. EDUCATION (DEGREE AND SPECIALIZATION) MS, Environmental Management, Arizona State University, Tempe, Arizona, 2003	f. PROFESSIONAL TRAINING - REGISTRATIONS Registered Geologist #31663 (AZ); Certified Remediation Specialist #35824 (AZ), Professional Geologist #8764 (CA), #664-13 (WI), Certified Environmental Manager #2293 (NV)
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g. OTHER PROFESSIONAL QUALIFICATIONS (Organizations, Awards, etc.)
 Certification in Geographic Information Systems (Penn State University); 40-Hour HAZWOPER and recent 8-Hour Refresher Training MSHA training; DOT HM-181 Hazmat Course; RCRA Hazardous Waste Generator Training
 Vice President, Environmental Professionals of Arizona

H. RELEVANT PROJECTS

1.	(1) TITLE AND LOCATION (City and State) NORD Resources, Johnson Camp Mine; Dagoon, Arizona	(2) YEAR COMPLETED	
		Professional Services 2013	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Mr. Minter evaluated the aquifer protection permit needs for NORD's Johnson Camp Mine, including an evaluation of the geologic and hydrogeologic conditions for the Dagoon area. Mr. Minter created a geodatabase for the site, as part of developing the Site Conceptual Model.	<input checked="" type="checkbox"/> Check if project performed with current firm	
2.	(1) TITLE AND LOCATION (City and State) City of Mesa, Various Electrical Substation Properties; Mesa, Arizona	(2) YEAR COMPLETED	
		Professional Services 2013	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Mr. Minter oversaw the Phase II ESA sampling activities and reporting for 5 electrical substation properties and the preparation of Phase II ESA reports.	<input checked="" type="checkbox"/> Check if project performed with current firm	
3.	(1) TITLE AND LOCATION (City and State) Chevron Environmental Management Company	(2) YEAR COMPLETED	
		Professional Services 2014	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Managed corrective action activities (monitoring, reporting, and agency interface) for 4 projects throughout Arizona.	<input checked="" type="checkbox"/> Check if project performed with current firm	
4.	(1) TITLE AND LOCATION (City and State) Hexcel; Casa Grande, Arizona	(2) YEAR COMPLETED	
		Professional Services 2014	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Revised the Stormwater Pollution Prevention Plan (SWPPP) and Spill Prevention, Control, and Countermeasure (SPCC) plan for the site based on new information for the site.	<input checked="" type="checkbox"/> Check if project performed with current firm	
5.	(1) TITLE AND LOCATION (City and State) Abengoa Solar: Solana Generating Station; Gila Bend, Arizona	(2) YEAR COMPLETED	
		Professional Services 2013-2014	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Mr. Minter evaluated the aquifer protection permit needs for Solana Generating facility, including an evaluation of the geologic and hydrogeologic conditions for the area. Mr. Minter created a geodatabase for the site, as part of developing the Site Conceptual Model.	<input checked="" type="checkbox"/> Check if project performed with current firm	



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

STATE PROCUREMENT OFFICE
Department of Administration
100 North 15th Avenue, Suite 101
Phoenix, Arizona 85007

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

a. NAME Jill Hankins, PWS	b. ROLE IN THIS CONTRACT Environmental	c. YEARS EXPERIENCE	
		1. TOTAL 18	2. WITH CURRENT FIRM 4

d. LOCATION (City and State)
 Stantec (Tempe - Elna Rae, Arizona)

e. EDUCATION (DEGREE AND SPECIALIZATION) BS, Environmental Science, Arizona State University, Tempe, Arizona 1995	f. PROFESSIONAL TRAINING - REGISTRATIONS Professional Wetland Scientist, Wetland Science
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g. OTHER PROFESSIONAL QUALIFICATIONS (Organizations, Awards, etc.)
 US Army Corps of Engineers Certified Wetland Consultant; Society of Wetland Scientists, Professional Wetland Scientist; US Fish & Wildlife Service, Certified Utah Prairie Dog Biologist; US Fish & Wildlife Service, Certified Southwestern Willow Flycatcher Biologist; US Fish & Wildlife Service, Certified Mexican Spotted Owl Biologist

H. RELEVANT PROJECTS

1.	(1) TITLE AND LOCATION (City and State) US-89 Emergency Repair of Landslide; Page, Arizona	(2) YEAR COMPLETED	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Completed survey and documentation of material source area to ensure compliance with T&E Species Act, Clean Water Act, and State Historic Preservation Act. Provided ADOT with GPS mapping and GIS files of material source. 65-acres.	Professional Services 2013	Construction (if applicable)
		<input checked="" type="checkbox"/> Check if project performed with current firm	

2.	(1) TITLE AND LOCATION (City and State) US-89 Reconstruction; Fredonia, Arizona	(2) YEAR COMPLETED	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Completed survey and documentation of material source area to ensure compliance with T&E Species Act, Clean Water Act, and State Historic Preservation Act. Provided ADOT with GPS mapping and GIS files of material source.	Professional Services 2013	Construction (if applicable)
		<input checked="" type="checkbox"/> Check if project performed with current firm	

3.	(1) TITLE AND LOCATION (City and State) Las Vegas Wash; Las Vegas, Nevada	(2) YEAR COMPLETED	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Completed USWaters Delineation in compliance with USACE current regulations on ephemeral washes for a In-Luie Fee Mitigation Bank on 25,000 acre parcel of BLM administered land in Clark County, Nevada. Project involved GPS mapping and GIS files of 21-miles of Las Vegas Wash and its ephemeral tributaries. Completed ground proofing of aerial photos and data collecting, report write up for presentation to BLM and USACE.	Professional Services 2012	Construction (if applicable)
		<input checked="" type="checkbox"/> Check if project performed with current firm	

4.	(1) TITLE AND LOCATION (City and State) Phase I Environmental Site Assessment The Village at Heritage Court Apartments; St. George, Utah	(2) YEAR COMPLETED	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Phase I Environmental Site Assessment in compliance with the ASTM 1527-05 on a 2.3-acre parcel of property for construction of a multi-unit housing development.	Professional Services 2012	Construction (if applicable)
		<input checked="" type="checkbox"/> Check if project performed with current firm	

5.	(1) TITLE AND LOCATION (City and State) Indian Hills Roadway Reconstruction; St. George, Washington County, Utah	(2) YEAR COMPLETED	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Provided Categorical Exclusion documentation in compliance with Utah Department of Transportation and Federal Highway Administration standards on a roadway reconstruction project. Tasks completed included Threatened & Endangered Species survey for Mojave Desert tortoise, raptor survey, noxious plant survey, US waters survey. Documentation for compliance with State Historic Preservation Act, Clean Water Act, and National Environmental Policy Act.	Professional Services 2013	Construction (if applicable)
		<input checked="" type="checkbox"/> Check if project performed with current firm	



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

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

a. NAME Galen Drake, RLA, CPESC, LEED® AP		b. ROLE IN THIS CONTRACT Landscape Architecture		c. YEARS EXPERIENCE	
				1. TOTAL 39	2. WITH CURRENT FIRM 27
d. LOCATION <i>(City and State)</i> Stantec (Phoenix, Arizona)					
e. EDUCATION <i>(DEGREE AND SPECIALIZATION)</i> BS, Landscape Architecture, University of Arizona, Tucson, Arizona, 1977			f. PROFESSIONAL TRAINING - REGISTRATIONS Certified Professional in Erosion and Sediment Control #2357, CPESC, Inc.; Registered Landscape Architect #14889, State of Arizona		
g. OTHER PROFESSIONAL QUALIFICATIONS <i>(Organizations, Awards, etc.)</i> LEED Accredited Professional, U.S. Green Building Council Member, International Erosion Control Association Member, American Society of Landscape Architects					

H. RELEVANT PROJECTS

	(1) TITLE AND LOCATION <i>(City and State)</i>	(2) YEAR COMPLETED	
		Professional Services	Construction (if applicable)
1.	Rincon Solid Waste Transfer Station; Tucson, Arizona (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Provided landscape, hardscape, and irrigation design support. This site has been certified LEED® Silver.	2009	
		<input checked="" type="checkbox"/>	Check if project performed with current firm
2.	Kyrene Water Reclamation Facility; Phoenix, Arizona (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Site improvements for this 10-acre site included a storage yard, parking, on-site retention basins, specialty wash bays, and landscape improvements to accentuate the public areas of the property and provide secure traffic circulation at the southern portion of the facility. The project was designed to achieve a LEED® Gold accreditation. The main project consisted of the additional 10,000 SF of administrative office space, 3,200 SF of maintenance space, and 10,000 SF of warehouse space.	2005 - 2007	
		<input checked="" type="checkbox"/>	Check if project performed with current firm
3.	City of Chandler Landscape Management Master Plan; Chandler, Arizona (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Mr. Drake was oversaw the final landscape management master plan for the inventory of over 8,500 trees located throughout the City of Chandler. Other responsibilities included the development of a tree ordinance and forestry planning program. The project was instrumental in achieving APWA accreditation for the City.	2005	
		<input checked="" type="checkbox"/>	Check if project performed with current firm
4.	Central Phoenix/East Valley Light Rail Transit Project - Line Section 3; Phoenix, Arizona (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Provided landscape, hardscape, and irrigation design support.	2002 - 2005	
		<input checked="" type="checkbox"/>	Check if project performed with current firm
5.	ADOT Statewide Rest Area Rehabilitation, Roadside Development Services; Statewide, Arizona (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Completed a comprehensive feasibility study and designs for the rehabilitation of 16 interstate rest areas in the State of Arizona, including Sunset Point Rest Area. Improvements included new ramps/parking areas, restroom buildings, information and vending kiosks, caretaker's residences, picnic shelters, pumphouses, mechanical and irrigation systems, site furnishings, hardscaping, and new well development.	1998 - 2009	
		<input checked="" type="checkbox"/>	Check if project performed with current firm



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

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

a. NAME David Hill, RLS	b. ROLE IN THIS CONTRACT Land Surveying	c. YEARS EXPERIENCE	
		1. TOTAL 42	2. WITH CURRENT FIRM 11
d. LOCATION (City and State) Stantec (Tucson, Arizona)			
e. EDUCATION (DEGREE AND SPECIALIZATION) Postgraduate in Land Surveying, University of London, London, United Kingdom, 1973		f. PROFESSIONAL TRAINING - REGISTRATIONS	
g. OTHER PROFESSIONAL QUALIFICATIONS (Organizations, Awards, etc.) Club President, Toastmasters International Member, Royal Institution of Chartered Surveyors			

H. RELEVANT PROJECTS

	(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
		Professional Services	Construction (if applicable)
1.	University of Arizona 6th Street Residence Halls; Tucson, Arizona	2009 - 2010	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Topographical surveys, by ground methods of various sites at University of Arizona, for student housing and associated improvements. This project also included underground utility surveys and multiple easement descriptions for rights-of-way or utilities.	<input checked="" type="checkbox"/>	Check if project performed with current firm
2.	ADOT Truck Weigh and Credential Processing Facility – Mariposa Land Port of Entry; Nogales, Arizona	2010 - 2011	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Mr. Hill was the Survey Manager for this proposed improvement project which includes seven processing booths; a new administration building at the existing Arizona State Inspection Facility; dynamic message sign; slow speed weigh-in motion scales; new Portland cement concrete paving; storm drain; and ancillary water, sewer, fire suppression, electrical, data, and communications infrastructure.	<input checked="" type="checkbox"/>	Check if project performed with current firm
3.	Expansion and Modernization of the Mariposa Land Port of Entry; Nogales, Arizona	2010 - Ongoing	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Mr. Hill is the Survey Manager for the complete redesign of the extremely constrained Mariposa Land Port of Entry site.	<input checked="" type="checkbox"/>	Check if project performed with current firm
4.	Avenue B&C Colonia Wastewater Collection System; Yuma, Arizona	2011	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Mr. Hill was the Survey Manager for the installation of approximately 8.5 miles of sewer collection system in an area of Yuma County bounded by Avenues B and C and 1st and 8th Streets.	<input checked="" type="checkbox"/>	Check if project performed with current firm
5.	Town of Marana As-Needed Professional Land Survey Services; Marana, Arizona	2008 - Ongoing	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Since 2008, this on-going contract provides for as-needed services including surveys for engineering design, ALTA/ACSM, boundary and rights-of-way surveys, topographical surveys including ground control for photogrammetric mapping, GPS control surveys, property descriptions, records of survey and any other land surveying activities, as required by the Town of Marana.	<input checked="" type="checkbox"/>	Check if project performed with current firm



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

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

a. NAME Jim Van Houten, PE	b. ROLE IN THIS CONTRACT Construction Management/ Administration	c. YEARS EXPERIENCE	
		1. TOTAL 39	2. WITH CURRENT FIRM 23
d. LOCATION (City and State) Stantec (Phoenix, Arizona)			
e. EDUCATION (DEGREE AND SPECIALIZATION) BS, Civil Engineering, University of Missouri, Rolla, Missouri, 1974		f. PROFESSIONAL TRAINING - REGISTRATIONS Professional Engineer #33063, State of Arizona; Professional Engineer #10898, State of Nevada	
g. OTHER PROFESSIONAL QUALIFICATIONS (Organizations, Awards, etc.) Member, Chi Epsilon National Civil Engineering Honor Society Level II & III Field Inspector, American National Standards Institute Member, American Society of Civil Engineers			

H. RELEVANT PROJECTS

	(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
		Professional Services	Construction (if applicable)
1.	I-10 Deck Park Tunnel Inspection; Phoenix, Arizona	2012	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Inspection of the highway tunnel running through downtown Phoenix, which serves over 260,000 vehicles per day. The items inspected included the tunnel ventilation system (eight 400 HP fans), carbon monoxide sensors, and fire protection piping and hydrants. The inspection identified the current condition of the equipment, as well as deficiencies that required immediate attention.	<input checked="" type="checkbox"/>	Check if project performed with current firm
2.	South Division Transit Maintenance Facility Liquid Natural Gas Station Refurbishments; Phoenix, Arizona	2008 - 2009	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Construction administration and inspection services for the federally funded South Operating Facility LNG Fuel Station Refurbishment. This project included the construction of two new 30,000 gallon LNG storage tanks, replacement of three LNG fuel dispensers, controls, emergency generator, electrical equipment enclosure, LNG and flame detection system upgrades, and other improvements over a nine-month construction period at a facility operating 24-hours a day, seven days a week.	<input checked="" type="checkbox"/>	Check if project performed with current firm
3.	Laughlin/Bullhead International Airport: Aircraft Parking Apron, Access Road and Parking Lot; Bullhead City, Arizona	2008 - 2009	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Construction administration for the rehabilitation of an aircraft parking apron, access road, and the existing airport parking lot, as well as expansion of the parking lot.	<input checked="" type="checkbox"/>	Check if project performed with current firm
4.	City of Phoenix Fuel Tank Farm; Phoenix, Arizona	2009	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Provided Construction Management services for security upgrades to a Fuel Tank Farm for the City of Phoenix.	<input checked="" type="checkbox"/>	Check if project performed with current firm
5.	ADOT Statewide Rest Area Rehabilitation, Roadside Development Services; Statewide, Arizona	1998 - 2009	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Provided construction management for the rehabilitation of interstate rest areas in the State of Arizona, including Sunset Point Rest Area. Improvements included new ramps/parking areas, restroom buildings, information and vending kiosks, caretaker's residences, picnic shelters, pumphouses, mechanical and irrigation systems, site furnishings, hardscaping, and new well development.	<input checked="" type="checkbox"/>	Check if project performed with current firm



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

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

a. NAME Richard Bigelow	b. ROLE IN THIS CONTRACT Construction Management/ Administration	c. YEARS EXPERIENCE	
		1. TOTAL 20	2. WITH CURRENT FIRM 17
d. LOCATION <i>(City and State)</i> Stantec (Tucson, Arizona)			
e. EDUCATION <i>(DEGREE AND SPECIALIZATION)</i> BS, Renewable Natural Resources, University of Arizona, Tucson, Arizona, 1993		f. PROFESSIONAL TRAINING - REGISTRATIONS Certified Field Technician #16582F, Arizona Technical Testing Institute; Certified Field Technician, American Concrete Institute; Grade 2 Water Distribution System Operator #45652, Arizona Department of Environmental Quality	
g. OTHER PROFESSIONAL QUALIFICATIONS <i>(Organizations, Awards, etc.)</i>			

H. RELEVANT PROJECTS

	(1) TITLE AND LOCATION <i>(City and State)</i>	(2) YEAR COMPLETED	
		Professional Services	Construction (if applicable)
1.	ROMP Water and Energy Sustainability Center; Tucson, Arizona	2010 - 2011	
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Mr. Bigelow performed construction inspection and observation for the Pima County Regional Wastewater Reclamation Department's Water and Energy Sustainability Center (WESC).	<input checked="" type="checkbox"/>	Check if project performed with current firm
2.	Caterpillar Well No.3 and Pipeline; Tucson, Arizona	2011 - 2012	
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Provided construction observation for the construction of a 1,000 gallon hydropneumatic tank, associated piping appurtenances, and approximately 1,450 linear feet of 3" distribution main in conjunction with converting existing Well No. 3 from a construction water use to a potable source. Responsibilities included overseeing the installation, pressure testing, and disinfection of the distribution main, tank, and piping/appurtenances.	<input checked="" type="checkbox"/>	Check if project performed with current firm
3.	Stanta Cruz Interceptor, Franklin Street to Prince Road, Phase 3; Tucson, Arizona	2011 - 2012	
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Mr. Bigelow performed construction inspection for Pima County Regional Wastewater Reclamation Department for the installation of 7,335 linear feet of steel and fiberglass pipeline varying from 42" to 66" via direct bore tunneling, jack and bore, and open cut.	<input checked="" type="checkbox"/>	Check if project performed with current firm
4.	I-10 Ruthrauff Road to Prince Road, Sanitary Sewer Improvements; Tucson, Arizona	2011 - 2012	
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Construction inspection for the sanitary sewer construction and relocation of 10" PVC, 42" and 48" fiberglass, and 72": and 78" cast-in-place pipe, as well as construction of junction structures and flow bypass pumping.	<input checked="" type="checkbox"/>	Check if project performed with current firm
5.	Pima County Wastewater Inspection New Construction; Pima County, Arizona	2010	
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Mr. Bigelow provided inspection and observation services during the construction of public wastewater collection systems within new developments for the Pima County Wastewater Department. Responsibilities included ensuring quality of work, maintaining shop drawings and reports, and system testing prior to the county accepting the collection system.	<input checked="" type="checkbox"/>	Check if project performed with current firm



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

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

a. NAME Mel Lawson	b. ROLE IN THIS CONTRACT Mining	c. YEARS EXPERIENCE	
		1. TOTAL 45	2. WITH CURRENT FIRM 2
d. LOCATION <i>(City and State)</i> Stantec (Tempe - West Broadway Road, Arizona)			
e. EDUCATION <i>(DEGREE AND SPECIALIZATION)</i> BS, Mining Engineering, Michigan Technological University, Houghton, Michigan, 1970		f. PROFESSIONAL TRAINING - REGISTRATIONS Certified, Surface and Underground, Mine Safety and Health Administration; Registered Qualified Person #1859650, Society for Mining, Metallurgy, and Exploration	
g. OTHER PROFESSIONAL QUALIFICATIONS <i>(Organizations, Awards, etc.)</i>			

H. RELEVANT PROJECTS

1.	(1) TITLE AND LOCATION <i>(City and State)</i> Kamoa Project; Democratic Republic of the Congo	(2) YEAR COMPLETED	
		Professional Services 2012-ongoing	Construction (if applicable)
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Provide mining and related infrastructure design and costing for study phases of the Kamoa Project.	<input checked="" type="checkbox"/> Check if project performed with current firm	
2.	(1) TITLE AND LOCATION <i>(City and State)</i> Pinto Valley Operations - Phase 1 Restart; Miami, Arizona	(2) YEAR COMPLETED	
		Professional Services 2012-2013	Construction (if applicable)
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Provided project over-sight on Stantec EPCM activities for the restart of the Pinto Valley Operation. Provided Senior Management guidance and review through all phases of work—from scope development through execution. This included continuous on-site review of Stantec’s activities.	<input checked="" type="checkbox"/> Check if project performed with current firm	
3.	(1) TITLE AND LOCATION <i>(City and State)</i> Pinto Valley Operations - Infrastructure Estimate; Miami, Arizona	(2) YEAR COMPLETED	
		Professional Services 2012	Construction (if applicable)
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Managed the Pinto Valley Phase 2 Identification Study. Provided cost, schedule, and resource estimates for surface infrastructure and facilities based on site experience gained during the Phase 1 Restart EPCM project.	<input checked="" type="checkbox"/> Check if project performed with current firm	
4.	(1) TITLE AND LOCATION <i>(City and State)</i> Curis Resources (Arizona) Inc. - Florence Copper; Florence, Arizona	(2) YEAR COMPLETED	
		Professional Services 2010-2011	Construction (if applicable)
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Executive in charge of development of Florence Copper, a green-field in-situ copper project. Hired and manage staff of nine professionals. Opened project office and implemented policies and procedures for Company start-up. Worked with IPO start-up capital, commenced final project feasibility study while providing leadership on permitting, community, and corporate affairs. Awarded EPCM contract for Phase I piloting facilities. Worked with Investor Relations and Company executive staff in supporting project funding initiatives.	<input checked="" type="checkbox"/> Check if project performed with current firm	
5.	(1) TITLE AND LOCATION <i>(City and State)</i> Newmont Mining Corporation - Leeville Project; Nevada	(2) YEAR COMPLETED	
		Professional Services 2002 - 2005	Construction (if applicable)
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Responsible for engineering, construction, development, and management of \$US 225M Leeville underground mine. Managed \$US 6.5M detailed EP contract and implemented construction plan. Directed in-house construction management team of 20 engineers and project controls staff. Major project components included two hydrostatic lined shafts; refurbishment and installation of four-mine hoists; two headframes and hoist houses; seven deep dewatering wells; water treatment plant; and all site surface infrastructure. Contractor safety performance highlighted by only four minor lost-time accidents (LTA incident rate = 1.6).	<input checked="" type="checkbox"/> Check if project performed with current firm	



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

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

a. NAME Mike Peden, PE	b. ROLE IN THIS CONTRACT Mining	c. YEARS EXPERIENCE	
		1. TOTAL 26	2. WITH CURRENT FIRM 8
d. LOCATION (City and State) Stantec (Tempe - West Broadway Road, Arizona)			
e. EDUCATION (DEGREE AND SPECIALIZATION) BS, Mechanical Engineering, Memorial University of Newfoundland, St. John's, Newfoundland, 1988		f. PROFESSIONAL TRAINING - REGISTRATIONS Professional Engineer #45470, State of Arizona; Professional Engineer #023063, State of Nevada; Registered Engineer #43202, National Council of Examiners for Engineering & Surveying	
g. OTHER PROFESSIONAL QUALIFICATIONS (Organizations, Awards, etc.)			

H. RELEVANT PROJECTS

1.	(1) TITLE AND LOCATION (City and State) Efemçukuru – Crushing Plant Control Gate Detail Design; Izmir, Turkey	(2) YEAR COMPLETED	
		Professional Services 2014	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Detail design for the removal and replacement of the existing Ross Feeders with solid steel gates actuated with hydraulic cylinders. Provided on-site inspection of the chute arrangement and its operational issues, and prepared a 3D design of the system while on site.	<input checked="" type="checkbox"/>	Check if project performed with current firm
2.	(1) TITLE AND LOCATION (City and State) Pinto Valley Operations Concentrator Restart Project; Miami, Arizona	(2) YEAR COMPLETED	
		Professional Services 2012-2013	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Engineering and modification of Pinto Valley Operations' primary crushing, fine grinding, flotation, concentrate storage, plant water supply, and ore transport facilities (\$12 million engineering value).	<input checked="" type="checkbox"/>	Check if project performed with current firm
3.	(1) TITLE AND LOCATION (City and State) Resolution Copper Underground Exploration Project; Arizona	(2) YEAR COMPLETED	
		Professional Services	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Preparation of underground dewatering plans for the Superior Mine Site. Preparation of equipment specifications, bid analysis, and equipment purchase recommendations. Detail design of dewatering equipment layout and mechanical drawings.	<input checked="" type="checkbox"/>	Check if project performed with current firm
4.	(1) TITLE AND LOCATION (City and State) Resolution Copper No. 9 Shaft Deep Well Pumping Project; Arizona	(2) YEAR COMPLETED	
		Professional Services	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Preparation of dewatering plans for the Superior Mine Site. Preparation of equipment specifications, bid analysis, and equipment purchase recommendations. Detail design of dewatering equipment layout and mechanical drawings.	<input checked="" type="checkbox"/>	Check if project performed with current firm
5.	(1) TITLE AND LOCATION (City and State) Cortez Mine Underground Pumping Stations; Nevada	(2) YEAR COMPLETED	
		Professional Services 2012 - 2013	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Responsible for detail design of underground pumping stations. Preparation of equipment specifications, bid analysis, and equipment purchase recommendations. Detail design of dewatering equipment layout and mechanical drawings.	<input checked="" type="checkbox"/>	Check if project performed with current firm



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

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	
Maricopa County On-Call Plan Review and Inspection Services; Maricopa County, Arizona	PROFESSIONAL SERVICES	CONSTRUCTION <i>(If applicable)</i>
	2001 - Ongoing	Ongoing

23. PROJECT OWNER'S INFORMATION

c. PROJECT OWNER	d. ORIGINAL BUDGET/NTE AMOUNT OF PROJECT	e. TOTAL COST OF PROJECT
Maricopa County	Various	Various

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

Services

- Plan Review
- Inspection

Description

Stantec currently serves as Building Official Consultant for approximately 20 cities, towns, counties, and Native American communities throughout Arizona, including Maricopa County, where we provide a combination of building code consulting, inspections, management, and plan review services. Our team of skilled plan review and inspection experts have been working with the county for more than a decade, working on numerous projects throughout the County, including several high profile projects, such as the Abener Teyma Solana Solar Plant and the Maricopa County Court Tower.

Project that our team have provided plan review and inspection services for include:

Abener Teyma Solana Solar Plant	\$2,100,000,000
Maricopa County Court Tower	\$340,000,000
Badger Solar I	\$32,000,000
Gillespie Solar I	\$18,000,000
APS Saddle Mountain Solar Station	\$9,000,000
Pegasus LDS Ward	\$2,000,000
S.E. Detention Facility	\$9,900,000
Dreaming Summit Elem. School – Litchfield Park	\$5,700,000
Wigwam Creek Elementary School – Litchfield Park	\$5,100,000
Tuscani Point Retail Shops - Carefree	\$3,900,000



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

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(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>
ADOT Truck Weigh and Credential Processing Facility – Mariposa Land Port of Entry; Nogales, Arizona	2010 - 2011	

23. PROJECT OWNER'S INFORMATION

c. PROJECT OWNER	d. ORIGINAL BUDGET/NTE AMOUNT OF PROJECT	e. TOTAL COST OF PROJECT
Arizona Department of Transportation	\$3.2 M (Construction Value)	\$3.2 M (Construction Value)

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

Services

- Architecture
- Civil Engineering
- Environmental Assessments, Permitting, and Compliance
- Special Systems
- Structural
- M/P/E
- Fire Protection
- Survey
- Transportation Design
- Traffic Operations



Description

Stantec provided full design and construction administration services for this improvement project which includes seven processing booths; a new administration building at the existing Arizona State Inspection Facility; dynamic message sign; slow speed weigh-in motion scales; new Portland cement concrete paving; storm drain; and ancillary water, sewer, fire suppression, electrical, data, and communications infrastructure. There are seven new Credential Booths consisting of Level 3 security protection, including bullet-proof glazing and siding. The new Administration Permits building is a 4,000 SF facility that also has Level 3 protection. The facility houses the administrative offices for the ADOT Port Director, a staff of officers, and support. It consists of offices, payment transaction lobby, 24 work stations, restrooms, lockers, and break room areas. The site is ADA accessible and has parking for 35 vehicles, as well as bicycle, alternative fuel vehicles, and electric vehicles. All work for this facility, including full civil, architectural, structural, mechanical, plumbing, electrical, special systems, and fire protection, was performed in-house. Additionally, there were full time construction administration staff to assist with code compliance, field changes, special structural inspections, change orders, and pay applications. The project was designed to meet LEED® Silver certification and 10% alternative energy consumption.



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

STATE PROCUREMENT OFFICE
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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>
Powerline, Vineyard Road, and Rittenhouse Flood Retarding Structures (PVR FRS) Design Project; Phoenix, Arizona	Ongoing	

23. PROJECT OWNER'S INFORMATION

c. PROJECT OWNER	d. ORIGINAL BUDGET/NTE AMOUNT OF PROJECT	e. TOTAL COST OF PROJECT
Flood Control District of Maricopa County	\$2,800,000 (fee value)	\$25,000,000 (fee value)

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

Services

- Hydrology
- Spillway Hydraulics
- Design for Rehabilitation
- Permitting Assistance

Description

Stantec, teaming with AMEC Foster Wheeler, is currently working with the Flood Control District of Maricopa County to design the rehabilitation of the Vineyard Road and Rittenhouse FRSs (earthen dam) in order to maintain flood control benefits, correct the dam safety deficiencies, and comply with State dam safety requirements. We are also working on the design of the Powerline channel system so that it meets Federal Emergency Management Agency criteria. This project includes application of the Failure Modes and Effects Analysis (FMEA) process to identify the potential failure modes for the dams. The final design work also includes landscaping and aesthetics and identification of multi-use opportunities within the project area where compatible with the safety and flood protection function of the project.





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

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Department of Administration
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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> Mariposa Land Port of Entry (POE) Expansion and Modernization; Nogales, Arizona	b. YEAR COMPLETED	
	PROFESSIONAL SERVICES 2010 - Ongoing	CONSTRUCTION <i>(If applicable)</i>

23. PROJECT OWNER'S INFORMATION

c. PROJECT OWNER GSA Pacific Rim Region	d. ORIGINAL BUDGET/NTE AMOUNT OF PROJECT \$156 M (Construction Value)	e. TOTAL COST OF PROJECT \$156 M (Construction Value)
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f. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (include scope, size, and length of project)

Services

- Grading and Earthworks
- Infrastructure Design and Rehabilitation
- Intelligent Transportation Systems
- Civil/Site Development
- Stormwater Management
- Land Surveying
- Traffic Signals and Signage
- Water Storage Facilities
- Land Acquisition Mapping
- Building Information Modeling (BIM)
- Communication Systems
- Transportation
- Utility
- Drainage



Description

Stantec is completely redesigning the extremely constrained Mariposa Land POE site. We are responsible for design for the demolition of the existing facilities (43-acre site) and expansion (12.6 acres) necessary to accommodate the growth in cross border traffic.

The main issue for port expansion projects is space, and in Nogales, the existing port abuts Mexico on a steep plateau. To effectively expand the footprint, over one-mile of retaining wall and 600,000 cubic yards of imported fill were implemented to overcome a 50-foot fall to the adjacent valley floor. The heart of the compound will be completely reconstructed, including nine buildings and over a mile each of storm/sanitary sewer and potable water infrastructure. We developed a four-phase construction plan that allows continuous port operations with minimal disruptions. We also identified the various constraints that must be addressed, including environmental/permitting issues and those that are a result of the surrounding terrain (e.g., waters of the US, 50-foot fills, border wall/fence).

We are continuously communicating with the client, US General Services Administration, and all key stakeholders, including the Department of Homeland Security, Customs and Border Protection, US Department of Agriculture, Food and Drug Administration, US Army Corps of Engineers, Santa Cruz County Flood Control District, City of Nogales, Federal Motor Carrier Safety Administration, and Arizona Department of Transportation.



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

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	
Luke Air Force Base On-Call Engineering Services (Wastewater, Water, Stormwater, Planning); Glendale, Arizona	PROFESSIONAL SERVICES Ongoing	CONSTRUCTION <i>(If applicable)</i>

23. PROJECT OWNER'S INFORMATION

c. PROJECT OWNER	d. ORIGINAL BUDGET/NTE AMOUNT OF PROJECT	e. TOTAL COST OF PROJECT
Luke Air Force Base	Various	Various

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

Services

- Water
- Sewer
- Pollution Prevention
- Land Use Planning
- Site Development
- Facility Space Utilization Optimization Studies
- Architecture
- Structural
- Roadway Layout and Design
- M/P/E
- Energy Audits
- Construction Oversight

Description

Stantec has provided a full range of services to Luke AFB since 1988 through on-call contracts. Some of our projects have included:

- [Luke AFB Sewer Study](#) – Identified potential, excessive influent inflow during storm events at WWTF, identified general condition of the sewer collection system through manhole inspection of 20% of the 240 manholes, and surveyed rim and invert elevations of 200 manholes to verify impacts to collection system from low-term ground subsidence.
- [Luke AFB Water Study](#) – Includes water model verification for the two-square mile water system and calibration of the water model.
- [Luke AFB 400 and 900 Area Chill Facilities Design](#) – Prepared an Energy Evaluation Study that demonstrated constructing two central chill facilities in the southern (900) and northern (400) areas of the base would improve energy efficiency.
- [Luke AFB Water Storage Tank and Arsenic Treatment System](#) – Prepared an Engineering Solutions Report and preliminary design for a new 500,000-gallon concrete ground storage tank, a 1.6 MGD arsenic treatment system, a 1,530 gpm pump station, and a chlorine injection system for the Base's high pressure potable water system.
- [Luke AFB Safe Drinking Water Act Implementation Plan](#) – Prepared a Safe Drinking Water Implementation Plan for Luke AFB. A drinking water compliance monitoring worksheet was prepared that identified the various testing required, frequency and location for the testing. A chain of Command for MCL violations was also prepared to document how violations are to be addressed and corrected.
- [Luke AFB WWTF Analysis](#) – In 1989, Stantec was selected to evaluate the Luke AFB WWTF; given the extensive permit changes that were coming under the new BADCT ruling, Luke AFB upgraded the facility from trickling filtration to an oxidation ditch. Clarifiers were repurposed, a traveling bridge filter and UV systems were added and the facility was converted to a Class A+ effluent facility. In recent years, Stantec has conducted a comprehensive performance evaluation to provide maintenance, operation and upgrade recommendations. Our current project includes oversight of repairs to the trickling filter.



ATTACHMENT I – General Qualifications

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100 North 15th Avenue, Suite 201
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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.)

Please see attached.

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:	28%
b.	Percentage of Total Work Attributable to Non-Government Work:	72%

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

Signature:

Date: December 30, 2014

Name: Scot Schlund, PE

Title: Principal



Stantec Consulting Services Inc.
8211 South 48th Street; Phoenix, Arizona 85044

December 30, 2014

Arizona Department of Administration
State Procurement Office
100 N. 15th Avenue, Suite 201
Phoenix AZ 85007

Reference

2015 Annual Professional Services List, Solicitation Number: #ADSP015-00004729

Dear Ms. Bauer,

On behalf of Stantec, I am pleased to submit our qualifications to continue to provide various engineering services to the Arizona Department of Administration (ADOA) and other State agencies under this contract. We have provided a brief overview of our qualifications in the Additional Information submitted in a separate document, including relevant experience, key staff members, and project management approach.

Our people are our most important competitive resource, ultimately determining our reputation and vitality. We respect and value input and opinion, and encourage self-improvement, innovation, creativity, and entrepreneurship. Teamwork is fundamental to our culture and we take pride in each other's achievements. Stantec has over 350 experienced personnel in our Phoenix, Tempe, and Tucson offices. With these extensive staff resources, Stantec can cover each area of the State to support any agency that may use this on-call contract.

Having performed similar types of "on-call" technical services for other clients over the years, Stantec is very familiar with the unique requirements of this type of contract. Our repeat and continuous services to our clients, including the State of Arizona, illustrates our success in providing quality consulting services in a coordinated, total service environment. We have provided consulting services on an annual, on-call basis to numerous agencies, including:

- Arizona Department of Administration
- Arizona Game and Fish Department
- Arizona Department of Transportation
- Arizona Department of Environmental Quality
- Maricopa County Facilities Management Department
- Maricopa Community College District
- Cities of Phoenix, Tempe, Chandler, Scottsdale, Gilbert, Flagstaff, Tucson, and Sierra Vista
- Luke Air Force Base
- Pima, Pinal, Maricopa, and Yuma counties
- Salt River Project
- Roosevelt Irrigation District
- Arizona State University, Northern Arizona University and University of Arizona

Thank you for considering our qualifications to provide statewide services under this on-call contract. We look forward to working with ADOA on the various projects. If you have any questions or wish to discuss any aspect of our proposal in more detail, please feel free to call.

Sincerely,
Stantec Consulting Services Inc.

Scot Schlund, PE
Managing Senior Principal
Tel: (602) 707-4651
scot.schlund@stantec.com

About us

We're active members of the communities we serve. That's why at Stantec, we always design with community in mind.

The Stantec community unites more than 14,000 employees working in over 230 locations. We collaborate across disciplines and industries to bring buildings, energy and resource, and infrastructure projects to life. Our work—professional consulting in planning, engineering, architecture, interior design, landscape architecture, surveying, environmental sciences, project management, and project economics—begins at the intersection of community, creativity, and client relationships. Since 1954, our local strength, knowledge, and relationships, coupled with our world-class expertise, have allowed us to go anywhere to meet our clients' needs in more creative and personalized ways. With a long-term commitment to the people and places we serve, Stantec has the unique ability to connect to projects on a personal level and advance the quality of life in communities across the globe.

Office Locations

Stantec has fully staffed offices in Phoenix, Tempe, and Tucson. With over 350 Arizona based staff, Stantec can quickly and efficiently respond to all issues associated with a potential project regardless of location. Stantec has operated in Arizona since 1991, with experience via acquisition dating back much further. We have worked with almost every public organization in the State and are very familiar with the local labor and materials markets.



Phoenix Office — 141 employees:

- Architecture
- Drainage and Irrigation
- Electrical Engineering
- Mechanical Engineering
- Environmental Services
- Landscape Architecture
- Aviation
- Roadways
- Transit
- Urban Development
- Water & Wastewater



Tucson Office — 35 employees:

- Drainage
- Electrical Engineering
- Mechanical Engineering
- Surveys & Geomatics
- Roadways
- Traffic Engineering
- Rail & Transit
- Urban Development
- Water & Wastewater



Tempe Office (Broadway Road) — 125 employees:

- Mining Engineering
- Electrical Engineering
- Mechanical Engineering
- Structural Engineering



Tempe Office (Elna Rae Street) — 18 employees:

- Air Quality
- Environmental Services
- Oil & Gas
- Emissions Testing

What we do

The following representative projects exemplify our experience in the services and project types requested by ADOA and listed in the Qualifications Form. As shown in our Introduction Letter, Stantec has worked with numerous agencies across Arizona on similar “on-call” contracts.

Architecture

Green Schoolhouse – Safari; Phoenix, Arizona

- Architecture
- Landscape Architecture
- Rendering Services
- LEED Submittal
- Code Review
- BIM

The purpose is to provide a 21st century sustainable educational facility and as a gift and resource to a well deserving low income community. Several schools submitted an application for this gift and after an interview process Roadrunner Elementary School was selected.

Roadrunner Elementary School was originally constructed in the 1970s and serves approximately 750 students. The single story school includes several buildings and has very few windows. It is a very traditional double loaded corridor facility that is minimalistic in its design. The architecture does not provide inspirational educational space. The staff at the school have made the facility more inspiring by developing things such as a vegetable garden, outdoor learning areas and painting inspirational quotes within the building.

The vision for the Safari Green School House is to allow the students to take an educational safari. As they make a transition from their existing school buildings to the Green School House they will experience inspiring spaces that are filled with natural light, creating a connection to nature and setting the stage for an adventure of discovery in education. The Green School House will be 6,291 GSF/5,661 NSF and will include: an indoor large multi-purpose room; library; teaching kitchen; computer lab; science, technology, engineering and math (STEM) classroom; health/wellness room, outdoor fitness/play area, student green garden, and two outdoor learning classroom gardens.

Sustainability and a connection to nature will be infused into the design in an effort to provide a learning opportunity through experiencing the building. The community will enter through an educational garden that will include native vegetation. Large windows will be located on the North elevation to allow diffused natural light to penetrate the learning environment. Storm water will be conveyed through a free flowing gutter into a catchment area and bio swale. Energy generation will be provided through photovoltaic panels and an energy efficient heating and cooling system will be incorporated. A digital dashboard will be installed so that students can monitor energy generation and usage. The building will be submitted to USGBC with the goal of LEED platinum.

ADOT Truck Weigh and Credential Processing Facility – Mariposa Land Port of Entry; Nogales, Arizona

- Architecture
- Civil Engineering
- Environmental Assessments, Permitting, and Compliance
- Special Systems
- Structural
- M/P/E
- Fire Protection
- Survey
- Transportation Design
- Traffic Operations

Stantec provided full design and construction administration services for this improvement project which includes seven processing booths; a new administration building at the existing Arizona State Inspection Facility; dynamic message sign; slow speed weigh-in motion scales; new Portland cement concrete paving; storm drain; and ancillary water, sewer, fire suppression, electrical, data, and communications infrastructure. There are seven new Credential Booths consisting of Level 3 security protection, including bullet-proof glazing and siding. The new Administration Permits building is a 4,000 SF facility that also has Level 3 protection. The facility houses the administrative offices for the ADOT Port Director, a staff of officers, and support. It consists of offices, payment transaction lobby, 24 work stations, restrooms, lockers, and break room areas.

The site is ADA accessible and has parking for 35 vehicles, as well as bicycle, alternative fuel vehicles, and electric vehicles. All work for this facility, including full civil, architectural, structural, mechanical, plumbing, electrical, special systems, and fire protection, was performed in-house. Additionally, there were full time construction administration staff to assist with code compliance, field changes, special structural inspections, change orders, and pay applications. The project was designed to meet LEED Silver certification and 10% alternative energy consumption.

91st Avenue Wastewater Treatment Plant Re-Roofing; Phoenix, Arizona

- Civil Engineering
- Mechanical Engineering
- Electrical Engineering
- Permitting

Stantec provided full design, permitting, construction administration, and inspection services for the re-roofing of the City of Phoenix 91st Avenue Wastewater Treatment Plant control building. The project included new rooftop HVAC units with electrical service and roof drains to current codes.

Engineering

Little Colorado River Basin Water Yield; Arizona

- Hydrologic Modeling
- STATEMOD Modeling
- Streamflow Simulation
- Water Rights

As a result of the Zuni Settlement Agreement, the Arizona Game and Fish Department (AGFD) is required to sever and transfer water rights to surface water in the Little Colorado River for use by the Zuni Tribe. Water rights in the basin are administered by the Apache County Superior Court in accordance with the Norviel Decree of 1918, 1921 and 1923. In support of AGFD, Stantec's services include verification of AGFD held water rights in the Basin, quantification of all water rights in the Basin and long-term historic simulation of the system management, identification of severance and transfer strategies, and simulation of those strategies. System management simulation is accomplished using STATEMOD. The STATEMOD model is derived from a spatial database of the water rights documenting the point of diversion, place of beneficial use, priority and decreed allotment. Inflow hydrology to the system is estimated from gage data and historic rainfall records. The STATEMOD model is calibrated to historic streamflow records in the Basin. The model will be used to identify existing AGFD water rights that can be severed and transferred to the Zuni Tribe and/or to identify potential private properties within the Basin that can be purchased by the AGFD for severance and transfer of the water rights.

Black Canyon Lake Dam; Navajo County, Arizona

- Hydrology
- Spillway Hydraulics
- Design for Rehabilitation
- Permitting Assistance

Stantec worked with the Arizona Game and Fish Department to modify the Black Canyon Lake Dam and spillway to accommodate increased runoff due to watershed burn and pass the Probable Maximum Flood (PMF), as well as address all NEPA compliance issues. The watershed of this reservoir was involved in the Rodeo-Chedeki fire of 2002 with a mosaic burn of differing intensities, which increased the runoff coefficient of the watershed. The PMF is considerably larger than the designed 100-year flood. The improvements must accommodate a peak PMF flow of 21,300 cfs.

Black Canyon Lake Dam is of earthen construction, 420 feet long with a crest width of 24 feet and volume of 1,580 acre feet. The elevation is 7,075 feet, and the dam is 68 feet high. The emergency spillway is a concrete lined chute with a 40-foot wide sill that narrows to 20 feet in the chute and ends in a 50-foot stilling basin. A filter diaphragm to the outlet conduit was designed according to NRCS criteria.

The embankment was raised, the spillway enlarged and replaced, and other dam safety improvements were made to the dam.

Fool Hollow Dam; Show Low, Arizona

- Hydrology
- Spillway Hydraulics
- Design for Rehabilitation
- Permitting Assistance

Stantec performed a dam hazard classification study, including dam breach analysis and downstream flood inundation mapping, for the Arizona Game and Fish Department, which was approved by the Arizona Department of Water Resources (ADWR). The analysis resulted in the adoption of the 0.5 Probable Maximum Flood (PMF) as the inflow design flood rather than the full PMF for the dam.

Our services included the review and revision of the hydrology to evaluate the reservoir freeboard and spillway. We prepared alternatives for improvements to the dam and conducted a dam break analysis of the dam and other upstream and downstream dams, including Show Low Lake, Rainbow Lake, Scott Reservoir, Lone Pine Reservoir, and Schoen's Dam. Finally, we coordinated with the ADWR Dam Safety branch.

Flood hydrology of the 110-square-mile watershed was also prepared for the 72-hour general storm, six-hour local storm, and a critically centered six-hour local storm. Unique aspects of this project were the inclusion of four upstream reservoirs in the flood hydrology and identification of alternatives for raising the crest of the dam to provide adequate freeboard with minimum disturbance while improving maintenance access to the dam crest.

Lynx Lake Dam and Spillway Modifications; Prescott, Arizona

- Hydrology
- Spillway Hydraulics
- Design for Rehabilitation
- Permitting Assistance

Stantec provided the engineering and construction observation services necessary to increase the spillway. The Phase I National Dam Safety Investigations determined that the dam had an inadequate spillway to pass the inflow design flood, which is the PMF for this high hazard dam. Subsequently, ADWR required the dam owner to increase spillway adequacy for the PMF. We conducted the first site-specific Probable Maximum Precipitation for the PMF assessment that was performed in Arizona and approved by the ADWR.

As a result of this study, a 20% reduction in required spillway capacity was achieved. We performed an alternatives study to determine the optimum spillway enlargement and embankment raise to pass the inflow design flood. We designed the dam and spillway modifications to meet ADWR safety requirements, performed the environmental compliance for an

environmentally sensitive area, and performed the construction engineering services.

The final design included the spillway enlargement, raising the crest of the embankment, replacing upstream slope erosion protection, recreational enhancements, geotechnical studies, surveying, mapping, environmental compliance, and permitting.

Mariposa Land Port of Entry (POE) Expansion and Modernization; Nogales, Arizona

- Grading and Earthworks
- Infrastructure Design and Rehabilitation
- Intelligent Transportation Systems
- Civil/Site Development
- Stormwater Management
- Land Surveying
- Traffic Signals and Signage
- Water Storage Facilities
- Land Acquisition Mapping
- Building Information Modeling (BIM)
- Communication Systems
- Transportation
- Utility
- Drainage

Stantec is completely redesigning the extremely constrained Mariposa Land POE site. We are responsible for design for the demolition of the existing facilities (43-acre site) and expansion (12.6 acres) necessary to accommodate the growth in cross border traffic.

The main issue for port expansion projects is space, and in Nogales, the existing port abuts Mexico on a steep plateau. To effectively expand the footprint, over one-mile of retaining wall and 600,000 cubic yards of imported fill were implemented to overcome a 50-foot fall to the adjacent valley floor. The heart of the compound will be completely reconstructed, including nine buildings and over a mile each of storm/sanitary sewer and potable water infrastructure. We developed a four-phase construction plan that allows continuous port operations with minimal disruptions. We also identified the various constraints that must be addressed, including environmental/permitting issues and those that are a result of the surrounding terrain (e.g., waters of the US, 50-foot fills, border wall/fence).

We are continuously communicating with the client, US General Services Administration, and all key stakeholders, including the Department of Homeland Security, Customs and Border Protection, US Department of Agriculture, Food and Drug Administration, US Army Corps of Engineers, Santa Cruz County Flood Control District, City of Nogales, Federal Motor Carrier Safety Administration, and Arizona Department of Transportation.

Gila County Shop and Roads Facility; Globe, Arizona

- Architecture
- Structural
- Mechanical Engineering
- Plumbing
- Electrical Engineering
- Fire Protection

Stantec provided engineering services for a 10,800 SF, pre-engineered metal shop and office building to house both the Shop and Roads Departments for Gila County. One of the project's successful components was our ability to coordinate with the County's on-call civil engineer for the 10-acre site that included an administrative complex designed by another firm. We worked with both teams to produce construction documents that were consistent between the two projects both in content and presentation.

The shop facility contained five vehicle bays for heavy equipment, including one equipped with embedded steel rails for tracked equipment. A weld shop and tire shop were designed on the end of the vehicle bays, with a separate 2,000 SF office space on the first floor with a public access for the Roads Department.

Working closely with Gila County, we identified salvageable equipment in the existing facility. The gasoline and diesel dispensing system was also relocated to the new site. It is envisioned that photovoltaic panels will be placed on the roof to reduce Gila County's energy cost.

We also provided a "stand-alone" underground package to allow the site contractor to begin work under a separate contract prior to completion of the building design. The project budget for the total site was \$2.4 million.

22nd Street Drainage Study; Phoenix, Arizona

- Hydrologic and Hydraulic Analyses
- Alternatives Analyses
- Preparation of Cost Estimates

Stantec provided a design concept report of a local flooding problem for the City of Phoenix. The project included hydrologic and hydraulic analyses, alternative analyses, and preparation of cost estimates.

Crystal Creek Apartments Drainage Study; Phoenix, Arizona

- Hydrologic and Hydraulic Analyses
- Alternatives Analyses
- Preparation of Cost Estimates

Stantec provided a design concept report of a local flooding problem for the City of Phoenix. The project included hydrologic and hydraulic analyses, alternative analyses and preparation of cost estimates for each alternative.

SOLON Photovoltaic Test Facility; Tucson, Arizona

- Civil Engineering
- Structural Engineering
- Electrical Engineering
- Hydrology
- Landscape Architecture
- Survey

Stantec provided engineering services for a photovoltaic (PV) panel test facility located within a two-acre stormwater retention basin. The design team worked with the City of Tucson Development Services Department to define the specific requirements for the construction of the project.

The test facility included fixed, single-axis, and two-axis tracking systems. Since construction within the retention basin is prohibited by the City of Tucson Flood Control Ordinance, our engineers designed a plan to construct the PV test facility on piers in order to maintain the existing volume of the basin. We presented the plan to the City for review and approval prior to commencing design. This innovative approach was approved by the City and provided the Owner with confidence moving into the design phase. The electrical system was modular in design to allow for the repeated removal and replacement of panels as new products are being tested.

City of Scottsdale Energy Analysis; Scottsdale, Arizona

- Building Energy Audits

Stantec worked with the City of Scottsdale to perform energy audits for 29 buildings totaling 912,500 SF. Our approach for these audits was simple: Analyze, Adapt, and Advance. First, we conducted a detailed energy audit of the facilities. This audit, the Analyze portion of our approach, involved the review of general building information, such as construction type, use, and hours of operation. The review included the following: system identification, configuration, and condition; indoor air quality at specific locations; HVAC equipment performance and condition; tenant imposed HVAC system loads; electrical load and capacity; outside air requirements and potential future requirements; and energy management system and control system components and potential modifications. We also interviewed City operations personnel regarding performance of building systems and review utility consumption history.

The audit identified the energy conservation potential, catalogued existing energy performance and end-uses (baseline conditions), and generated a list of Energy Conservation Measures (ECM) that can be implemented. A description of the work, opinion of probable costs, annual energy saving potential per system, and expected economic return in the aforementioned report were documented for each ECM. A final report summarized the resource, financial, and environmental findings and recommendations.

This constitutes the Adapt and Advance phases of our approach. The Adapt phase occurs when our recommendations are implemented, and the Advance phase is the documentation of the reduction in energy consumption at each facility.

Luke Air Force Base On-Call Engineering Services (Wastewater, Water, Stormwater, Planning); Glendale, Arizona

- Water
- Sewer
- Pollution Prevention
- Land Use Planning
- Site Development
- Facility Space Utilization
- Optimization Studies
- Architecture
- Structural
- Roadway Layout and Design
- M/P/E
- Energy Audits
- Construction Oversight

Stantec has worked with Luke Air Force Base (AFB) for more than 20 years on numerous facility projects that branched into planning, transportation, architectural, mechanical, electrical, and plumbing projects in addition to the water and wastewater projects. These services were provided through a series of on-call style contracts with specific delivery orders/projects. Maria Brady has served as the client coordinator for Luke since 1991. These are a few of the most recent projects.

- [Luke AFB Sewer Study](#) – Identified potential, excessive influent inflow during storm events at WWTF, identified general condition of the sewer collection system through manhole inspection of 20% of the 240 manholes, and surveyed rim and invert elevations of 200 manholes to verify impacts to collection system from low-term ground subsidence.
- [Luke AFB Water Study](#) – Includes water model verification for the two-square mile water system and calibration of the water model.
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- [Luke AFB WWTF Analysis](#) – In 1989, Stantec was selected to evaluate the Luke AFB WWTF; given the extensive permit changes that were coming under the new BADCT ruling, Luke AFB upgraded the facility from trickling filtration to an oxidation

ditch. Clarifiers were repurposed, a traveling bridge filter and UV systems were added and the facility was converted to a Class A+ effluent facility. In recent years, Stantec has conducted a comprehensive performance evaluation to provide maintenance, operation and upgrade recommendations. Our current project includes oversight of repairs to the tricking filter.

Santan Generating Station Waste Water Force Main; Maricopa County, Arizona

- Planning
- Survey
- Design
- Raw Water Delivery Designs
- Canals and Gates
- Pipelines and Stand Pipes

Evaluated reuse options for 8,500 gpm waste water discharge from Santan Generating Station. Evaluated various pipeline alignment and canal sections for capacity. Recommended design of approximately 14,000 LF of 24-inch HDPE pipeline installation along SRP Canal 4 and upgrades to reuse waste water out of the Western Canal.

Val Vista Water Transmission Main, Phase 2; Mesa, Arizona

- Planning
- Survey
- Design
- Congested urban corridor
- Construction
- Pipelines
- Budget/schedule constraints

Water treatment rule changes have led water utility providers to search for the best, low-cost solutions to provide clean water to their customers. When the City of Phoenix chose to add GAC treatment at the co-owned Phoenix/Mesa Val Vista Water Treatment Facility (WTF), Mesa identified that GAC treatment was not required for their system and was operationally too costly. It was decided that connection upstream of the GAC treatment and a second waterline would be required to provide water to Mesa. The proposed 72-, 60-, and 48-inch diameter potable water transmission pipeline will convey potable water from the Val Vista WTF to three existing reservoir and booster facilities that serve the City of Mesa. This waterline was divided into three design and construction phases and Stantec was selected to design the second 2.3 mile, 60-inch diameter reach. The design requires utility coordination and relocation, a Salt River Project canal and box culvert crossing, corrosion control design, transportation system analysis, and isolation valves. The project must be completed by December 2015 to avoid penalty payments.

Location of Growth, Urban Form, and Cost of Infrastructure Study – White Paper;

Tucson, Arizona

- Land Planning
- Roads and Highways
- Transit
- Transportation Planning
- Urban Land Engineering
- Wastewater Treatment
- Water Treatment

Stantec worked with a team of City of Tucson and Pima County staff to examine the impacts of both the location and form of growth. We identified criteria to evaluate areas most suitable for future development, developed detailed GIS-based models of future growth scenarios, and outlined the most likely positive and negative aspects of various forms of development. We used benchmark data from other communities to analyze the pros and cons of various urban form patterns from a sustainability perspective. Four major scenarios were examined: the status quo, enhanced habitat protection, infrastructure efficient/taxpayer savings, and transit-oriented development. Four general infill and outlying growth areas were predicted.

The key finding from the report is that where and how we grow are important, and the City and County can plan for future growth in a way that is more sustainable than the status quo. How and where we grow impact a variety of factors, including how much infrastructure we need to build, the cost of public services and tax levels, water consumption, public health/walk ability, driving distances versus viability of public transit, energy consumption, greenhouse gas emissions, and housing choice and diversity.

Southwest Infrastructure Plan, Phase I and II; Pima County, Arizona

- Community Planning
- Feasibility Study
- Financial Analysis
- Flood Control and Drainage Management
- Geographic Information Systems (GIS)
- Infrastructure and Management Master Plans
- Master Drainage Planning
- Opportunity/Constraint Analysis
- Ownership & Operations Models
- Partnership Arrangements
- Procurement Models & Processes
- Recreation Master Planning & Development
- Regional Planning

Stantec provided planning services to initiate the Southwest Infrastructure Plan (SWIP), which quantified the nature, phasing, financial impacts, and funding possibilities for flood control, recreation, wastewater infrastructure, and other improvements that are necessary to service future saturation growth within the study area. The 71-square-mile project area is generally bounded by Tucson Mountain Park to the north, Mission Road to the east, the Tohono O’odham Nation/San Xavier District to the south, and Sandario Road to the west.

The plan leveraged extensive input from Pima County agencies, and proceeded in concert with a transportation planning component prepared by others. Envisioned products (phased infrastructure plans, estimates of probable cost, and funding analysis outputs), from this work will serve to collaboratively develop and evolve an infrastructure planning process suitable for deployment elsewhere in the County. Phase II of this project incorporated a sustainability assessment of the plan.

Nogales International Wastewater Treatment Plant; Nogales, Arizona

- Wastewater
- Odor Control
- Instrumentation and Controls
- Permitting
- Startup and Commissioning
- Flood Control
- Site Development
- Architecture
- Structural
- M/P/E
- Construction Oversight

The project budget was particularly tight given the client’s requirements of less than \$5/gallon to construct a 14.74 MGD facility in a market where capacity of that size is typically constructed for \$10/gallon.

Stantec teamed with PCL to provide design-build services for the 14.74 MGD upgrade of the Nogales International Wastewater Treatment Plant. The original lagoon based plant did not meet federal effluent limits and was negatively

impacting aquatic life in the Santa Cruz River. A number of local citizens and environmental groups had been monitoring the river for years and raised the issue of river quality with the City of Nogales. The city and IBWC had tried several times over the last 10 years to construct a new plant via conventional design-bid-build; however, bid prices consistently exceeded the engineer’s estimate and project budget. The project completed by PCL and Stantec delivered this much needed facility both ahead of schedule and on budget.

The project’s impact upon the community has been immediate. Follow-up sampling in the river indicates a number of fish species have now returned to the area in the vicinity of the effluent discharge. In addition, many of the citizen and environmental groups who monitor the river have complimented the plant operators on the effluent quality and significant improvement in the river’s health.

The project, designed in a compressed six month schedule, included decommissioning of the existing detritors and replacement with vortex grit tanks, 6 mm screens downstream of the existing 25 mm coarse screens, biofilters for plant wide odor control, and three secondary process trains for nitrification and denitrification. Our design accommodated a two-stage construction sequence allowing PCL to build the clarifiers and aeration basins under ideal groundwater conditions reducing dewatering requirements with significant cost savings.

El Rio Watercourse Master Plan and Area Drainage Master Plan; Maricopa County, Arizona

- Environmental
- Hydrologic and Hydraulic Analyses
- Permitting
- Flood Control
- Stormwater Management

The master plan is an evolutionary, living document that provides a framework for enhancing and preserving the river, and a path for development that ensures public safety and flood control strategies are sustainable and environmentally sensitive, while staying responsive to current, local realities.

Stantec provided civil engineering, environmental management, and planning services for the El Rio Watercourse and Area Drainage Master Plan, which provides sustainable flood management solutions that conserve the natural environment and accommodate future growth along 18 miles of the Gila River. The Gila River watershed is the largest in the state contributing storm water runoff from approximately 45,000 square miles to the project area. Recently, the river has experienced several large flood events resulting in significant damage to property and infrastructure. These events, along with other environmental issues and development pressures, threaten the river’s ecosystem and surrounding open space.

The Stantec team used a regional approach to multi-use floodplain management strategies focusing on public safety, while still maintaining and enhancing the natural functions of the river. The master plan elements will cost \$150 million to fully implement over the anticipated 15-20 year build-out. Over 3,000 acres will be reclaimed from the floodplain, miles of trails will be constructed, several hundred acres of open space and open water will be created, and the local economy and quality of life for area residents will be greatly enhanced.

The project won four major industry awards in 2006, including the Valley Forward Environmental Excellence Awards, Crescordia Award; WESTMARC Best of the West Awards, Honor Award; Arizona Planning Association's State Planning Awards, Best Regional Plan; and American Council of Engineering Companies of Arizona, Honor Award.

Central Phoenix/East Valley Light Rail Transit Project - Line Section 3; Phoenix, Arizona

- Drainage
- Utilities
- Roadway Design
- Communications
- Survey
- Electrical Engineering
- Structural Engineering

Line Section 3, considered to be the most complex of the five sections, runs through downtown Phoenix and was the single largest construction contract issued by the City.

Stantec provided engineering services for approximately eight miles of track (double) for Line Section 3 of the Central Phoenix/East Valley Light Rail Transit project, a 20-mile starter system that links major business and commerce areas within the cities of Phoenix, Tempe, and Mesa.

Unlike other line sections, the track on this project is “in-street” running on one-way couplets, which meant twice the amount of design, significantly increasing design challenges. The single-track guideway was positioned asymmetrically to allow for property access on both sides while retaining the arterial roadway to one side. Instead of using conventional crossovers, loop tracks were implemented to connect the two tracks a block apart, furthering the complexity of both transit and street infrastructure systems. Several utilities had to be relocated out from under the guideway in an already congested area with scant record information. This required extensive field checks and coordination among the design teams and utility companies.

Vertical profiles for the street and guideway were critical to ensure positive drainage and retain existing drainage patterns. We used a unique “flow-through” guideway curb to keep stormwater from flooding adjacent properties. Several subsurface buildings were discovered under or adjacent to the guideway, and our team identified unique solutions to protect the existing structures.

We continued on with design services during the construction of the project, assisting the constructor in expediting owner requested changes and resolving differing site conditions. As a result, the construction was completed on schedule in December 2008.

Plan Review/Code Compliance

Electronic Plan Review; Various Cities, Arizona

- Electronic Plan Review

Using specialized software, Stantec personnel are trained to review digital plans. We are currently providing Electronic Plan Review services to the Town of Gilbert, and cities of Tempe and Flagstaff, as well as private clients. These clients have found a number of significant benefits when compared to traditional review, including:

- Digital commenting directly on plans allows for more accurate and easier to understand mark ups;
- Reduction in paper use; and
- No courier or pickup/drop off fees.

This truly unique service has been embraced by the development community, as well as our municipal clients, for its ability to reduce costs and streamline the review process.

There is no additional cost for this new method of plan review.

Radisson Fort McDowell Resort & Casino; Fort McDowell, Arizona

- Plan Review
- Inspection

Stantec provided plan review and inspection services for this Radisson branded, four diamond, 250-room resort in Arizona. Civil engineering improvements reviewed included grading and drainage, drainage reports, paving, sewer, water, and storm drains. Building review included entry feature upgrades of a new three-lane facility, including a 220-foot-long bridge and the new RV resort with 150 RV spaces on three acres. All reviews and inspections were done in compliance with the Fort McDowell Yavapai Nation's adopted codes and standards.

University of Arizona Science & Technology Park (STP), Building 9052 Kitchen Exhaust Hoods; Tucson, Arizona

- Code Compliance Review
- Mechanical
- Engineering
- Electrical Engineering
- Fire Protection

Stantec provided mechanical, electrical, and fire protection design services for the design-build project involving the renovation of the existing exhaust hoods serving the cafeteria in building 9052 at the University of Arizona STP.

The project began with the review of the existing kitchen hood mechanical and electrical drawings for code compliance. We then performed mechanical design for a new bakery which included a convection oven and pot washer exhaust fans. Electrical design was done for the addition of a new section of motor control center and the addition of a new 200 amp, 120/208 volt, three-phase, 42 circuit panel board. We also provided electrical design on the control system for the kitchen exhaust fans and data/communication systems. Fire alarms, mechanical registers, and light fixtures were all replaced.

Geological

ADEQ Broadway Pantano WQARF Site; Tucson, Arizona

- Remedial investigation
- Feasibility study

The project commenced with initiation of a remedial investigation/feasibility study (RI/FS) at the Broadway-Pantano WQARF site where a PCE plume, over 1.5 miles long, had contaminated an aquifer that supplies drinking water used by the residents of Tucson. The source of the groundwater plume is the Broadway North Landfill, which was operated in the 1960s. Over a ten year period, Stantec was responsible for investigating the extent of contamination in groundwater and in the landfill source area. The project involved the installation of 23 groundwater monitoring wells up to 450 feet deep, geophysical logging, and sampling a network of 60 wells using discrete interval sampling methods to map the vertical characteristics of the plume. Using data from this work, a Health Risk Assessment and the RI for the Groundwater Operable Unit were completed in 2007. The RI for the Landfill Operable Unit was also completed. In addition to the RI, an important part of Stantec's responsibility at this site was oversight and critical evaluation of the design, groundwater modeling, and operation of an interim containment system designed to prevent downgradient migration of the groundwater plume.

Former Ted's Truck Stop; Quartzite, Arizona

- Preliminary Investigation
- Early Response Actions

Stantec is responsible for the ongoing preliminary investigation and early response actions under the direction of the ADEQ Remedial Projects Unit at the Former Ted's Truck Stop site located in Quartzite. The site is an inactive fueling facility that consists of multiple generations of above ground storage tanks, underground storage tanks, and fuel dispensing areas. The site is underlain by interlayered clay and sand and the depth to water is approximately 45 feet below ground surface. Stantec designed, built, and is currently operating and maintaining a remediation system that consists of 31 SVE wells, 14 wells with pumps, and 19 OS wells. A PLC has been installed at the site which allows remote

monitoring and control of the system. The contaminants of concern are benzene, toluene, ethylbenzene, total xylenes, and liquid phase hydrocarbons (gasoline and diesel fuel). The remediation technologies include dual phase extraction, soil vapor extraction, ozone sparging, catalytic and thermal oxidation for vapor abatement, and activated carbon treatment for the groundwater effluent. The remediation system, which included 38 remediation wells, began operation in late January 2008 and to date over 60,000 pounds of petroleum hydrocarbons have been removed by the SVE system, over 1.8 million gallons of impacted water have been removed and treated, and over 125 gallons of FP have been removed.

Camp Williams Military Training Reservation, Environmental Due Diligence; Utah

On behalf of the Utah National Guard (UTNG) and its 26,000-acre Camp Williams Military Training Reservation (MTR), Stantec, formerly JBR personnel completed environmental due diligence in accordance with both ASTM Standard E 1527-05, Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process and ASTM Standard D 6008-96 (Reapproved 2005), Practice for Conducting Environmental Baseline Surveys. In accordance with Department of Defense (DOD) and U.S. Army Corps of Engineers (USACE) policy, Stantec conducted the due diligence activities in support of the UTNG's renewal of its lease of the property from the U.S. Department of Army. The military reservation has existed since 1914 and provides training grounds for numerous state and National Department of Defense entities.

The Camp Williams MTR is comprised of numerous parcels of land that are owned by state and federal parties; several of which were to be exchanged and/or sold to public and private entities in subsequent years. Stantec's ESA/EBS final report was referenced by the UTNG during the lease renewals, land exchanges, property transactions, and/or real estate developments, including construction projects at Camp Williams. Stantec formulated its ESA/EBS final report to help streamline the environmental due diligence process for any such new construction, thereby saving the UTNG considerable time and monies for future construction projects.

The document includes a variety of user-friendly Geographical Information System (GIS) figures and maps, and project-specific geodatabase, such that future changes across Camp Williams may be easily documented by the UTNG.

Landscape Architecture

ADOT Statewide Rest Area Rehabilitation; Statewide, Arizona

- Civil Engineering
- Water/Wastewater
- Architecture
- M/P/E
- Landscape
- Architecture
- Construction
- Observation/ Administration

Stantec provided engineering and construction phase services for the rehabilitation of numerous interstate rest areas throughout Arizona. Improvements included new ramps/parking areas, restroom buildings, information and vending kiosks, caretaker's residences, picnic shelters, pumphouses, mechanical and irrigation systems, site furnishings, hardscaping, and new well development.

Our landscaping design emphasized the use of the xeriscape design principles, including native and indigenous plant materials and low water use irrigation systems. The projects are all designed to be fully accessible and in compliance with the Americans with Disabilities Act Accessibility Guidelines (ADAAG).

Apache Neighborhood Park; Scottsdale, Arizona

- Hardscape Design
- Planning

Stantec provided site reconnaissance, planning, and design for utility and infrastructure upgrades, site grading and paving, and horizontal control for this 10-acre specialty park. Park improvements included the parking lot, restroom building, two picnic ramadas, children's playground, basketball courts, two multi-use fields, turf open space, pathways/neighborhood pedestrian connections, and native desert landscape/salvage/ revegetation.

The restroom and ramadas design was based upon a cultural interpretation of historic Hohokam habitation of the Salt River Valley expressed through constructed "protected ruins". This theme utilized low "ruins" walls of stained concrete for the restroom building and site walls. The landscape design theme incorporated the context of the neighborhood's traditional landscape juxtaposed with the native Sonoran desert.

Land Surveying

ADOA 1000-Bed Prison Expansion; Various, Arizona

- Construction Staking
- As-builts

This project involved the 180,000-sf addition of 1,000-beds Level one (low security) dorm housing at multiple facilities around the State. The project included housing, grading

drainage improvements along with associated site utilities and security improvements. This was a fast-track project that completed in five months and ahead of schedule. Stantec provided construction staking and as-builts at the Douglas and Perryville locations for McCarthy Builders. The architect was Arrington Watkins Architects.

ADOA 4000-Bed Prison Expansion; Various, Arizona

- Construction Staking
- As-builts

This project involved the 4,000-bed minimum security prison expansion with 2,000 beds in Yuma and 1,000 beds in Tucson and Perryville. The facilities include water storage at Tucson and Perryville, and a water and wastewater treatment plant in Yuma. The facilities also include complex kitchens and education and administration buildings along with grading drainage improvements and associated site utilities and security improvements. Stantec provided construction staking and as-builts at the Perryville location. The architect was Arrington Watkins Architects.

Metropolitan Domestic Water Improvement District (MDWID); Tucson, Arizona

- Topographical Surveys for Design
- Construction Staking
- Control Surveys
- As-builts
- Boundary Surveys and Legal Descriptions

Stantec was appointed in June 2009 as exclusive on-call surveyor for MDWID, to carry out all their construction layout, topographical surveys, well elevation surveys, and boundary work. The annual maximum is \$100,000 and they have recently renewed the contract for a fourth year. To date, twenty-six separate projects have been successfully completed under this contract.

ADOT I-10 Widening, Ruthrauff Road to Prince Road; Tucson, Arizona

- Construction Staking

This ongoing, 2-year project involves the widening of I-10 to four lanes in each direction, together with reconstruction of the Prince Road interchange, to take Prince Road over the freeway and adjacent railroad. In addition to the road widening, there are significant utility and drainage improvements as well as three bridge structures.

Stantec is providing construction staking services for ADOT's General Contractor, Pulice Construction.

Environmental

B&C Colonia Environmental Assessment; Yuma County, Arizona

- Assessments, Permitting, and Compliance

This Environmental Assessment increased health and safety conditions within the B&C Colonia. Our Environmental Assessment (EA) described the impacts of three viable alternatives for providing wastewater service to 838 house lots on 512 acres that currently rely on septic tanks and outhouses in Yuma County. Known as B&C Colonia, the project area is under the jurisdiction of both the City of Yuma and Yuma County. A Colonia is an area that has standard utilities or lacks utility service entirely. Prepared pursuant to the National Environmental Policy Act, the EA addressed the community's location, service area, population, topography, geology, climate, air quality, water resources, water quality, and environmental inventory. It determined potential direct and indirect impacts as a result of the chosen alternative, as well as mitigation measures to be considered.

City of Phoenix Phase I/Phase II ESA; Phoenix, Arizona

- Phase I Assessments
- Phase II Assessments

Stantec conducted Phase I & Phase II assessments at sites across Phoenix including a multi-parcel right-of-way acquisition project along 7th Avenue. This project involved the assessment of portions of 20 parcels that included residential, commercial and industrial properties. Additional assessments were conducted on residential and commercial parcels. Phase II assessments were conducted on parcels where recognized environmental conditions were identified and included soil sample collection and analysis.

City of Mesa Phase I/Phase II ESA; Mesa, Arizona

- Phase I Assessments
- Phase II Assessments

Stantec has been contracted by the City of Mesa to conduct Phase II ESAs for several electrical substation properties for the City. These activities included working with the City to research historic site activities, collecting soil samples in the areas of concern, preparation of Phase II ESA reports with recommendations, and development of a geodatabase that was migrated to a secure webmap.

Solana Generating Station; Gila Bend, Arizona

Stante assisted Abengoa Solar One, LLC with their plan to build, operate, and maintain a 250 MW concentrating solar power (CSP) electrical generating plant, Solana Generating Station (Solana) near Gila Bend, Arizona. The innovative nature of Abengoa Solar's CSP and thermal energy storage technology required updates to the design of the facility as new information from research and pilot plants was obtained. The new information required changes to the Solana Air Quality Permit. Stantec revised process flow diagrams, created a revised emission inventory for the facility, and prepared the non-Title V non-minor permit revision in order to update the permit to reflect the new information and the subsequent changes to the original design of the facility. Stantec assisted the client to respond to questions from the Maricopa County Air Quality Department in a timely manner in order to facilitate issuance of the revised permit. Stantec also reviewed the aquifer protection permit for the drywells at the site and developed a GIS geodatabase for the site.

Mining

Resolution Copper No. 9 Shaft Deep Well Pumping Project; East of Superior, Arizona

- Underground Mine Infrastructure
- Electrical Engineering
- Mechanical Engineering
- Structural Engineering

Stantec provided a unique approach to dewater a flooded mine, which enhanced safety and productivity during the mine restoration efforts. As an integral part of the underground mine recovery, we conducted extensive investigations and studies to determine the unique challenges associated with dewatering a mine of this nature safely and productively. In excess of 2.5 billion gallons of water was to be removed while sinking a new production shaft and refurbishing the old No. 9 shaft simultaneously. A mine dewatering schedule of two years was requested, which calculated to a required pumping rate of 2,500 usgpm, 24 hours per day. We used oilfield technology for the concept and provided the basic engineering required to construct a dual, deep well, multi-stage pumping system. The system was capable of providing higher flow rates than required and achieved dewatering past the mine working levels. The potential safety risk for the miners was alleviated due to the decreased threat of existing bulkhead failures. Stantec provided feasibility, conceptual design, basic engineering, and site services to support the initiative.

Training and State Standard Development

State Standard Detention/Retention Training Seminar; Arizona

- Training and Professional Development
- Knowledge of State Standards

Stantec developed a training course and PowerPoint presentation for the Arizona Department of Water Resources (ADWR) on State Standard 8-99 for stormwater detention/retention (various methods and models). Specific tasks included developing a course outline, creating the appropriate (PowerPoint) handouts, and conducting the training sessions. The course was presented in seven communities throughout Arizona.

State Standard Floodplain Issues in Transportation Design Training Seminar; Arizona

- Training and Professional Development
- Knowledge of State Standards

Stantec developed a training program for ADWR that included a course outline and PowerPoint presentation (including three example projects), and conducted four 8-hour training sessions throughout Arizona. The objective of the course is to present training to transportation designers and other applicable participants in the application of State Standards for Floodplain Management.

State Standard Floodplain/Floodway Delineation Training Seminar; Arizona and California

- Training and Professional Development
- Knowledge of State Standards (ADWR)

Stantec developed a training course for ADWR based on the State Standard for Requirement for Floodplain and Floodway Delineation in Riverine Environments. The project included developing a course outline and appropriate handouts and facilitating the training sessions.

LEED® Design

Stantec has one of the largest integrated building design teams in North America, currently with almost 500 LEED-accredited professionals (eight in Arizona). To date, we have provided consulting and/or design services on 105 LEED certified projects, including 17 LEED Platinum projects and 50 LEED Gold certifications, accounting for 62 percent of the ratings.

While the projects span many sectors, so too do the services provided, ranging from full service architecture and engineering design, to buildings engineering, LEED consulting, transportation engineering, commissioning, and project management. Likewise, the projects reflect our ability to achieve certifications for our clients under a host of LEED rating systems, including New Construction, Commercial Interiors, Neighborhood Development, Core and Shell, Existing Buildings, and LEED for Schools.

National Renewable Energy Laboratory (NREL) Research Support Facility LEED-NC Platinum and Zero Energy Building Targets; Golden, Colorado

- Design for LEED Platinum Certification
- Electrical Engineering
- Mechanical
- Engineering
- Heat Recovery/Energy Conservation

This new signature 220,000 SF administration building is the gateway to the National Renewable Energy Laboratory campus in Golden, Colorado. Stantec is providing mechanical and electrical engineering design services and sustainable design guidance for this project, which aims for LEED Platinum Certification and Zero Energy Building (ZEB) under the strict definition from NREL.

We are providing extensive thermal and energy modeling to maximize the passive performance of this facility. Energy saving design strategies include robust natural ventilation strategies, hydronic radiant slab heating and cooling, displacement ventilation, passive air preheat via transpired collectors, a below-grade remote mass labyrinth to store thermal energy, and extensive heat recovery and daylight harvesting to meet an energy target of more than 50 percent better than code. One hundred percent of all typical work spaces are designed to receive adequate daylight (based on LEED criteria) by utilizing a narrow floorplate and an advanced light bouncing device on the south face of the building. A huge photovoltaic array will be integrated into the building roof and adjacent visitor's parking lot, which will be designed to produce more energy than the facility will use in a year.

The project received the ACEC Grand Award of Engineering Excellence in 2011 and has been featured in numerous publications, including the New York Times, the Wall Street Journal, and Metropolis Magazine.

Rincon Solid Waste Transfer Station; Tucson, Arizona

- Design for LEED Gold Certification
- Architecture
- Civil Engineering
- Structural Engineering
- Mechanical Engineering
- Plumbing
- Electrical Engineering

Stantec completed planning, permitting, and design services for this solid waste transfer station for Waste Management of Arizona. The project was completed using the CM@Risk alternative project delivery method. We worked closely with the Owner, Waste Management, and the Contractor throughout the project. We assisted during construction with shop drawing review, RFI response, inspections, and preparation of as-built drawings.

This facility includes inbound and outbound electronic deck scales with a scale house, a facility operations building, and a transfer building for processing of up to 1,500 tons of municipal solid waste per day, expandable to 2,500 tons. The transfer station consisted of a 15,000 SF, fully-enclosed metal building with a concrete tipping floor with load out openings above one tunnel bay and electronic in-ground tunnel scales. It included an innovative tipping/pushwall structure for end-dump operations that significantly reduces the potential of end-dump tip over during unloading operations. The planning for this project included allowance for future tipping floor expansion and addition of a second tunnel.

This project has achieved LEED Gold certification. The decision to pursue LEED Certification was not made until after the design, permitting, and bidding were complete. The buildings were redesigned and re-permitted as quickly as possible to minimize construction delays. We worked closely with Waste Management and the Contractor throughout construction to maximize the potential LEED points with minimum project costs.

Who we are

An experienced group of key project team members are presented in this section, each of whom represent a major discipline being offered by Stantec. Each of these professionals have worked in Arizona for a number of years and are familiar with local, state and federal regulations. Additional staff resources are available in our Phoenix, Tempe, and Tucson offices to support these key staff members for your projects. All of these staff members will be available to perform the required work at your notice to proceed.

Scot Schlund, PE – Principal-in-Charge (Phoenix)

Scot has more than 31 years of experience and is the Managing Principal for our Phoenix and Tucson offices. He will be the main point of contact for this contract. He has the authority to dedicate the necessary resources to ensure any projects we are assigned are completed on schedule and within budget. He will also be responsible for project team coordination and management and QA/QC.

Architecture

Annette Zacherson, RA, NCARB, AIA, LEED AP BD+C (Phoenix)

Annette has 22 years of hands-on design and construction experience. Her broad understanding of the design process coupled with her attention to detail, and knowledge of projects offers owners' client service from start to finish. She stays closely involved with the project design, validation of design, development of construction documents, and coordination through out the project. Annette's involvement in every step of the project offers the client design solutions that focus on critical issues, goals, and ultimately successful projects.

Brian McClure, RA, CSI, CDT (Phoenix)

Brian has 25 years of design experience. He excels in the application of technology throughout his design while maintaining a focus on the client and their goals. His previous design experience includes technical facilities, schools, offices, and event venues.

Paul Mullins, RA (Phoenix)

Paul brings to the team more than 30 years of planning, design, and construction experience. His experience includes program management, design architecture, construction administration, field inspections, site studies and oversight for municipal, public, and private work. Paul is a very practical architect who brings a wealth of experience in real world construction issues and resolution for successful implementation on any assignment in which he is involved.

Water/Wastewater

Maria Brady, PE (Phoenix)

Maria has 31 years of experience in water, wastewater, storm water, and environmental management projects. Her expertise provides a broad focus on the development, planning, design, construction, start-up, and post-construction follow-up for water, wastewater, storm water, irrigation distribution systems, reuse systems, and other civil projects. Maria has been involved in the planning phase of many projects both for individual projects and overall facilities. Her efforts have included technical analysis of water and wastewater systems and design report preparation, coordination of biological, archaeological and environmental assessment evaluations and report preparation, permit application preparation and coordination and soil/land suitability studies for agricultural, commercial, and industrial purposes.

Maria is involved in the design of water supply, transmission, storage, pumping, and distribution systems; wastewater collection, pumping, treatment, and reuse systems; large-diameter storm collection systems; land grading and site development; wastewater and storm water permitting, and pollution prevention; site, soil and environmental evaluations; and project design and construction estimates.

Noel Guercio, PE (Phoenix)

Noel is a project engineer with Stantec's Water group and has over 12 years of experience specializing in the design, assessment, and construction of municipal infrastructure especially trenchless applications. He is involved with the review, assessment, and rehabilitation of all components of underground municipal infrastructure in both project management and technical advisory positions. Noel is currently working with Tempe to evaluate the 48th Street and Scottsdale Road sewer siphons under the Salt River and Tempe Town Lake for condition and capacity.

John Take, PE (Tucson)

John has more than 20 years of water and wastewater engineering experience concentrating on the master planning and analysis of linear underground infrastructure systems. He has acted as Project Principal on five water and wastewater master plans, Project Manager on more than ten underground infrastructure master plans, and as Project Engineer on numerous water and wastewater related projects. John is familiar with dozens of pressurized pipe and gravity flow simulation models and analytical tools.

Drainage

John Wise, PE, CFM (Tucson)

John has 35 years of hydrologic/hydraulic engineering experience, including 28 years with Stantec as a Principal. He is responsible for the preparation and management of federal flood insurance studies, map revisions, flood control and drainage design, stormwater and drainage master plans, storm sewer systems, and water/wastewater design projects. John has been involved with ADWR State Standards Program for approximately 20 years, including development of State Standards, as well as preparing and instructing training classes. He is also well-versed and experienced with permitting programs: USACOE 404 Program and EPA/ADEQ Stormwater Permit Program. John is a member of the Stantec STARR team, which is one of FEMA's national Production and Technical Services contractors, providing DFIRM studies and associated tasks.

Patrick Ellison, PE (Phoenix)

Patrick has more than 31 years of experience in the project management and technical evaluations associated with a variety of flood control projects, including floodplain delineation studies, ADMPs, WCMPs, flood control design, and roadway drainage projects. Through this experience, he has acquired significant experience in the application of engineering software, such as HEC-1, HEC-2, HY•8, StormCAD, and HEC-RAS. In addition to his engineering modeling experience, Pat has extensive experience in the development of flood control management alternatives, planning evaluations, Rules of Development, Design Guidelines, and conducting public meetings.

Michael Gerlach, PE (Phoenix)

Michael conducts studies in surface water hydrology including rainfall and runoff modeling, open channel hydraulics, and sediment analysis. He has more than 14 years of experience in the areas of hydrology, hydraulic and drainage studies and design engineering and dam safety studies and analyses. He has served as project engineer for numerous large floodplain delineation studies and area drainage master plans and is experienced with HEC-1/HMS hydrologic modeling as well as the application of engineering software integrated with GIS software for the development of hydrologic and hydraulic models. Mike is very experienced in the creation of GIS relational databases for drainage masterplanning which are used by Stantec for data analysis and alternatives formulation.

Chuck Williams, PE (Tucson)

Chuck has more than 20 years of experience in civil engineering and resource management projects. He has worked in both the public and private sector as an engineer and manager, and his extensive public sector experience gives him a unique perspective, and a valuable set of skills. He possesses a thorough understanding of how to navigate through complex resource and stakeholder issues in order to get his clients public work completed on time and within budget.

Site Civil

Warren Thompson, PE, RLS (Tucson)

Warren has 41 years of project management and civil engineering design experience. His major field of expertise is in providing consulting engineering services for land development of recreational, single-family, multi-family, commercial, governmental, and industrial projects. His project experience includes plans and specifications for recreational centers, offices, restrooms, comfort stations, parking lots, and community facilities. Design experience consists of utilities, potable water and wastewater systems, site improvements, and grading, paving, and drainage plans. Development projects range in size from 1-acre to 915-acre parcels.

Warren is proficient in re-zonings, tentative and final plats, development plans, and improvement plans.

Warren also served as part of a core group of stakeholders who worked with the City of Tucson Manager's office to redesign and create a streamlined development plan review process. He is a member of the Pima County Wastewater Management Oversight Committee, the Pima County Wastewater Management Engineers Standards Committee, the Pima County Department of Environmental Quality Advisory Council, as well as numerous city, county, and town committees for development policy reviews, ordinance reviews, and oversight reviews.

Tricia Cook, PE (Phoenix)

Tricia is a project engineer with more than 31 years of experience in design and construction management of civil projects and has an established record of delivering projects within budget and on schedule. Stantec has designed more reaches of the Valley light rail than any other engineering consultant — Tricia has been the lead for utility relocations on all of those projects. She has recently completed the design, construction, and engineering services for the NW Extension METRO light rail project, which is located on 19th Avenue in Phoenix. She was also the project manager/lead engineer for the water main replacement projects completed for the City of Phoenix between 2002 and 2005.

Transportation

Bill Ferris, Jr., PE (Phoenix)

Bill has been with Stantec for 26 years and has been responsible for the management, planning, and design of numerous transportation improvement projects from rural/urban arterials to expressways and interchanges. In total, he has led design teams on 30 capital projects totaling over \$300 million in construction costs. His recent responsibilities include the management of design for the expansion and modernization of the Mariposa Land Port of Entry (\$156M) and management of three sequential construction contracts for a \$140 million system interchange and expressway reconstruction project in Steuben County, New York.

Douglas Moseke, PE (Tucson)

Douglas serves as Transportation Project Manager for Stantec where he has been a key part of the Transportation team for more than 16 years. He focuses on providing context sensitive design processes and sustainable solutions that are essential elements of civil engineering. He understands that these elements must be incorporated at the inception of the project and continuously addressed through final design.

Doug possesses a breadth of ability and experience ranging from project management to project design and planning. His project experience comprises transportation improvement projects ranging from urban arterials to pedestrian enhancements, multiuse paths, and roundabouts. Additionally, he has been involved in all phases of the public involvement and outreach and has worked extensively with clients in effectively presenting concepts to the public and regulatory authorities for their consideration and acceptance.

He has successfully worked with clients throughout the State from as far south as Yuma to as far north as Page. His recent responsibilities include the management of a three-mile, three phase project with the City of Scottsdale along Cactus Road from the Loop 101 to Frank Lloyd Wright Boulevard.

Sheina Hughes, PE (Phoenix)

With more than 30 years of experience in the engineering and construction industry, Sheina is a veteran project manager. A former employee, Sheina has rejoined Stantec after more than a decade with the City of Chandler, serving in various roles, including City Engineer. As account manager she brings a wealth of experience from her recent position as City Engineer and was responsible for the delivery of a wide variety of roadway, water, wastewater, reclaimed water, parks, and buildings. She was also responsible for the construction oversight of all types of facilities. This recent experience has provided her with a unique perspective into the project management and municipal contracting process from the client's perspective. She is familiar with the budget

and schedule constraints often faced by municipal clients, as well as the various ways to overcome these challenges.

Electrical/Mechanical

Martin Armenta, PE, RCDD, LEED® AP (Phoenix)

Martin is a professional engineer with 23 years of electrical engineering and project management experience. His expertise includes the design of medium voltage (2.4kV - 46kV) power distribution, low voltage (120V - 600V) power distribution, exterior area lighting, street lighting, interior lighting, grounding, traffic signals, lightning protection, fire alarm, telecommunications, access control, closed circuit television, integrated security, intercom, public address, distributed control systems, and PLC/HMI control systems for design-build, CMAR, and conventional delivery projects.

He is directly involved in all aspects of design, including the preparation of specifications and cost estimates. He also possesses general contracting, construction management, and construction administration experience to complement his design experience. His experience in operations, project, and quality management round out his skill set. Martin's Registered Communications Distribution Designer (RCDD) credential is the most widely recognized credential for knowledge and experience in telecommunications system design.

John Theiss, IAEI (Tucson)

John has 31 years of experience, the last 21 with Stantec, and is responsible for the technical quality of all mechanical, plumbing, electrical, and structural engineering projects produced in the region. John performs detailed quality control, interdisciplinary coordination, and constructability reviews of civil, architectural, structural, mechanical, plumbing, and electrical drawings and specifications. His responsibilities include project management, client relations, and oversight of the design process and construction administration.

Patrick McKenna, PE, LEED® AP (Tucson)

Patrick has 14 years of mechanical engineering and plumbing design experience, with an emphasis on energy efficient and environmentally conscious designs. His expertise includes life cycle cost, energy consumption and building energy envelope analyses, as well as the design of HVAC, plumbing and medical gas systems. He also has experience with applying his mechanical and plumbing system knowledge to water treatment and wastewater facilities and collaborating with all other engineering disciplines to create a well thought-out facility for the end users.

Patrick approaches his design with an emphasis on energy efficient and environmentally conscious designs without providing unnecessary system complexity for the end user. His expertise includes life cycle cost analyses, energy

consumption and building energy envelope analyses, load calculations, as well as the design of mechanical and plumbing systems. He is also experienced in the creation of as-built drawings, load calculations, cost estimating and scheduling.

Plan Review/Code Compliance

Bert Stone, CBO (Phoenix)

Bert has over 38 years in the building construction and administration industry, including bid preparation, staff supervision, code compliance, plan review, teaching, and special projects. He has extensive experience in single and multi-family, multi-story, townhomes, apartments, office buildings, hotels, hospitals, semiconductor plants, industrial occupancies, warehouses, storage facilities, fire stations and administration buildings, schools, colleges, malls and shopping centers, retirement facilities, recreational facilities, manufactured dwelling park, fisheries, recreational vehicle park, churches, amusement parks, automotive centers, and garages and service stations. His additional responsibilities have included fire and life safety plan review, plumbing inspections and reviews, mechanical inspections and reviews, energy inspections and reviews, accessibility inspections and reviews, electrical, and other civil inspections as required to achieve compliance with all applicable state and local jurisdictional rules and regulations.

Geological

Marty Minter, PG, RG, CRS, CEM (Tempe - Elna Rae)

As a Professional Geologist (PG), Certified Remediation Specialist (CRS), and Certified Environmental Manager (CEM), Marty has more than 23 years of broad environmental experience with expertise in Phase I and II assessments, site characterization, remediation, risk assessment, low threat closure, Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Resource Conservation and Recovery Act (RCRA), landfills, petroleum sites, permitting, reporting, geographic information systems (GIS), groundwater statistical analysis, project management, business development, and staff mentoring. He has managed a wide range of environmental projects including numerous soil and groundwater characterization/remediation projects for hazardous waste sites throughout Arizona, California, Illinois, and Nevada. Marty works closely with regulatory agencies on municipal, county, state, tribal, and federal levels to promote adherence to negotiated clean-up requirements. Prior to working in the environmental industry, he worked in the petroleum field for several years.

Jill Hankins, PWS (Phoenix)

Jill specializes in wetland delineations, wetland mitigation, and **Section 404** permitting. She has been listed by the Society of Wetland Scientists as a PWS since 2012 and she has been listed by the US Army Corps of Engineers (USACE) as a certified consultant since 1999. She is proficient in streamlining the 404 process to meet project timelines by preparing mitigation plans that are acceptable to both the client and the USACE. She is also certified by the US Fish and Wildlife Service (USFWS) to complete surveys for Utah prairie dog, southwestern willow flycatcher, and Mexican spotted owl. She has authored numerous Biological Assessments/Biological Evaluations (BA/BE) and conducted species-specific surveys for several sensitive wildlife and plants. She is certified with the Arizona Game & Fish Department to complete burrowing owl surveys. She is proficient in identifying applicable mitigation measures and moving projects through the Section 7 consultation process. Jill is also proficient in scoping and staging projects for NEPA compliance. She has worked on projects from initial scoping through drafting the Finding of No Significant Impact (FONSI) for the Forest Service, BLM, Federal Emergency Management Agency, USACE, Utah Department of Transportation (UDOT), and Rural Development.

Kim Marsh (Phoenix)

Kim has over 15 years of experience in geology, water resources, mining, environmental science, and application of the Clean Water Act (CWA), Safe Drinking Water Act (SDWA) and Resource Conservation and Recovery Act (RCRA). Kim's overall experience includes program and project management, interpretation and analysis of environmental laws and regulations, financial analysis, policy development and implementation, environmental guidance development and implementation, and business analysis and business requirements definition. She has over six years of direct experience with the evaluation of leaking underground storage tank (LUST) site assessments and soil and groundwater remediation activities and verification of project costs. She also has over six years of experience with the Federal Clean Water and Drinking Water State Revolving Fund (SRF) programs, including assisting the U.S. Environmental Protection Agency (EPA) and states with the implementation of the American Recovery and Reinvestment Act (ARRA) of 2009 for the SRF programs.

Landscape Architecture

Galen Drake, RLA, CPESC, LEED® AP (Phoenix)

As a professional landscape architect in Arizona for nearly 30 years, Galen has a wide range of experience and knowledge of local conditions in regard to plant materials, irrigation systems, and construction techniques. In addition, he has experience in the environmental inspection and administration for large-scale rural highway projects. His experience has included salvage of native vegetation, seeding and revegetation, rock sculpting and slope contouring, erosion and sediment control, and NPDES compliance.

Galen's projects involve numerous aspects of site development, including site analysis and design, grading and drainage, planting and irrigation design, construction documents, cost estimating, and construction administration and inspection. His extensive experience has also given him a thorough knowledge of local conditions in regard to plant materials, irrigation systems, and construction techniques.

Land Surveying

David Hill, RLS (Tucson)

David has 40 years of experience in the preparation of subdivision plats, boundary surveys, ALTA surveys and legal descriptions, together with supervision of topographical surveys (by both ground and aerial methods), construction staking, as-built surveys, and terrestrial scanning projects. Recent projects include Tucson International Airport Terminal Apron Improvements (topography and scanning), Rosemont Copper Mine (topography, boundary surveys, ALTA surveys, right-of-way surveys and legal descriptions), I-10 Widening, Ruthrauff Road to Prince Road (construction staking) and Rancho Sahuarita Master Planned Community (topography, boundary surveys, legal descriptions, subdivision plats, construction staking and as-built surveys). In addition to the above, Dave acts as project manager for all survey projects in the Tucson office.

Environmental

Bob Larkin, RPA, AICP (Phoenix)

Bob manages the Environmental Planning and Archaeology group for Stantec's Phoenix office and has over 16 years of experience performing and managing the preparation of Phase I and Phase II environmental site assessments. The assessments have all been performed to ASTM standards. He has either prepared or managed the preparation of more than 100 NEPA Environmental Assessments and Environmental Impact Statements. Bob has also prepared or managed the preparation of over 300 reports of archaeological surveys and excavations.

Theresa Jones (Phoenix)

Theresa has 18 years experience in environmental consulting and management. She has managed and conducted corrective action programs in Arizona, California, New Jersey, New Mexico, New York, Pennsylvania, Rhode Island, Texas, Utah, the Salt River Pima-Maricopa Indian Community, and the Navajo Nation. Theresa's client base has ranged from major oil companies to local school districts. Her combined background in the geological and environmental science fields has been instrumental in executing an interdisciplinary approach to defining and resolving a wide range of environmental concerns. Based on education and experience, her ability to make critical decisions based upon observations and analytical data has proven invaluable in reducing project costs without compromising the integrity of the projects that she has managed. These abilities have made Theresa instrumental not only in managing and conducting corrective action programs, but also in obtaining site closure and maintaining a high level of client satisfaction.

Louis Thanukos, PhD (Tempe - Elna Rae)

Dr. Thanukos has over 30 years experience in the regulatory and technical aspects of air quality. As a Senior Environmental Scientist at Arizona Public Service Company (APS), he was responsible for the permitting of a coal-fired generating unit subject to the Prevention of Significant Deterioration (PSD) requirements, and operation of ambient air, meteorological, and visibility monitoring programs. Upon entering the consulting industry, Louis has coordinated many permitting projects including major and minor New Source Review construction permits, Title V and non-Title V operating permits, and Significant and Minor permit revisions to existing permits. His regulatory experience includes seminars on the state and federal permitting process for air emission sources, and working with state and local regulatory agencies in Arizona, Colorado, Idaho, Nebraska, Nevada, New Mexico, and Utah. His industry experience includes but is not limited to the electrical utility industry, Portland cement plants, lime plants, open pit mines, steel mini-mills, metal and paper recycling industries, soil remediation facilities, furniture, and other coating industries.

Mannie Carpenter, PE (Tempe - Elna Rae)

Mannie has over 30 years of professional experience and is a registered professional engineer in Arizona in the environmental discipline. He has established excellent working relationships with clients and state and county regulatory agencies, mostly in his native Arizona. He has worked for clients and employers in the mining, electric generation, manufacturing, and waste disposal industries. Some of his regulatory/air quality-related projects include preparation of Title V and Non-Title V air quality permit applications for non-metallic mining operations, aerospace manufacturing facilities, seed oil processing

facilities, pharmaceutical research facilities, bio-fuels manufacturing facilities, pesticide formulation facilities, and incinerators. He has conducted hundreds of air quality emissions tests for engineering and regulatory compliance, including testing of many non-traditional emission sources that have required development and approval of one-of-a-kind test methodologies. He also has prepared Tier II, Form A, and Form R reports for industrial clients since the inception of the Emergency Planning and Community Right to Know Act (EPCRA). His experience includes groundwater protection and monitoring; stormwater pollution prevention; hazardous and radioactive waste management; environmental impact monitoring studies for a nuclear power plant; landfill permitting; and chemical usage database development and management. Mannie has served as President of the Environmental Professionals of Arizona, is a member of the Air and Waste Management Association, and represents Valley Forward on the Maricopa Association of Governments Air Quality Technical Advisory Committee.

Construction Management/ Administration

Jim Van Houten, PE (Phoenix)

Jim has 31 years of experience in construction administration/management, project inspection, and materials testing on a variety of projects. He performed construction administration, construction observation, and material testing of airport Portland Cement Concrete paving reinforced concrete, structural masonry, structural steel, soils fill control, asphalt paving, roof construction, concrete batch plants, pre-stressed concrete, electrical, mechanical, fireproofing, structural welding, high-strength bolted connections, structural slabs, and continuous and isolated spread footings. Jim is also experienced with many alternate project delivery methods, including design-build and CM@Risk.

Richard Bigelow (Tucson)

Richard has 20 years of experience engineering design as well as in construction administration, inspection, and observation in both public wastewater collections systems within new development and as a Pima County Regional Wastewater Reclamation Department representative for Capital Improvement Projects (CIP). His experience with public sewer construction within new developments includes maintaining shop drawings, job reports, and construction permits; ensuring proper construction techniques such as depth, bedding, pipe joining, line and grade, shading, and backfill; verifying adequate utility separation; ensuring proper HCS construction; observing manhole base construction; mirror, mandrel, and pressure testing pipe segments; vacuum testing manholes; and ensuring manhole rings and covers established at finished grade. Richard is certified by the American Concrete

Institute as a Concrete Field Testing Technician - Grade 1 and by the Arizona Technical Testing Institute as an ATTI Field Technician. He is also certified by National Association of Sewer Service Companies to practice pipeline assessments, manhole assessments, and lateral assessments.

Mining

Mel Lawson (Tempe - Broadway)

Mel is a Mining Engineer with 43 years of experience in domestic and international mine management, with an emphasis on underground/surface mining operations and project and construction management, including 20 years in senior operations and project management roles. He has strong operational and technical abilities with hands-on experience in supervision, safety, permitting, mine development, feasibility, contract preparation and execution, project and construction management, project start-up, policy development, and administration.

Mike Peden, PE (Tempe - Broadway)

As Manager of Material Handling for Stantec's US & International Mining group, Mike is actively involved with numerous mine feasibility and design projects. He has 26 years of experience in the base metals, uranium, and potash mineral processing industries above ground and underground. He has assumed project management, engineering, lead mechanical, and construction supervision roles on many projects in underground mining, surface concentrate processing operations, refineries, and smelters.

Mike's experience involves project management and engineering in all aspects of detail design, equipment layouts, equipment selection, cost estimating, scheduling, construction management, and commissioning. He is a system design specialist in underground crushing plants, heavy-duty material handling systems, mine dewatering systems, paste backfill plants, slurry pumping, and concentrator processing equipment. Mike has assumed various roles within his career such as Chief Mechanical Engineer, Manager of Engineering, Operations Manager, and Project Manager.

How we do it

Stantec's approach to meet the needs of ADOA will be patterned after the successful approaches we have developed and refined over the years while providing services for similar on-call contracts. This experience includes the incorporation of project management tools and techniques, a thorough and consistent Quality Assurance/Quality Control (QA/QC) program, maintaining open and constant communication between all involved parties, and assigning our most experienced personnel to the proposed project.

Management Team

Stantec's efforts on this contract will be lead by Scot Schlund, PE. Once awarded a project/task, Scot will work with local office management to determine the best project team for that particular task order. Our Arizona offices are led by an experienced management team who are actively involved in management, design, and quality control of each project completed within their areas of responsibility. Their direction ensures that our projects are adequately budgeted and staffed throughout the life of the project. They attend partnering meetings with the client, design team, and affected stakeholders during development of the project and provide experienced input and expertise relating to specific project criteria.

Capacity

With over 350 Arizona based staff members, Stantec has the capacity to complete any task we may be assigned. To ensure that we can respond rapidly to your requests and that all project tasks will be completed on schedule, current and expected workloads will be reviewed for each team member prior to project assignments.

Quality Management System

Stantec has a formal quality management system in use across the organization which is registered to the ISO9001:2008 Quality Management standard. The quality management system promotes quality practices across the organization with the goal of:

- Reducing the risk and consequences of design errors;
- Helping us grow by promoting reliable processes;
- Improving productivity and efficiency;
- Promoting the quality and reliability of our services;
- Improving the financial performance of our operations;
- Increasing client confidence and loyalty; and
- Supporting regulatory compliance.

Cost Control

A thorough understanding and agreement on the scope of services is the first step of our design services cost control process. During the contract negotiation phase, we will work closely with the client to prepare a detailed scope of services, estimated work hours for each task, labor cost, and other direct costs. Additionally, we will work with the client's staff to identify project budgetary limitations associated with the construction costs, administrative efforts, indirect project costs, and other project constraints that would affect these issues during the project-scoping phase. This depth of understanding aids us in determining how we can best meet the client's needs while maintaining the project budget.

Schedule Control

The project or task schedule is a valuable tool for both the determination of the progress of work and to assist with budgetary controls. We will develop written project work plans identifying the goals of each project. In addition to the work plan, a design schedule is developed to monitor progress and manpower loading. Stantec uses Microsoft Project to monitor progress relative to the original schedule. Major milestones and critical dates are monitored against progress and adjustments are made to the project commitment as necessary.

Value Engineering

As an integral part of the design process, Stantec uses value engineering (VE) to ensure the most appropriate, efficient, and cost effective systems are incorporated into every project. VE analyzes the functional, aesthetic, and long-term operational issues in the context of budget, schedule, and constructability. It scrutinizes all components of a project from a variety of viewpoints, modifying or eliminating elements that add cost without contributing to functionality, efficiency, or form. The most successful VE programs are multi-disciplined and comprise all planning and design stages— programming, schematic design, design development, contract document, and 95% completion. Formal workshops are held at each stage and documented for use by all design and construction team members. This ensures that the team clearly understands the owner's objectives and the implementation reflects the design intent.