

DEFINITIONS

Architect Services, Engineer Services, Land Surveying Services, Assayer Services, Geologist Services and Landscape Architect Services: Those professional services within the scope of the practice of those services as provided in ARS § 32-101.

Branch Office: A geographically distinct place of business or subsidiary office of a firm that has a key role on the team.

Discipline: Primary technical capabilities of key personnel, as evidenced by academic degree, professional registration, certification, and/or extensive experience.

Firm: Defined in ARS § 32-101(B.19.).

Key Personnel: Individuals who will have major contract responsibilities and/or provide unusual or unique expertise.

SPECIFIC INSTRUCTIONS:

1. Complete this form for each branch office seeking work under this RFQ.
 - a. – e. **Firm (or Branch Office) Name and Address.** Self-explanatory.
 - f. **Year Established.** Enter the year the firm (or branch office, if appropriate) was established under the current name.
 - g. **Ownership.**
 - (g1). *Type.* Enter the type of ownership or legal structure of the firm (sole proprietor, partnership, corporation, joint venture, etc.).
 - (g2). *Small Business Status.* A firm is a small business if the firm has less than 100 employees **or** has gross revenues of \$4 million or less.
 - h.-j. **Point of Contact.** Provide this information for a representative of the firm that the Customer can contact for additional information. The representative must be empowered to speak on contractual and policy matters.
 - k. **Name of Firm.** Enter the name of the firm.
2. **Employees by Discipline.**
 - a. Select disciplines from the List of Disciplines (Function Code) listed on Page 3 of 4 Instructions. For employees that do not qualify for any of the disciplines, select Other. *Note: The intended searchable database indicated in the RFQ will be populated from the Qualifications Form I Excel attachment only.*
 - b. Each person can be counted only twice; once for his/her primary function and once for his/her secondary function. Primary and secondary functions should be indicated by including a "P" or an "S" in column b after the Description Title is given.
 - c-d. If the form is completed for a firm (including all branch offices), enter the number of employees by disciplines in column c. If the form is completed for a branch office, enter the number of employees by discipline in column d and for the firm in column c.
3. **Profile of Firm's Experience and Annual Average Revenue for Last Year.**
 - a. Enter the approximate number of projects the firm (or branch) has done attributable by Profile Code listed on Page 3 of 4 Instructions over the last year.
 - b. Enter the appropriate Profile Codes from Instructions Pages 3 of 4 that represent the type of work the firm (or branch) has done over the last year.
 - c. Using the Revenue Index Number on Page 3 of 6 Form, indicate the approximate revenue the firm has

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earned over the last year per Profile Code entered into the table.

4. **Resumes of Key Personnel Proposed for This Contract.** Complete this section for each key person who will participate in this contract.
 - a. Self-explanatory.
 - b. Self-explanatory
 - c. Total years of relevant experience (block c1), and years of relevant experience with current firm, but not necessarily the same branch office (block c2).
 - d. Name, City and State of the firm where the person currently works, which must correspond with one of the firms (or branch office or a firm, if appropriate) listed in Section 1.
 - e. Provide information on the highest relevant academic degree(s) received. Indicate the area(s) of specialization for each degree.
 - f. Provide information on current relevant professional registration(s) and in which State(s) they are current.
 - g. Provide information on any other professional qualifications relating to this contract, such as education, professional registration, publications, organizational memberships, certifications, training, awards, and foreign language capabilities.
 - h. Provide information on no more than five (5) projects in the last year which the person had a significant role that demonstrates the person's capability relevant to her/his proposed role in this contract. These projects do not necessarily have to be any of the projects presented in Section 5 for the project team if the person was not involved in any of those projects or the person worked on other projects that were more relevant than the team projects in Section 5. Use the check box provided to indicate if the project was performed with any office of the current firm. If any of the professional services or construction projects are not complete, leave Year Completed blank and indicate the status in Brief Description and Specific Role.

5. **Example Projects Which Best Illustrate Firms Qualification for this contract.** Select project where multiple team members worked together, if possible, that demonstrate the team's capability to perform work similar to that required for this contract. Complete one Section 5 for each project. List no more than five (5) projects.
 - a. Title and Locations of project or contract. For an indefinite delivery contract, the location is the geographic scope of the contract.
 - b. Enter the year completed of the professional services (such as planning, engineering study, or design), and/or the year completed if construction. If any of the professional services or the construction projects are not complete, leave Year Completed blank and indicate the status in Brief Description of Project and Relevance to This Contract (block f).
 - c. Project Owner or user, such as a government agency or installation, an institution, a corporation or private individual.
 - d. Provide the original budget or not to exceed dollar amount for the project.
 - e. Provide the Total Cost of the Project. If any of the professional services or construction projects is not complete, indicate the percentage complete and whether this project will be on budget, over or under budget.
 - f. Brief Description: Indicate scope, size, and length of project, principle elements and special features of the project. Discuss the relevance of the example project to this contract.

6. **Additional Information.** Use this section to provide additional information you feel may be necessary to describe your firm's qualifications for this contract.

7. **Annual Average Professional Services Revenues of Firm for Last 3 Years.** Complete this block for the firm or branch office for which this form is completed. In column a, enter an approximate percentage of total work attributable to State, Federal or Municipal Work. In column b, enter an approximate percentage of total work attributable to Non-Government work. Percentages should take into consideration work completed over the last 3 years.

8. **Authorized Representative.** An authorized representative of the firm or branch office must sign and date the completed form. Signing attests that the information provided is current and factual. Provide the name and title of the authorized representative who signed the form.

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List of Disciplines (Function Codes) for Question 7

Aeronautical Engineer	Environmental Engineer	Mining Engineer
Agricultural Engineer	Environmental Scientist	Nuclear Engineer
Archeologist	Fire Protection Engineer	Petroleum Engineer
Architect	Geodetic Surveyor	Photogrammetrist
Architectural Engineering	Geographic Information System Specialist	Project Manager
Biologist	Geological Engineer	Sanitary Engineer
CADD Technician	Geologist	Soils Engineer
Chemical Engineer	Hydrographic Surveyor	Structural Engineer
Civil Engineer	Hydraulic Engineer	Technician/Analyst
Construction Manager	Hydrologist	Transportation Engineer
Construction Inspector	Industrial Engineer	Water Resources Engineer
Control Systems Engineer	Landscape Architect	
Cost Engineer/Estimator	Mechanical Engineer	
Ecologist	Metallurgical Engineer	
Electrical Engineer		

List of Experience Categories (Profile Codes for Question 8)

Acoustics, Noise Abatement	Dredging Studies and Design
Aerial Photography; Airborne Data and Imagery Collection and Analysis	Design & Planning Structured Parking Facilities
Activity Centers	Detention Security Systems
Air Pollution Control	Disability / Special Needs
Airports; Nav aids; Airport Lighting; Aircraft Fueling	Ecological and Archeological Investigations
Airports; Terminals and Hangars; Freight Handling	Educational Facilities; Classrooms
Agricultural Development; Grain Storage; Farm Mechanization	Electrical Studies and Design
Animal Facilities	Electronics
Anti-Terrorism/Force Protection	Elevators; Escalators; People-Movers
Area Master Planning	Energy / Water Auditing Savings
Auditoriums and Theaters	Energy Conservation; New Energy Sources
Automation; Controls; Instrumentation	Environmental Impact Studies, Assessments or Statements
Barracks; Dormitories	Fallout Shelters; Blast-Resistant Design
Bridge Design: Bridges	Fire Protection
Cartography	Fisheries; Fish Ladders
Cemeteries (<i>Planning and Relocation</i>)	Forensic Engineering
Chemical Processing and Storage	Garages; Vehicles Maintenance Facilities; Parking
Child Care/Development Facilities	Gas Systems (<i>Propane; Natural, Etc.</i>)
Codes; Standards; Ordinances	Geodetic Surveying: Ground and Airborne
Cold Storage; Refrigeration and Fast Freeze	Heating; Ventilating; Air Conditioning
Commercial Building (<i>Low Rise</i>); Shopping Centers	Highways; Streets; Airfield Paving; Parking Lots
Community Facilities	Historical Preservation
Communications Systems; TV; Microwave	Hospital and Medical Facilities
Computer Facilities	Hotels; Motels
Conservation and Resource Management	<i>Housing (Residential, Multi-Family; Apartments; Condominiums)</i>
Construction Management	Hotels; Motels
Construction Surveying	Hydraulics and Pneumatics
Corrosion Control; Cathodic Protection Electrolysis	Hydrographic Surveying
Cost Estimating; Cost Engineering and Analysis; Parametric Costing; Forecasting	Industrial Buildings; Manufacturing Plants
Cryogenic Facilities	Industrial Processes; Quality Control
Construction Materials Testing	Industrial Waste Treatment
Dams (<i>Concrete; Arch</i>)	Intelligent Transportation Systems
Dams (<i>Earth; Rock</i>); Dikes; Levees	Infrastructure
Desalinization (<i>Process and Facilities</i>)	Irrigation; Drainage
Design-Build - Preparation of Requests for Proposals	Judicial and Courtroom Facilities
Digital Elevation and Terrain Model Development	Laboratories; Medical Research Facilities
Digital Orthophotography	Land Surveying
Dining Halls; Clubs; Restaurants	Landscape Architecture
	Libraries; Museums; Galleries

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Lighting (*Interior; Display; Theater, Etc.*)
Lighting (*Exteriors; Streets; Memorials; Athletic Fields, Etc.*)
Labs - General
Labs – Research – Dry
Labs – Research – Wet
LEED Accredited A/E
LEED Independent 3rd Party Building Commissioning
Mapping Location/Addressing Systems
Materials Handling Systems; Conveyors; Sorters
Metallurgy
Materials Testing
Measurement / Verification / Conservation Water Consumption Savings
Mining and Mineralogy
Medical Related
Modular Systems Design; Fabricated Structures or Components
Mold Investigation
Museums
Nuclear Facilities; Nuclear Shielding
Office Buildings; Industrial Parks
Outdoor Recreation
Petroleum and Fuel (*Storage and Distribution*)
Photogrammetry
Pipelines (*Cross-Country - Liquid and Gas*)
Phase I Environmental
Prisons & Correctional Facilities
Plumbing and Piping Design
Prisons and Correctional Facilities
Product, Machine Equipment Design Pneumatic Structures, Air-Support Buildings Power Generation, Transmission, Distribution Public Safety Facilities
Radar; Sonar; Radio and Radar Telescopes
Radio Frequency Systems and Shielding's
Railroad; Rapid Transit
Recreation Facilities (*Parks, Marinas, Etc.*)
Refrigeration Plants/Systems
Rehabilitation (*Buildings; Structures; Facilities*)
Research Facilities
Resources Recovery; Recycling
Roof Infrared Imaging to Identify Water Leaks

Roofing
Safety Engineering; Accident Studies; OSHA Studies
Security Systems; Intruder and Smoke Detection
Seismic Designs and Studies
Sewage Collection, Treatment and Disposal
Soils and Geologic Studies; Foundations
Solar Energy Utilization
Solid Wastes; Incineration; Landfill
Special Environments; Clean Rooms, Etc.
Structural Design; Special Structures
Surveying; Platting; Mapping; Flood Plain Studies
Sustainable Design
Swimming Pools
Storm Water Handling and Facilities
Specifications Writing
Toxicology
Testing and Inspection Services
Traffic and Transportation Engineering
Topographic Surveying and Mapping
Towers (*Self-Supporting and Guyed Systems*)
Tunnels and Subways
Traffic Studies
Transportation
Urban renewals; Community Development
Utilities (*Gas and Steam*)
Value Analysis; Life-Cycle Costing
Warehouse and Depots
Water Resources; Hydrology; Ground Water
Water Supply; Treatment and Distribution
Wind Tunnels; Research/Testing Facilities Design
Waste Water Treatment Facility
Water Well Rehabilitation; Water Well Work
Zoning; Land Use Studies

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

1. REVISED ADSPO13-00003465: Annual Request for Qualifications

a.	FIRM (OR BRANCH OFFICE) NAME:	Cardno ATC
b.	FIRM (OR BRANCH OFFICE) STREET:	9185 S. Farmer Avenue, #111
c.	FIRM (OR BRANCH OFFICE) CITY:	Tempe
d.	FIRM (OR BRANCH OFFICE) STATE:	Arizona
e.	FIRM (OR BRANCH OFFICE) ZIP CODE:	85284
f.	YEAR ESTABLISHED:	1997
(g1).	OWNERSHIP - TYPE:	Corporation
(g2)	OWNERSHIP - SMALL BUSINESS STATUS:	
h.	POINT OF CONTACT NAME AND TITLE:	Phillip Schneider, Branch Manager
i.	POINT OF CONTACT TELEPHONE NUMBER:	(480) 355-4658
j.	POINT OF CONTACT E-MAIL ADDRESS:	phillip.schneider@cardno.com
k.	NAME OF FIRM <i>(If block 1a is a branch office):</i>	Cardno

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4. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT (Complete one Section 4 for each key person.)

a. NAME Girard (“Ric”) Morgan, P.G.	b. ROLE IN THIS CONTRACT Geologist	c. YEARS EXPERIENCE	
		1. TOTAL 40	2. WITH CURRENT FIRM 10
d. FIRM NAME AND LOCATION (City and State) Cardno ATC; Tempe, Arizona			
e. EDUCATION (DEGREE AND SPECIALIZATION) B.S., Geology		f. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE) Geologist (AZ, CA, ID, WY, OR, GA, WA)	
g. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)			

H. RELEVANT PROJECTS

1)	(1) TITLE AND LOCATION (City and State) Site Characterization, Risk Assessment, Remedial System Design/Install, Remedial System O&M, throughout Arizona	(2) Year Completed	
		Professional Services Ongoing	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Provided technical oversight and program management for a variety of projects including Phase I Environmental Assessments, tank and piping removals, preliminary underground storage tank (UST) release assessments, site characterization activities and remedial action programs. Site assessment investigations included comprehensive drilling and soil sampling programs, design and installation of groundwater monitoring, vapor extraction and air sparge wells and conducting various pilot tests.		
2)	(1) TITLE AND LOCATION (City and State) Phillips 66 Remediation, throughout Arizona	(2) Year Completed	
		Professional Services Ongoing	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Worked closely with Site Manager and ADEQ to develop rules which allow the agency to close sites when certain criteria are met, even though dissolved phase chemicals of concern exceed their respective Aquifer Water Quality Standards and a guidance document for an ADEQ developed software program for a Tier II Risk Assessment evaluation for impacted soil.		
3)	(1) TITLE AND LOCATION (City and State) Broadway-Pantano WQARF Site, Tucson, Arizona	(2) Year Completed	
		Professional Services 2003	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Principal Geologist for the remedial investigation conducted under the direction of ADEQ at the Broadway-Pantano Water Quality Assurance Revolving Fund (WQARF) Site. The site included an unlined closed municipal landfill covering approximately 130 acres and a solvent impacted groundwater plume extending about 1.5 miles downgradient of the former landfill.		
4)	(1) TITLE AND LOCATION (City and State) 40th Street and Indian School Road WQARF Site, Phoenix, Arizona	(2) Year Completed	
		Professional Services 2003	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Principal Geologist for preparation of an Early Response Action (ERA) Memorandum at the 40th Street and Indian School Road WQARF Site. After reviewing the data from previous investigations and results of groundwater sampling and monitoring activities, convinced ADEQ that further site investigations were not warranted.		
5)	(1) TITLE AND LOCATION (City and State)	(2) Year Completed	
		Professional Services	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE		

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4. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT (Complete one Section 4 for each key person.)

a. NAME David F. Laney, CHMM		b. ROLE IN THIS CONTRACT Senior Project Manager		c. YEARS EXPERIENCE	
				1. TOTAL 29	2. WITH CURRENT FIRM 1
d. FIRM NAME AND LOCATION (City and State) Cardno ATC; Tempe, Arizona					
e. EDUCATION (DEGREE AND SPECIALIZATION) B.S., Resource Development			f. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE)		
g. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.) Certified Hazardous Materials Manager Certification; Affiliations: Arizona Bar Association Environmental & National Resources Law Section; Arizona Hydrological Society; ASTM Technical Committee E50 Environmental Assessment, Risk Management and Corrective Action; Environmental Professionals of Arizona					
H. RELEVANT PROJECTS					
1)	(1) TITLE AND LOCATION (City and State) Broadway North Landfill, Tucson, Arizona			(2) Year Completed	
				Professional Services 2005	Construction (if applicable)
(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input type="checkbox"/> Check if project performed with current firm Responsible for directing a team of geologists and engineers responsible for sampling 25 existing 300-500 foot deep groundwater monitor wells, installing and sampling 18 new wells, and completing a remedial investigation for groundwater at the Broadway North Landfill.					
2)	(1) TITLE AND LOCATION (City and State) 52 nd Street NPS Site and 56 th Street WQARF Site, Phoenix, Arizona			(2) Year Completed	
				Professional Services	Construction (if applicable)
(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input type="checkbox"/> Check if project performed with current firm Work included coordinating the quarterly development and sampling of more than 150 groundwater monitor wells; prequalification, screening and selection of analytical laboratories; oversight validation of lab data for organic and inorganic contaminants; preparation of quarterly groundwater monitoring reports; an annual evaluation of the effectiveness (in terms of ability to achieve hydraulic containment of contaminants) of a 13 well groundwater extraction and treatment system; management of an excavation of TCE contaminated sludge and soil; and management of the design and implementation of a bench- and field-scale test of palladized iron.					
3)	(1) TITLE AND LOCATION (City and State) Arizona Army National Guard, Phoenix, Arizona			(2) Year Completed	
				Professional Services 2005	Construction (if applicable)
(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input type="checkbox"/> Check if project performed with current firm Responsible for site characterization and remediation/closure of 18 areas of historical chemical use at the Papago Park Military Reservation. Former land use of each site included fuel storage, waste storage, grenade training and skeet range training.					
4)	(1) TITLE AND LOCATION (City and State) Arizona Army National Guard, Safford, Arizona			(2) Year Completed	
				Professional Services 2005	Construction (if applicable)
(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input type="checkbox"/> Check if project performed with current firm Responsible for coordinating innovative remediation of contaminated soil and bullet fragments using vacuum truck technology at the Shooting Range at Safford Military Reservation. Upon completion of this work, soil samples were collected to confirm that the site was remediated to meet the State of Arizona residential Soil Remediation Levels and the United States Environmental Protection Agency Preliminary Remediation Goals for lead.					

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4. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT (Complete one Section 4 for each key person.)

a. NAME Jeremy Gniffke, R.G.	b. ROLE IN THIS CONTRACT Senior Project Manager	c. YEARS EXPERIENCE	
		1. TOTAL 15	2. WITH CURRENT FIRM 15
d. FIRM NAME AND LOCATION (City and State) Cardno ATC; Tempe, Arizona			
e. EDUCATION (DEGREE AND SPECIALIZATION) B.S., Hydro/Environmental Geology		f. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE) Geologist (AZ, CA, OR, WA)	
g. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)			

H. RELEVANT PROJECTS

1)	(1) TITLE AND LOCATION (City and State) ADEQ State Lead, Elfrida, Arizona	(2) Year Completed	
		Professional Services Ongoing	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Project manager for an investigation to determine current soil and soil vapor conditions at a LUST site through installation of seven soil borings and 10 temporary soil vapor probes. Designed, implemented and interpreted aquifer tests to evaluate hydraulic conductivity changes before and after conducting pneumatic and hydraulic fracturing pilot tests in a fine-grained aquifer present between 90 and 110 feet below ground surface.		
2)	(1) TITLE AND LOCATION (City and State) GRIC Department of Environmental Quality, Chandler, Arizona	(2) Year Completed	
		Professional Services Ongoing	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Management of a remedial investigation to characterize the vertical and lateral extent of a 2,000-acre dissolved-phase chlorinated solvent plume. Employed passive diffusion sampling techniques for all investigation chemicals of concern (volatile organic compounds, 1,4-dioxane and perchlorate), which resulted in adherence to project data quality objectives while providing substantial cost savings to client.		
3)	(1) TITLE AND LOCATION (City and State) FIBERS Public Supply Wells Superfund Site, Guayama, Puerto Rico	(2) Year Completed	
		Professional Services 2012	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input type="checkbox"/> Check if project performed with current firm Developed a scope of work and implemented a drilling program including the installation of over 40 groundwater monitor wells to enhance the conceptual site model and increase the efficiency and effectiveness of ongoing site remediation. Reviewed and evaluated existing site conceptual model and identified data gaps. Designed groundwater monitor well clusters to target discrete aquifers and vertically characterize dissolved phase volatile organic compounds and haloethers associated with synthetic fiber manufacturing and pharmaceutical production.		
4)	(1) TITLE AND LOCATION (City and State) Nick's Self Serve, Gila Bend, Arizona	(2) Year Completed	
		Professional Services Ongoing	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Reviewed historical site data and aerial photography to determine probable release locations on the vacant lot where a former service station had been demolished. Supervised the installation of 17 soil borings and collection of soil vapor samples. Utilized a drilling rig equipped with hollow stem augers and a Simulprobe™ sampling device.		

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4. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT *(Complete one Section 4 for each key person.)*

a. NAME Peter Rupal, P.E.	b. ROLE IN THIS CONTRACT Civil Engineer	c. YEARS EXPERIENCE	
		1. TOTAL 30	2. WITH CURRENT FIRM 1
d. FIRM NAME AND LOCATION <i>(City and State)</i> Cardno ATC; Tempe, Arizona			
e. EDUCATION <i>(DEGREE AND SPECIALIZATION)</i> B.A.Sc., Civil Engineering		f. CURRENT PROFESSIONAL REGISTRATION <i>(STATE AND DISCIPLINE)</i> Professional Engineer (AZ, CO)	
g. OTHER PROFESSIONAL QUALIFICATIONS <i>(Publications, Organizations, Training, Awards, etc.)</i> American Society of Civil Engineers (ASCE) American Public Works Association (APWA)			

H. RELEVANT PROJECTS

1)	(1) TITLE AND LOCATION <i>(City and State)</i> QA Testing Program at Denver International Airport, Denver, Colorado	(2) Year Completed	
		Professional Services 2013	Construction <i>(if applicable)</i>
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input type="checkbox"/> Check if project performed with current firm Served as Project Principal who was ultimately responsible for all technical and administrative aspects surrounding the operation of the City/County of Denver's on-site materials lab. This lab provided QA Testing on virtually all construction projects, air side and land side at the airport. Services included earthwork testing, concrete testing (compressive and flexural strength), asphalt testing, special inspections, and lab testing of construction materials, all for the purposes of acceptance or rejection.		
2)	(1) TITLE AND LOCATION <i>(City and State)</i> EP05 Project A and B Upgrades at the 91st Avenue WWTP, Phoenix, Arizona	(2) Year Completed	
		Professional Services 2013	Construction <i>(if applicable)</i>
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input type="checkbox"/> Check if project performed with current firm Project Manager for Project A which included new 72 inch to 96 inch diameter effluent lines, 84 inch dual force main, and electrical building. Project B included upgrades, improvements, and new elements at the treatment plant including odor control buildings, chemical buildings, primary and secondary sedimentation basins, aeration basins, influent/effluent channels, junction/splitter structures, grit basins, and piping.		
3)	(1) TITLE AND LOCATION <i>(City and State)</i> Tres Rios Ecosystem Restoration and Flood Control Project, Phoenix, Arizona	(2) Year Completed	
		Professional Services 2009	Construction <i>(if applicable)</i>
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input type="checkbox"/> Check if project performed with current firm Project Manager for the quality control testing and inspection which covered all earthwork and backfill operations, concrete and grout placement, shotcrete placement, soil cement mix design, reinforcing steel placement and epoxy anchor installation (including load testing).		
4)	(1) TITLE AND LOCATION <i>(City and State)</i> Central Mesa Light Rail Extension, Mesa, Arizona	(2) Year Completed	
		Professional Services 2012	Construction <i>(if applicable)</i>
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input type="checkbox"/> Check if project performed with current firm Project Manager for the project which included four station platforms on Main Street located to the east of Alma School Road, Country Club Drive, Center Street, and Mesa Drive, a Park and Ride Facility at LeSueur, embedded track, three traction power substations, OCS, street lighting and traffic signal poles, four signal buildings, landscaping, roadway/drainage reconstruction, deep excavation for offset manhole construction, and various utility relocation work. The alignment was primarily center-street-running with the overhead contact system poles between the tracks.		

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4. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT (Complete one Section 4 for each key person.)

a. NAME Kevin Miller, R.G., C.E.M.	b. ROLE IN THIS CONTRACT Geologist	c. YEARS EXPERIENCE	
		1. TOTAL 7	2. WITH CURRENT FIRM 7
d. FIRM NAME AND LOCATION (City and State) Cardno ATC; Tempe, Arizona			
e. EDUCATION (DEGREE AND SPECIALIZATION) B.S., Geology		f. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE) Geologist (AZ) Certified Environmental Manager (NV)	
g. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)			

H. RELEVANT PROJECTS

1)	(1) TITLE AND LOCATION (City and State) Circle K #1383, Springerville, Arizona	(2) Year Completed	
		Professional Services Ongoing	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Project Manager for site involving dual-phase extraction remediation system and groundwater monitoring. Three historical releases at the site. Approximate annual budget of \$150,000-\$200,000 during operation. Responsible for project financials and day-to-day tasks.		
	<input checked="" type="checkbox"/> Check if project performed with current firm		
2)	(1) TITLE AND LOCATION (City and State) North Central Aquifer Cleanup Gila River Indian Community, Arizona	(2) Year Completed	
		Professional Services Ongoing	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Project Geologist for site involving characterization of the lateral and vertical extent of a 2,000 acre chlorinated solvent plume. Performed passive diffusion groundwater sampling and oversaw the installation of multiple groundwater monitor wells.		
	<input checked="" type="checkbox"/> Check if project performed with current firm		
3)	(1) TITLE AND LOCATION (City and State) Former Conoco Station No. 28003 Las Vegas, Nevada	(2) Year Completed	
		Professional Services Ongoing	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Project Manager for site involving dual-phase extraction remediation system and groundwater monitoring using low-flow sample methods. Site is underlain by confining layer and groundwater plume extends offsite. Approximate annual budget of \$120,000-\$150,000		
	<input checked="" type="checkbox"/> Check if project performed with current firm		
4)	(1) TITLE AND LOCATION (City and State) Motorola 52nd Street WQARF Site, Phoenix, Arizona	(2) Year Completed	
		Professional Services 2008	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Project Geologist tasked with installation of soil borings for the collection of simultaneous soil and soil vapor samples to investigate the potential for vapor intrusion of chlorinated solvents into nearby buildings.		
	<input checked="" type="checkbox"/> Check if project performed with current firm		
5)	(1) TITLE AND LOCATION (City and State) Former Mine, Lynn Lake, Manitoba, Canada	(2) Year Completed	
		Professional Services 2012	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Supervised installation of culvert to connect holding ponds and approximately 400 meters of high density polyethylene pipe using global positioning system coordinates to locate the pipe intake in an optimal location. Approximately 121 million gallons were calculated to have been pumped for treatment during the initial pumping season of three and one-half of months.		
	<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 Edwin Vandegrift, R.G.	b. ROLE IN THIS CONTRACT Geologist	c. YEARS EXPERIENCE	
		1. TOTAL 21	2. WITH CURRENT FIRM 10
d. FIRM NAME AND LOCATION (City and State) Cardno ATC; Tempe, Arizona			
e. EDUCATION (DEGREE AND SPECIALIZATION) B.S., Earth Sciences, Focus: Geology		f. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE) Geologist (AZ, OR, WA)	
g. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)			

H. RELEVANT PROJECTS

	(1) TITLE AND LOCATION (City and State)	(2) Year Completed	
		Professional Services	Construction (if applicable)
1)	Broadway Pantano WQARF, Tucson, Arizona	2003	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Project Geologist for siting, permitting and installation oversight of 13 groundwater monitor wells to depths of >500 feet. Coordinated periodic sampling of well network (40+ wells).		
2)	East Central Phoenix WQARF, Phoenix, Arizona	2003	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Project Geologist for a multi-site project with chlorinated solvents in groundwater. Co-authored two Early Response Action Memos. Planned and coordinated investigatory soil borings and supervised groundwater sampling activities (including uploading to Agency database).		
3)	Historic Oil Field Sump Assessment/Remediation, Santa Maria, California	2004	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Project Geologist responsible for development of field sampling plan for 28-acre site historically utilized for oil production. Managed staff of 13 during execution of characteristic activities. Communication with both county and city regulators.		
4)	NorCal P66 Due Diligence Portfolio, Bay Area, California	2007	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Project Coordinator responsible for permitting/scheduling, regulatory inspection, coordination of a 30-site subset of a larger 120-site portfolio to establish baseline conditions prior to sale.		
5)	U-Haul Portfolio, Throughout United States	Ongoing	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Client Manager responsible for environmental risk management. Required coordination with local offices and subject matter experts, cost development, maintenance of budges, invoicing and overall client satisfaction. Approximately 30 active sites.		

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4. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT (Complete one Section 4 for each key person.)

a. NAME <p align="center">Julie M. Powers, REA</p>	b. ROLE IN THIS CONTRACT <p align="center">Environmental Scientist</p>	c. YEARS EXPERIENCE	
		1. TOTAL <p align="center">20</p>	2. WITH CURRENT FIRM <p align="center">9</p>
d. FIRM NAME AND LOCATION (City and State) <p align="center">Cardno ATC; Tempe, Arizona</p>			
e. EDUCATION (DEGREE AND SPECIALIZATION) B.S., Construction M.B.A., Business Administration		f. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE) <p align="center">Registered Environmental Assessor (CA)</p>	
g. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.) Arizona Bankers Association (ABA) Environmental Professionals of Arizona (EPAZ) Environmental Information Association (EIA)			
H. RELEVANT PROJECTS			
1)	(1) TITLE AND LOCATION (City and State) City of Phoenix Environmental On-Call, Phoenix, Arizona	(2) Year Completed	
		Professional Services <p align="center">Ongoing</p>	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Program Manager providing ESA services for various City departments such as Aviation, Engineering & Architectural Services, Streets, Public Works, Neighborhood Services and for the City Manager's Office. At present, over 210 Phase I ESAs have been completed on residential, various right-of-ways on retail, commercial, industrial and agricultural properties, and airport properties. <input checked="" type="checkbox"/> Check if project performed with current firm		
2)	(1) TITLE AND LOCATION (City and State) Arizona Oil Holdings Due Diligence, Throughout United States	(2) Year Completed	
		Professional Services <p align="center">Ongoing</p>	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE This work was performed as part of due diligence evaluations for real estate transactions. The Phase I ESAs included client and lender conference calls regarding project findings and recommendations. The Phase I ESA scopes typically included following the ASTM 05, AAI standard and lender requirements. Typically, the Phase I ESAs have been delivered within three weeks and fast track projects have been delivered in one to two weeks. <input checked="" type="checkbox"/> Check if project performed with current firm		
3)	(1) TITLE AND LOCATION (City and State) Arizona Public Service, Throughout Arizona	(2) Year Completed	
		Professional Services	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Served as the Project Scientist, primary report author and report reviewer for Phase I ESAs conducted at 14 electrical substations located throughout Arizona. Obtained project information, coordinated site visits, and provided information to staff geologists and engineers assigned to the project. The Phase I ESA process included: a site inspection documented by photographs; historic review of aerial photographs, city directories and topographic maps; interviews with regulatory agencies, service personnel, owners and/or owner representatives; federal and state regulatory agency database research; development of conclusions and recommendations; and, a comprehensive written report. <input type="checkbox"/> Check if project performed with current firm		
4)	(1) TITLE AND LOCATION (City and State)	(2) Year Completed	
		Professional Services	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input 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 Scott Thompson	b. ROLE IN THIS CONTRACT CMT Project Manager	c. YEARS EXPERIENCE	
		1. TOTAL 21	2. WITH CURRENT FIRM 3
d. FIRM NAME AND LOCATION (City and State) Cardno ATC; Tempe, Arizona			
e. EDUCATION (DEGREE AND SPECIALIZATION)		f. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE)	
g. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.) American Rock Products Association (ARPA) American Concrete Institute (ACI) Associated General Contractors of Arizona (AGC)			

H. RELEVANT PROJECTS

1)	(1) TITLE AND LOCATION (City and State) Bagdad Mine, Bagdad, Arizona	(2) Year Completed	
		Professional Services 2013	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Served as Project Manager for the contractor quality control testing and inspection at the Freeport McMoRan Bagdad Mine of a soil nail wall, flotation foundation, electrical transformer foundation, MCC building foundation, capacitor foundation, and blower foundation. Our testing and inspection on the soil nail wall included observing the drilled depths and angles of the soil nails to assure compliance with the plans and specifications. We also tested the grout used to fill the soil nails and monitored the quantities of grout used to fill each soil nail.		
2)	(1) TITLE AND LOCATION (City and State) ADOT On-Call Contract for Materials Testing, Throughout Arizona	(2) Year Completed	
		Professional Services Ongoing	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Performed materials testing and analysis of various highway construction materials under department's On-Call Materials Testing Program. Tested materials included soils, aggregates, Portland Cement concrete, Superpave, asphalt rubber and Marshall designed bituminous mixtures.		
3)	(1) TITLE AND LOCATION (City and State) Twin Peaks Road and North Puerto Blanco Drive, Ajo, Arizona	(2) Year Completed	
		Professional Services 2012	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Full-time quality control testing and observation services for the new construction of 1 mile of asphalt-paved two-lane Federal Highway Administration (FHWA) roadway Included placement of subgrade, utility trench backfill, aggregate base, asphalt concrete and minor structural concrete. Responsibilities included project setup, quality control plan review and submittal, scheduling of technician staff, report preparation and review, oversight of field and lab services and invoicing.		
4)	(1) TITLE AND LOCATION (City and State) ADOT Referee Contract, Throughout Arizona	(2) Year Completed	
		Professional Services Ongoing	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Performed asphaltic concrete materials testing for the ADOT Referee contract. This testing was performed when a contractor disputed test results for ADOT and requested a blind referee to be performed.		

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4. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT (Complete one Section 4 for each key person.)

a. NAME D.J. Peters		b. ROLE IN THIS CONTRACT CMT Project Manager		c. YEARS EXPERIENCE	
				1. TOTAL 17	2. WITH CURRENT FIRM 5
d. FIRM NAME AND LOCATION (City and State) Cardno ATC; Tempe, Arizona					
e. EDUCATION (DEGREE AND SPECIALIZATION) General Studies, ASU			f. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE)		
g. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.) American Rock Products Association (ARPA) American Concrete Institute (ACI) Associated General Contractors of Arizona (AGC) American Public Works Association (APWA)					

H. RELEVANT PROJECTS

1)	(1) TITLE AND LOCATION (City and State) City of Phoenix On-Call Soils and Materials Testing, Phoenix, Arizona	(2) Year Completed	
		Professional Services Ongoing	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Project Manager for City of Phoenix for On-Call Soils and Materials Testing Services for capital improvement projects. From December 2009 to Present, provided observation and testing during the placement of all native subgrade material, bedding material, Aggregate Base Course (ABC), concrete and asphalt for various projects throughout the city.		
2)	(1) TITLE AND LOCATION (City and State) SR303L-I-10/SR303L Project, Goodyear, Arizona	(2) Year Completed	
		Professional Services Ongoing	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE The work involves roadway excavation; construction of embankments; and placing aggregate base, PCCP, and asphaltic concrete. Also, this project includes cast-in-place post-tensioned box girder concrete bridges and one precast, pre-stressed concrete bridge.		
3)	(1) TITLE AND LOCATION (City and State) SR303L (Camelback Road to Glendale Avenue), Glendale, Arizona	(2) Year Completed	
		Professional Services Ongoing	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE This project consists of constructing a new freeway with two traffic interchanges at Bethany Home Road and Glendale Avenue. Work includes roadway excavation, placing embankments, Portland Cement Concrete Pavement and Asphaltic Concrete pavements, tow precast/prestressed Type V AASHTO girder bridges, a concrete-lined drainage channel, two reinforced concrete box culverts, and other related work. Cardno ATC is providing all the construction materials testing on all the related work.		
4)	(1) TITLE AND LOCATION (City and State) Taxiway A Reconstruction-Phase 2, Phoenix, Arizona	(2) Year Completed	
		Professional Services 2012	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE The pavement life of the taxiway has been expended and requires reconstruction. This was a federal-aid, multi-phased, multi-element construction project managed by Mr. Peters for Cardno ATC. The elements included 145,000 square yards of asphalt milling, 5,000 cubic yards of unclassified excavation earthwork, 108,000 square yards of earthwork subgrade preparation, over 11,600 square yards of Cement Treated Subgrade, 120,000 square yards of Aggregate Base Course and approximately 35,000 tons of plant-mixed bituminous material (P-403 & P-401 asphaltic concrete).		

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4. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT (Complete one Section 4 for each key person.)

a. NAME <p align="center">Phillip A. Schneider, P.E.</p>	b. ROLE IN THIS CONTRACT <p align="center">Mechanical Engineer</p>	c. YEARS EXPERIENCE	
		1. TOTAL <p align="center">27</p>	2. WITH CURRENT FIRM <p align="center">3</p>
d. FIRM NAME AND LOCATION (City and State) <p align="center">Cardno ATC; Tempe, Arizona</p>			
e. EDUCATION (DEGREE AND SPECIALIZATION) B.S., Mechanical Engineering M.B.A., Management		f. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE) <p align="center">Registered Mechanical Engineer (AZ)</p>	
g. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)			

H. RELEVANT PROJECTS

	(1) TITLE AND LOCATION (City and State) Broadway-Pantano WQARF Site, Tucson, Arizona	(2) Year Completed	
		Professional Service 2006s	Construction (if applicable)
1)	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Provided technical review of existing soil vapor extraction / air injection system at the Broadway North Landfill and assisted in the development of a Work Plan to increase its effectiveness. Provided technical review of the design and operation and maintenance plan of the Western Interim Groundwater Containment System for the dissolved place tetrachloroethylene (PCE) groundwater plume. Evaluated the need for and design of two Early Response Actions for containment of the PCE groundwater plume. <input type="checkbox"/> Check if project performed with current firm		
	(1) TITLE AND LOCATION (City and State) Morton Salt All Ponds Capacity Project, Glendale, Arizona	(2) Year Completed	
		Professional Services 2013	Construction (if applicable)
2)	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Project Manager to provide capacity calculations and figures for 12 evaporative ponds to produce salt to Morton Salt. Cardno ATC utilized survey data and AutoCAD drawings generated by Integra Engineering to calculate square footage (acreage) for each of the 12 ponds located at the site. Cardno ATC generated a table and 12 separate figures (one for each pond) showing gross acreage (top of sidewall perimeter), net acreage 1 (perimeter base of 1:1 sidewall slope; most likely existing conditions although not specifically surveyed) and net acreage 2 (perimeter base of 2:1 sidewall slope; proposed pond 3 design and ADEQ Aquifer Protection Permit P-100176 basis). <input type="checkbox"/> Check if project performed with current firm		
	(1) TITLE AND LOCATION (City and State) Morton Salt Pond 3 Liner Replacement, Glendale, Arizona	(2) Year Completed	
		Professional Services Ongoing	Construction (if applicable)
3)	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Project Manager responsible for removal and installing two crossover canals utilized to transfer salt brine from one pond to another. <input type="checkbox"/> Check if project performed with current firm		
	(1) TITLE AND LOCATION (City and State) Thermal Enhanced Vapor Extraction Pilot Study, Mesa, Arizona	(2) Year Completed	
		Professional Services 2010	Construction (if applicable)
4)	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Conducted a thermal enhanced vapor extraction pilot study for the jet fuel (JP-4) impacted subsurface, groundwater monitoring optimization, and incidental groundwater monitoring well installation at the former Williams Air Force Base under the federal contracts for over \$4M. <input type="checkbox"/> Check if project performed with current firm		

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

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

23. PROJECT OWNER'S INFORMATION

c. PROJECT OWNER	d. DOLLAR AMOUNT OF PROJECT	e. TOTAL COST OF PROJECT
City of Phoenix	< \$900,000	< \$900,000

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

Cardno ATC has an on-call contract with the City of Phoenix to perform materials testing and inspection services, laboratory and field testing and analysis, preparation of reports on construction materials and sampling for acceptance, when requested by the City of Phoenix Transportation Department. To date, Cardno ATC has completed or is working on 38 projects under this Contract. In addition, Cardno ATC supplements the City's Materials Laboratory on an "as needed" basis. Currently, Cardno ATC has a materials technician working full time in the City of Phoenix Materials Laboratory performing soils, aggregates, asphalt and concrete testing. Additionally, we have an equivalent materials technician that performs Hot Plant inspections at various plants around the valley that produce City of Phoenix Hot Mix Asphalt.

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

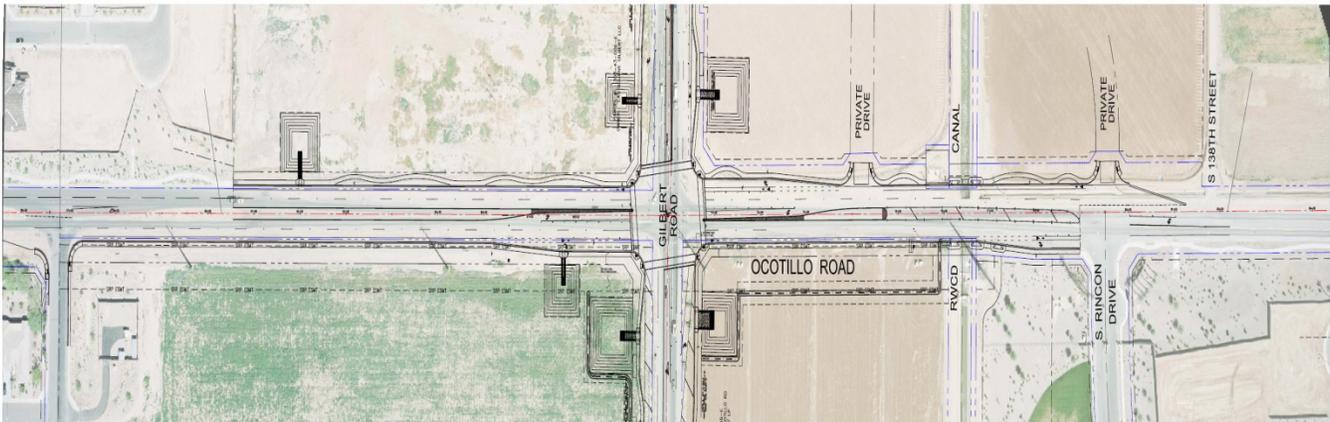
(Present no more than five (5) projects. Complete one Section 5 for each project.)

23. PROJECT OWNER'S INFORMATION

c .PROJECT OWNER Arizona Department of Transportation	d .DOLLAR AMOUNT OF PROJECT	e. TOTAL COST OF PROJECT
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f. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (include scope, size, and length of project)

Cardno ATC is performing CMT and Inspection for the Gilbert Road Improvements project which is located in Chandler, Arizona. This project consists of improving the one-mile segment of Gilbert Road to a full six-lane arterial section from Queen Creek Road to just south of Ocotillo Road. The project includes landscaped medians, paving, concrete bus bays, bike lanes, curb and gutter, sidewalks, and right and left turn lanes, street lighting and traffic signals. A significant part of this project also includes improvements to the Roosevelt Water Conservation District structures and equipment. It is a Construction Manager at Risk contract and will be constructed in phases. The construction duration for this project is expected to be 15 months.



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5. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT <i>(Present no more than five (5) projects. Complete one Section 5 for each project.)</i>
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23. PROJECT OWNER'S INFORMATION
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c. PROJECT OWNER City of Phoenix	d. DOLLAR AMOUNT OF PROJECT	e. TOTAL COST OF PROJECT
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f. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (include scope, size, and length of project)

ATC has been awarded the contract for Environmental Services On-Call Consulting Services for Fiscal Years 2012/13 & 2013/14 for the City of Phoenix Engineering and Architectural Services Department to perform Phase I EAs. These Phase I EAs include Phoenix Sky Harbor Airport Community Noise Reduction Program Properties (CNRP). A portion of the funding for the CNRP is derived from Federal American Recovery and Reinvestment Act (ARRA) monies. At present 85 Phase I ESAs have been completed on residential, various right-of-ways on retail, commercial, industrial and agricultural properties, and airport properties. The Phase I ESA scopes complied with the American Society for Testing and Materials (ASTM) 05 and All Appropriate Inquiry standard. Typically, the Phase I ESAs have been delivered within four weeks and fast track projects have been delivered in one to two weeks. A few sites have escalated to Phase II assessments.

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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.)

23. PROJECT OWNER'S INFORMATION

c .PROJECT OWNER Morton Salt Glendale Plant, Inc.	d .DOLLAR AMOUNT OF PROJECT \$30,000	e. TOTAL COST OF PROJECT
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f. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (include scope, size, and length of project)

Cardno ATC was contracted by the Project Owner to assess the current conditions of the compacted clay and geosynthetic material liner beneath an existing evaporation pond. On site personnel had observed a tear in the geosynthetic liner material and excessive erosion along a linear trend in the underlying compacted clay liner. Based on experience and an understanding of the subsurface geology of the western portion of the Salt River Valley, Cardno ATC personnel determined that the observed linear erosional feature could be related to an earth fissure. To evaluate the potential existence of a fissure Cardno ATC conducted an electromagnetic geophysical survey over the affected area and an area that did not visually appear to be affected. Evaluation of the geophysical survey results suggested the presence of an anomaly to a depth of approximately 10 to 20 feet below ground surface coincident with the observed linear erosional feature. To confirm the geophysical survey results and to provide additional subsurface data with respect to repairing the compacted clay liner, Cardno ATC advanced a series of soil borings, one of which extended to approximately 100 feet below ground surface. Visual inspection of the soil samples collected from the borings suggested the width of the fissure is relatively narrow and the depth of the fissure shallows to the southwest. Soil samples collected for geotechnical evaluation indicate that in situ material can be excavated and compacted to repair the evaporation pond. Under an additional scope of work, Cardno ATC provided construction oversight and materials testing for the clay and geosynthetic liner repair.

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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.)

23. PROJECT OWNER'S INFORMATION

c. PROJECT OWNER	d. DOLLAR AMOUNT OF PROJECT	e. TOTAL COST OF PROJECT
Gila River Indian Community	\$250,000	\$350,000

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

In 2004, dissolved phase industrial solvents (primarily trichloroethene and tetrachloroethene), 1,4-dioxane and perchlorate were discovered during periodic groundwater sampling activities at an existing network of groundwater monitor wells in the vicinity of an industrial park complex owned by the Gila River Indian Community (GRIC). The GRIC Department of Environmental Quality, Water Quality Program (WQP) contracted with Cardno ATC to conduct an area wide remedial investigation (RI). The goal of the RI was to determine the lateral and vertical extent of dissolved phase chemicals of concern (COC) in the saturated portion of the East Salt River Valley Upper Alluvial Unit sediments underlying an approximate four- to six-square-mile area; identify potential and/or likely source areas; and, assist in identifying potentially responsible parties (PRPs).

Due to budgetary constraints, Cardno ATC recommended and has followed a phased approach to complete the RI. The initial phase of the project involved historical research to identify previous and current tenants of the industrial park; installation of strategically located groundwater monitor wells to augment the existing well network; and, development of a cost-effective sampling plan to characterize the vertical extent of dissolved phase COC. The historical research identified, based on the apparent business activity, at least two potential contaminant source areas. Based on experience at sites exhibiting similar saturated zone stratigraphic characteristics, Cardno ATC advocated the use of passive diffusion bag samplers (PDBS), positioned at consistent vertical horizons relative to the ground surface, as an alternative to depth specific, low-flow sampling techniques to characterize the vertical extent of dissolved phase COC. Prior to initiating groundwater sampling activities utilizing PDBS exclusively, comparison sampling events were conducted using low-flow techniques and PDBS. Comparison of the laboratory analytical results of groundwater samples collected using both methodologies indicated no discernable difference and that the data quality objectives would not be compromised using the more cost-effective PDBS. Groundwater data collected at the newly installed wells and from existing monitor wells clearly identified two PRPs supplying the information GRIC needed to pursue enforcement action through the U.S. Environmental Protection Agency.

To date (2013) Cardno ATC has installed 15 groundwater monitor wells as part of this RI. Groundwater monitoring and depth-specific sampling is conducted by Cardno ATC on a periodic basis at 25 locations. Groundwater data collected during the execution of this RI indicates the vertical and horizontal extent of dissolved phase COC have been determined. Two distinct dissolved phase plumes, extending nearly two miles downgradient of the identified source areas, have been identified and delineated. Groundwater monitoring and sampling activities will continue in order to provide assurance that remedial activities currently underway at the source areas are effectively removing contaminant mass.

6. ADDITIONAL INFORMATION

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

The ATC Tempe office has provided Geotechnical Engineering, Construction Materials Testing (CMT), Special Inspection and Environmental services to private and public sector clients throughout Arizona since 1997. Our Geotechnical/CMT department provides testing and inspection services to assure materials utilized during construction meet quality specifications and integrity goals. ATC's Tempe office is staffed with experienced field, Laboratory and project management personnel ready to apply expertise to your project. The strength of over 70 professionals and the longevity of 15 years in Arizona signify our commitment to the construction services industry and our depth of local experience. ATC has an experienced staff with expertise in a wide range of Geotechnical/CMT services including concrete strength testing, preparing concrete/asphalt mix designs, masonry/grout testing, evaluating soils/aggregates, asphalt testing and more. These resources are complimented by a full service, in-house AASHTO accredited Laboratory and a fleet of 26 service vehicles, all based from our Tempe and Show Low offices. Each ATC technician is equipped with a laptop computer with remote wireless internet service to facilitate prompt delivery of test/inspection reports and to allow real-time Laboratory data to be transmitted to the field where timely decisions can be made. This helps clients make decisions based on test results, and helps keep projects on schedule, which translates into cost savings for our clients. ATC's materials testing Laboratory satisfies all American Association of State Highway and Transportation Officials (AASHTO) accreditation requirements and is listed as an Arizona Department of Transportation (ADOT) approved Laboratory. ATC's fully equipped Tempe Laboratory holds AASHTO Materials Reference Laboratory (AMRL), Cement and Concrete Reference Laboratory (CCRL) and ADOT accreditations and we participate in all applicable proficiency sampling programs.

GEOTECHNICAL ENGINEERING

Our geotechnical engineering services include foundation and other subsurface evaluations for sites. Geotechnical studies include development of recommendations for grading, excavation, slope stability and design of foundations. We provide recommendations for drainage, sub-drain design and other methods to handle ground water during and after construction, floor laboratory support, design and support of asphalt and concrete paving. We offer practical and cost-effective recommendations for your projects. Our reports provide the following information and engineering recommendations for a site:

- > Results of our field explorations and laboratory tests, describing the soil and groundwater conditions encountered
- > Recommendations for design of feasible foundation types, including spread footings, mat foundations, drilled caissons, other drilled piers and or driven piles
- > Estimated settlement for anticipated loadings
- > Evaluation of liquefaction potential
- > Frictional and passive values for the resistance to lateral forces
- > Recommendations for grading, subgrade preparation, backfilling and compaction
- > Recommendations for excavation and shoring design
- > Recommendations for temporary and permanent stability of slopes
- > Recommendations for pavement design and support
- > Analysis of soils to ascertain the presence of expansive, deleterious, chemically active or corrosive materials

ATC provides quality assurance testing and inspection during construction. The purpose is to determine whether geotechnical-related work for your project is performed in accordance with plans, specifications and the requirements of the governing agencies. Sometimes conditions encountered in the field do not correspond to plans, in these cases, our highly trained field personnel work with your design and construction team to promptly recommend any necessary modifications to the plans. We provide observation and testing services for:

- > Foundation Construction
- > Pile Driving Installation and Inspection
- > Shoring and Underpinning
- > Grading
- > Backfills
- > Embankment Construction
- > Sub-drain Systems
- > Soil Stabilization
- > Asphaltic concrete & Portland cement/concrete paving

Soil conditions, such as deep loose fills, can sometimes make building unfeasible in terms of cost and/or constructability. Applying ground modification methods can improve or strengthen the soil to provide better support for your building or structure. Ground modification can also be utilized for existing structures, to mitigate settlement, slope creep and other harmful soil conditions. ATC is experienced at developing recommendations for improving soil conditions. Ground modification methods include:

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- > Chemical Grouting
- > Compaction Grouting
- > Deep Dynamic Compaction
- > Vibro-Compaction
- > Vibro-Replacement

MATERIALS TESTING & SPECIAL INSPECTION

The most crucial stage of quality assurance and quality control is during construction and fabrication. Cardno ATC's services include testing of materials under established codes and standards, specialized examination of materials used in construction and other inspections as required by factors unique to each project. A measurement of quality must represent the potential of construction materials delivered, placed and properly installed to meet or exceed design specifications. It is imperative that technicians performing these tests and inspections are qualified to do so. Cardno ATC connects you to a nationwide network of qualified personnel with the knowledge skills and resources to keep your project on track, develop creative solutions to your most difficult challenges while meeting scope requirements.

Cardno ATC's local staff includes many qualified engineers, geologist and other scientific professionals. Engineering technicians and special inspectors perform the field and Laboratory tests under the supervision of a professional staff. Cardno ATC is known for the quality and reliability of our work and excellence in client service.

Cardno ATC maintains a staff of experienced, certified technicians and a special inspector which includes AWS/CWI nondestructive test certified special inspectors as well as ATTI, ACI certified engineering technicians. Our special inspectors routinely provide special inspection and testing in accordance with the Uniform Building Code (UBC) requirements. A brief list of inspection services include:

- > Reinforced Concrete before and during placement of structural reinforced concrete
- > Structural Welding during the welding of any member or connection that is designed to resist loads and forces required by the UBC
- > High strength bolting during installation and tightening of ASTM A325 and A490 bolts
- > Structural masonry during placement of masonry units, reinforcing steel, inspection of grout space and during grout placement
- > Spray Applied Fire Resistive Material during installation
- > Driven Piles during installation
- > Observation of drilled piers during installation
- > Grading observation, from cleanouts to finish grade
- > Nondestructive testing as required
- > Shallow and deep foundation installation observation
- > Reinforcing steel evaluation
- > Structural steel evaluation (shop and field)
- > Fire-proofing testing and evaluation
- > Structural wood
- > Roof installation observation
- > Post-tensioning tendon placement and stressing observation
- > Floor profiling surveys (flatness/levelness)
- > Precast concrete (plant and field) including tilt-up
- > Weld examinations

Materials Testing

- > Soils and earthwork
- > Concrete mix design
- > Concrete testing
- > Masonry testing
- > Grout testing
- > Block and brick testing
- > Asphaltic concrete mix design
- > Asphalt pavement testing and inspection
- > Field repair observations

LABORATORY TESTING AND ANALYSIS CAPABILITIES

Cardno ATC has been providing Laboratory testing services nationwide for 24 years. As a result, we have developed extensive capabilities in material testing and geotechnical testing. Cardno ATC has the ability to set up mobile laboratories on your project site; we are well equipped to respond to your materials testing needs.

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Our laboratory has a wide range of AMRL/CCRL ADOT accreditations. Accredited capabilities include asphalt concrete, aggregate, concrete and soil.

Our laboratory offer soils, aggregates, masonry, grout, mortar, concrete and asphaltic concrete testing for any major building or paving project as well as having the capabilities to do sand equivalent, Marshall, and compressive testing. The laboratory equipment consists of temperature and climate controlled water tanks for curing concrete cylinders, Flex Beam Molds, Asphalt Ignition Oven, and Compression Machine.

Soils Testing

We can provide virtually any type of soils testing for your projects. Our geotechnical laboratories are fully equipped, staffed and government inspected to perform the following and many other soils tests:

- > Grain-size Distribution (sieve analyses)
- > Specific Gravity of Soil and Rock
- > Plasticity characteristics
- > Swell and Collapse Potential
- > Compaction relationships
- > Permeability of Undisturbed and Remolded Soils
- > Consolidation of undisturbed and remolded soils
- > Unit Weight and moisture content of undisturbed soils

ENVIRONMENTAL MANAGEMENT

When environmental contamination is suspected in soil and/or groundwater Cardno ATC can conduct a site investigations determine whether contamination is present, delineate its extent and probable source and estimate the cost of remediation. Based upon your specific goals, Cardno ATC can team with you to design a sampling plan or remedial program, select a clean-up technology, prepare a comprehensive findings report, manage the permitting process, or provide expert witness testimony.

The Cardno ATC Tempe office has provided assessment and remediation services to private and public sector clients throughout Arizona since 1997. Cardno ATC's current staff of 16 professional geologists, engineers, scientists has been involved with 285 site assessments, 85 remedial designs and has achieved regulatory closure at 273 sites in Arizona.

Cardno ATC owns and maintains a fleet of remediation equipment including trailer mounted thermal/catalytic oxidizers and blowers with carbon treatment vessels, compressors, generators, and various pieces of testing equipment. Cardno ATC can custom design remediation systems and modify them if necessary to accommodate changing site conditions, which often results in substantial cost and time savings to our clients.

Services Summary

- > Brownfield Redevelopment
- > Soil/Groundwater Assessments
- > Feasibility Studies / Pilot Testing
- > Permitting
- > Soil/Groundwater Remedial System Design
- > Remedial System Construction Oversight
- > Remedial System Operation & Maintenance
- > Groundwater Monitoring and Sampling
- > Underground Storage Tank Management
- > Storm water Management
- > Spill Prevention Countermeasure & Control Plans (SPCC)
- > Compliance Management

BUILDING SCIENCES

Throughout the U.S., Cardno ATC supports owners, managers, developers, insurers, and investors of commercial real estate as well as construction companies, lenders and borrowers. The Building Sciences division of Cardno ATC provides technical expertise to identify, measure and mitigate environmental and safety risks associated with buying, selling and operating virtually any type of office building, manufacturing plant or industrial facility. We accomplish this with an experienced staff of environmental scientists who understand how environmental issues affect your project and can help minimize exposure to liabilities.

Cardno ATC's Building Sciences division in Tempe, Arizona is staffed with 14 professionals and additional support staff to respond quickly to client needs. We have conducted over 1,200 Phase I Site Assessments, 660 asbestos/lead projects and over 300 Industrial Hygiene projects.

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Environmental Due Diligence Services

- > Phase I Environmental Site Assessments
- > Phase II Environmental Site Assessments
- > Asbestos Surveys & Consultation / Abatement Oversight
- > Operation & Maintenance Program Development
- > Lead-Based Paint Surveys / Abatement Oversight
- > National Environmental Policy Act (NEPA) Assessments
- > Archeological Surveys
- > Property Condition Assessments
- > Structural testing for renovation
- > Roof testing and evaluation
- > Waterproofing evaluation

Industrial Hygiene / Occupational Health

- > Mold / Microbial Investigations
- > Indoor Air Quality Assessments
- > Noise Exposure Assessments
- > Hazardous Materials Exposure Assessments
- > Hazard Communication Assessment & Management
- > Safety Program Development
- > Compliance Determinations / Audits
- > Infection Control Consulting (Healthcare)
- > Ergonomic Assessments
- > Litigation Support / Expert Witness Testimony

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:	17%
b. Percentage of Total Work Attributable to Non-Government Work:	83%

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

Signature: Phillip A. Schneider Date: December 12, 2013

Name: Phillip A. Schneider Title: Branch Manager