

**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 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.

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REVISED - Attachment I – General Qualifications**

- 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 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**

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Aeronautical Engineer	Construction Inspector	Specialist
Agricultural Engineer	Control Systems Engineer	Geological Engineer
Archeologist	Cost Engineer/Estimator	Geologist
Architect	Ecologist	Hydrographic Surveyor
Architectural Engineering	Electrical Engineer	Hydraulic Engineer
Biologist	Environmental Engineer	Hydrologist
CADD Technician	Environmental Scientist	Industrial Engineer
Chemical Engineer	Fire Protection Engineer	Landscape Architect
Civil Engineer	Geodetic Surveyor	Mechanical Engineer
Construction Manager	Geographic Information System	Metallurgical Engineer

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Mining Engineer  
Nuclear Engineer  
Petroleum Engineer  
Photogrammetrist  
Project Manager

Sanitary Engineer  
Soils Engineer  
Structural Engineer  
Technician/Analyst  
Transportation Engineer

Water Resources Engineer

**List of Experience Categories (Profile Codes for Question 8)**

Acoustics, Noise Abatement  
Aerial Photography; Airborne Data and Imagery Collection and Analysis  
Activity Centers  
Air Pollution Control  
Airports; Navais; Airport Lighting; Aircraft Fueling  
Airports; Terminals and Hangars; Freight Handling  
Agricultural Development; Grain Storage; Farm Mechanization  
Animal Facilities  
Anti-Terrorism/Force Protection  
Area Master Planning  
Auditoriums and Theaters  
Automation; Controls; Instrumentation  
Barracks; Dormitories  
Bridge Design: Bridges  
Cartography  
Cemeteries (*Planning and Relocation*)  
Chemical Processing and Storage  
Child Care/Development Facilities  
Codes; Standards; Ordinances  
Cold Storage; Refrigeration and Fast Freeze  
Commercial Building (*Low Rise*); Shopping Centers  
Community Facilities  
Communications Systems; TV; Microwave  
Computer Facilities  
Conservation and Resource Management  
Construction Management  
Construction Surveying  
Corrosion Control; Cathodic Protection Electrolysis  
Cost Estimating; Cost Engineering and Analysis; Parametric Costing; Forecasting  
Cryogenic Facilities  
Construction Materials Testing  
Dams (*Concrete; Arch*)  
Dams (*Earth; Rock*); Dikes; Levees  
Desalinization (*Process and Facilities*)  
Design-Build - Preparation of Requests for Proposals  
Digital Elevation and Terrain Model Development  
Digital Orthophotography  
Dining Halls; Clubs; Restaurants

Dredging Studies and Design  
Design & Planning Structured Parking Facilities  
Detention Security Systems  
Disability / Special Needs  
Ecological and Archeological Investigations  
Educational Facilities; Classrooms  
Electrical Studies and Design  
Electronics  
Elevators; Escalators; People-Movers  
Energy / Water Auditing Savings  
Energy Conservation; New Energy Sources  
Environmental Impact Studies, Assessments or Statements  
Fallout Shelters; Blast-Resistant Design  
Fire Protection  
Fisheries; Fish Ladders  
Forensic Engineering  
Garages; Vehicles Maintenance Facilities; Parking  
Gas Systems (*Propane; Natural, Etc.*)  
Geodetic Surveying: Ground and Airborne  
Heating; Ventilating; Air Conditioning

Highways; Streets; Airfield Paving; Parking Lots  
Historical Preservation  
Hospital and Medical Facilities  
Hotels; Motels  
*Housing (Residential, Multi-Family; Apartments; Condominiums)*  
Hotels; Motels  
Hydraulics and Pneumatics  
Hydrographic Surveying  
Industrial Buildings; Manufacturing Plants  
Industrial Processes; Quality Control  
Industrial Waste Treatment  
Intelligent Transportation Systems  
Infrastructure  
Irrigation; Drainage  
Judicial and Courtroom Facilities  
Laboratories; Medical Research Facilities  
Land Surveying  
Landscape Architecture  
Libraries; Museums; Galleries

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 3<sup>rd</sup> 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

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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

**RFQ# ADSP014-00003465, Annual Request for Qualifications and Experience  
REVISED - Attachment I – General Qualifications**

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

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**1. REVISED ADSP013-00003465: Annual Request for Qualifications**

a.	FIRM (OR BRANCH OFFICE) NAME:	Tata & Howard, Inc.
b.	FIRM (OR BRANCH OFFICE) STREET:	528 W. Aspen Avenue
c.	FIRM (OR BRANCH OFFICE) CITY:	Flagstaff
d.	FIRM (OR BRANCH OFFICE) STATE:	Arizona
e.	FIRM (OR BRANCH OFFICE) ZIP CODE:	86001
f.	YEAR ESTABLISHED:	1992 (Firm), 2011 (Branch Office)
(g1).	OWNERSHIP - TYPE:	S CORPORATION
(g2).	OWNERSHIP - SMALL BUSINESS STATUS:	Small Business
h.	POINT OF CONTACT NAME AND TITLE:	Donald. J. Tata, P.E., President
i.	POINT OF CONTACT TELEPHONE NUMBER:	(508) 303-9400 ext. 119
j.	POINT OF CONTACT E-MAIL ADDRESS:	dtata@tataandhoward.com
k.	NAME OF FIRM <i>(If block 1a is a branch office):</i>	Tata & Howard, Inc.

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REVISED - Attachment I – General Qualifications**

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

**1. REVISED ADSP013-00003465: Annual Request for Qualifications**

a.	FIRM (OR BRANCH OFFICE) NAME:	Tata & Howard, Inc.
b.	FIRM (OR BRANCH OFFICE) STREET:	67 Forest Street
c.	FIRM (OR BRANCH OFFICE) CITY:	Marlborough
d.	FIRM (OR BRANCH OFFICE) STATE:	Massachusetts
e.	FIRM (OR BRANCH OFFICE) ZIP CODE:	01752
f.	YEAR ESTABLISHED:	1992

(g1).	OWNERSHIP - TYPE:	S CORPORATION
(g2)	OWNERSHIP - SMALL BUSINESS STATUS:	Small Business

h.	POINT OF CONTACT NAME AND TITLE:	Donald. J. Tata, P.E., President
i.	POINT OF CONTACT TELEPHONE NUMBER:	(508) 303-9400 ext. 119
j.	POINT OF CONTACT E-MAIL ADDRESS:	dtata@tataandhoward.com

k.	NAME OF FIRM <i>(If block 1a is a branch office):</i>	
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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 (see below)
27	Construction Management	5
6	Energy/Water Auditing Savings	2
24	Phase I Environmental	5
3	Sewage Collection, Treatment, and Disposal	1
4	Storm Water Handling and Facilities	1
1	Water Resources; Hydrology; Ground Water	1
21	Water Supply; Treatment and Distribution	6
20	Waste Water Treatment Facility	4
2	Water Well Rehabilitation; Water Well Work	2

**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               |

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

<b>a. NAME</b> Donald J. Tata, P.E., President	<b>b. ROLE IN THIS CONTRACT</b> Principal	<b>c. YEARS EXPERIENCE</b>	
		<b>1. TOTAL</b> 38	<b>2. WITH CURRENT FIRM</b> 21
<b>d. FIRM NAME AND LOCATION</b> <i>(City and State)</i> Tata & Howard, Inc., Marlborough, MA			
<b>e. EDUCATION</b> <i>(DEGREE AND SPECIALIZATION)</i> MS, Northeastern University, Environmental Engineering, 1981 BS, Worcester Polytechnic Institute, Civil Engineering, 1975		<b>f. CURRENT PROFESSIONAL REGISTRATION</b> <i>(STATE AND DISCIPLINE)</i> Professional Engineer Registrations: Massachusetts, Sanitary Engineer; Arizona, Civil Engineer; New Hampshire, Civil Engineer; Rhode Island, Professional Engineer; New York, Professional Engineer	
<b>g. OTHER PROFESSIONAL QUALIFICATIONS</b> <i>(Publications, Organizations, Training, Awards, etc.)</i> American Water Works Association, Arizona Water Association, Massachusetts Water Works Association, National Council of Engineering Examiners (Civil), New England Water Works Association, Completed over 100 hydraulic models and over 20 water treatment designs, practice leader in Capital Efficiency Plans™, specialized expertise in water system designs, technical papers on distribution, treatment, and Public Private Partnership (PPP)			

**H. RELEVANT PROJECTS**

1)	<b>(1) TITLE AND LOCATION</b> <i>(City and State)</i> City of Goodyear, Arizona	Ongoing	<b>(2) Year Completed</b> Ongoing	
			Professional Services Design, Facilities Planning	Construction <i>(if applicable)</i> Construction Admin.
	<b>(3) BRIEF DESCRIPTION</b> <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Principal. Project included design, bidding, CA and RO services for improvements to the Corgett WRF including: filter system, low lift pump station, modifications to the sand filter, and effluent diversion valve and turbidimeter control. \$400K.		<input checked="" type="checkbox"/> Check if project performed with current firm	
2)	<b>(1) TITLE AND LOCATION</b> <i>(City and State)</i> City of Flagstaff, Arizona	Ongoing	<b>(2) Year Completed</b> Ongoing	
			Professional Services General Services	Construction <i>(if applicable)</i> Construction Admin.
	<b>(3) BRIEF DESCRIPTION</b> <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Principal. Conduct evaluation to determine the aeration process basis of design, new turbo blower design criteria, design layout, ancillary system requirements, pre and proposed energy consumption, and ROI on implementation of turbo blower technology at Wildcat Hills and Rio de Flag Water Reclamation Facilities. Provide engineering services to prepare bid documents for the replacement of bar screens at Wildcat Hill WWTP. Prepare electrical and instrumentation procurement documents for the replacement of the primary and secondary pumps at Wildcat WWRF. \$201K		<input checked="" type="checkbox"/> Check if project performed with current firm	
3)	<b>(1) TITLE AND LOCATION</b> <i>(City and State)</i> Town of Falmouth, Massachusetts	Ongoing	<b>(2) Year Completed</b> Ongoing	
			Professional Services Design, Permitting	Construction <i>(if applicable)</i> Construction Admin.
	<b>(3) BRIEF DESCRIPTION</b> <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Principal. Design of a new 8.0 mgd dissolved air flotation (DAF) water treatment plant. \$3M		<input checked="" type="checkbox"/> Check if project performed with current firm	
4)	<b>(1) TITLE AND LOCATION</b> <i>(City and State)</i> South Central Connecticut Regional Water Authority (SCCRWA), New Haven, Connecticut	Ongoing	<b>(2) Year Completed</b> Ongoing	
			Professional Services General Services	Construction <i>(if applicable)</i> Construction Admin.
	<b>(3) BRIEF DESCRIPTION</b> <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Population and water use projection study for a 50-year planning horizon; Capital Efficiency Plan™ for the Main Service Area that includes 17 service areas; Analysis of SCCRWA service area using AWWA M36 guidelines and worksheet. Commercial and industrial Water Audit Study. \$1.6M		<input checked="" type="checkbox"/> Check if project performed with current firm	
5)	<b>(1) TITLE AND LOCATION</b> <i>(City and State)</i> City of Worcester, Massachusetts	Ongoing	<b>(2) Year Completed</b> Ongoing	
			Professional Services General Services	Construction <i>(if applicable)</i> Construction Admin.
	<b>(3) BRIEF DESCRIPTION</b> <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Principal. Provided engineering services for the completion of a hydraulic model update; currently providing engineering services for the completion of a Capital Efficiency Plan™ - work includes population and demand projections, storage and supply analysis, completion of an asset management rating system and preparation of prioritized improvements; prepared specifications, provided bid assistance, construction administration, and resident observation for the Cleaning and Painting of the 0.5 mg Chester Street Water Storage Tank. \$299K		<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 Jack E. O'Connell, P.E., Senior Vice President	b. ROLE IN THIS CONTRACT Project Manager	c. YEARS EXPERIENCE	
		1. TOTAL 39	2. WITH CURRENT FIRM 17
d. FIRM NAME AND LOCATION (City and State) Tata & Howard, Inc., Marlborough, MA			
e. EDUCATION (DEGREE AND SPECIALIZATION) MS, Harvard University, Environmental Engineering, 1975 BS, Worcester Polytechnic Institute, Civil Engineering, 1974		f. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE) Massachusetts, Sanitary Engineer; Rhode Island, Professional Engineer	
g. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.) American Water Works Association (AWWA), New England Water Works (NEWWA), Arizona Water, Water Environment Federation (WEF), New England Water Environment Association (NEWEA), Practice Leader for Treatment Processes and Director of the Wastewater Group, Innovator for First Preozonation/ Ultrafiltration Facility in the Country, NEWWA Technical Paper, Soils Evaluator in Massachusetts, LEED Accredited Professional			

**H. RELEVANT PROJECTS**

1)	(1) TITLE AND LOCATION (City and State) City of Goodyear, Arizona	Ongoing	(2) Year Completed
		Professional Services General Services	Construction (if applicable) Construction Admin.
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Project Manager. Update of existing water and sewer system models using InfoWater and InfoSewer computer programs; review of the impact of proposed developments and proposed extensions to the City's systems. Provided design and construction services associated with improvements to the Corgett WRF including: filter system, low lift pump station, modifications to the sand filter, and instrumentation upgrades. \$400K.		
2)	(1) TITLE AND LOCATION (City and State) Kachina Village Improvement District (KVID), Flagstaff, Arizona	Ongoing	(2) Year Completed
		Professional Services Audit, Eval., Hydraul. Mod.	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Principal. Project includes the evaluation of the KVID's water distribution infrastructure, the development of a hydraulic model and verification, and pump efficiency testing of all the water supplies. \$36K.		
3)	(1) TITLE AND LOCATION (City and State) City of Coolidge, Arizona	Ongoing	(2) Year Completed
		Professional Services Evaluation, Permitting	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Principal. Provided engineering services for the Review of a WWTF Design. Assisted the City with Bright International Industrial Sewer Connection Permit. \$5K.		
4)	(1) TITLE AND LOCATION (City and State) Town of Peoria, Arizona	2012	(2) Year Completed
		Professional Services Evaluation, Design	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Principal. Evaluated existing site configuration and design of the Arrowhead Shores Booster Pump Station. The site consists of two hydraulically connected 1mg reservoirs and two sets of booster pump stations. Provided complete bid-ready design package containing the construction drawing set, specifications, and general construction notes. \$17K.		
5)	(1) TITLE AND LOCATION (City and State) Valentine Environmental Engineers, LLC, services for Scottsdale, Arizona	Ongoing	(2) Year Completed
		Professional Services Evaluation, Hyd. Modeling	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Principal. Providing engineering services to Valentine Environmental Engineering to evaluate up to 45 candidate sites within the City of Scottsdale, Arizona water distribution system for construction of micro-turbines. Services provided include the review of the City's hydraulic model and water distribution system, evaluation of potential micro-turbine sites, and assistance with permitting at local and federal regulatory levels. \$20K.		

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

a. NAME Randall L. Pellatz, P.E., Associate	b. ROLE IN THIS CONTRACT Project Manager	c. YEARS EXPERIENCE	
		1. TOTAL 40	2. WITH CURRENT FIRM 2
d. FIRM NAME AND LOCATION (City and State) Tata & Howard, Inc., Flagstaff, Arizona			
e. EDUCATION (DEGREE AND SPECIALIZATION) BS, University of Nebraska, Civil Engineering, 1973		f. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE) Arizona, Civil Engineer	
g. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.) AWWA (American Water Works Association) - QUAL-SERVE Peer Reviewer; Arizona Grade 4 Water And Wastewater Treatment Operator; Former Utility Director for the City of Flagstaff; Flagstaff, AZ, Gillette, WY and HWS Employee Awards.			

**H. RELEVANT PROJECTS**

1)	(1) TITLE AND LOCATION (City and State) Bio Gas Piping System City of Flagstaff, Arizona	Ongoing	(2) Year Completed
		Professional Services Design, Evaluation	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Project Manager. Providing engineering design services for an above grade bio gas piping system to replace the below grade system that is not operating. \$43K		
2)	(1) TITLE AND LOCATION (City and State) Wildcat and Rio De Flag Wastewater Treatment Plants City of Flagstaff, Arizona	Ongoing	(2) Year Completed
		Professional Services General Services	Construction (if applicable) Construction Admin.
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Project Manager. Conduct evaluation to determine the aeration process basis of design, new turbo blower design criteria, design layout, ancillary system requirements, pre and proposed energy consumption, and ROI on implementation of turbo blower technology. Providing design services for the replacement of existing aeration turbo blowers. Provide SCADA and PLC programming and design for the installation of new turbo blowers. \$390K		
3)	(1) TITLE AND LOCATION (City and State) Kachina Village Improvement District (KVID), Flagstaff, Arizona	2013	(2) Year Completed
		Professional Services Audit, Eval., Hydraulic Mod.	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Project Manager. Project includes the evaluation of the KVID's water distribution infrastructure, the development of a hydraulic model and verification, and pump efficiency testing of all the water supplies. \$366K.		
4)	(1) TITLE AND LOCATION (City and State) Energy Audit City of Flagstaff, Arizona	2012	(2) Year Completed
		Professional Services Energy Audit	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Project Manager. Conduct Energy Audit for the City of Flagstaff. \$39K		
5)	(1) TITLE AND LOCATION (City and State) General Services City of Flagstaff, Arizona	Ongoing	(2) Year Completed
		Professional Services General Services	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Project Manager. Assisting the City of Flagstaff in the preparation of APS rebates for a total savings of over \$400,000. Assist the City of Flagstaff in the annual evaluation of the Lake Mary Dam. Provide engineering services to prepare bid documents for the replacement of bar screens at the Wildcat Hill WWTP. Engineer's estimate of probable construction costs provided and construction project management.		

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

a. NAME Shira A. McWaters, P.E., Associate	b. ROLE IN THIS CONTRACT Project Manager	c. YEARS EXPERIENCE	
		1. TOTAL 21	2. WITH CURRENT FIRM 21
d. FIRM NAME AND LOCATION <i>(City and State)</i> Tata & Howard, Inc., Flagstaff, Arizona			
e. EDUCATION <i>(DEGREE AND SPECIALIZATION)</i> BS, Worcester Polytechnic Institute, Civil Engineering, 1993		f. CURRENT PROFESSIONAL REGISTRATION <i>(STATE AND DISCIPLINE)</i> Massachusetts, Civil Engineer Arizona, Civil Engineer Pending	
g. OTHER PROFESSIONAL QUALIFICATIONS <i>(Publications, Organizations, Training, Awards, etc.)</i> Arizona Water, Boston Society of Civil Engineers Section/ASCE, completed over 30 hydraulic models, specialized expertise in water system designs and construction administration services, NEWWA - Town of Spencer, MA Two Zone Pressure System Project, December 2012			

**H. RELEVANT PROJECTS**

1)	(1) TITLE AND LOCATION <i>(City and State)</i> City of Flagstaff, Arizona	Ongoing	(2) Year Completed
		Professional Services General Services	Construction <i>(if applicable)</i> Construction Admin.
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Project Manager. Conduct evaluation to determine the aeration process basis of design, new turbo blower design criteria, design layout, ancillary system requirements, pre and proposed energy consumption, and ROI on implementation of turbo blower technology at Wildcat Hills and Rio de Flag Water Reclamation Facilities. \$201K		
2)	(1) TITLE AND LOCATION <i>(City and State)</i> Bellemont Water Company City of Flagstaff, Arizona	Ongoing	(2) Year Completed
		Professional Services General Services	Construction <i>(if applicable)</i> Construction Admin.
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Project Manager. General engineering services agreement associated with the preparation and submittal of a 4-Log Removal of Viruses and associated design for water source. \$11K		
3)	(1) TITLE AND LOCATION <i>(City and State)</i> Kachina Village Improvement District (KVID), Flagstaff, Arizona	2013	(2) Year Completed
		Professional Services Audit, Eval., Hydraul. Mod.	Construction <i>(if applicable)</i>
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Project Manager. Project includes the evaluation of the KVID's water distribution infrastructure, the development of a hydraulic model and verification, and pump efficiency testing of all the water supplies. \$366K.		
4)	(1) TITLE AND LOCATION <i>(City and State)</i> Energy Efficiency Evaluation City of Flagstaff, Arizona	2013	(2) Year Completed
		Professional Services Energy Audit	Construction <i>(if applicable)</i>
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Project Manager. Performed an energy efficiency evaluation on the new Shop Well VFD. Efficiency gains were realized and the City qualified for a \$30,000 rebate through APS. \$3K		
5)	(1) TITLE AND LOCATION <i>(City and State)</i> Town of Spencer, Massachusetts	2012	(2) Year Completed
		Professional Services Hydraulic Modeling	Construction <i>(if applicable)</i> Construction Admin.
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Project Manager. Engineering services to evaluate the Town's water distribution system for the purpose of implementing a two-zone pressure system. Services included collection and implementation of data, incorporation of existing EPANET model into WaterGEMS, evaluation of hydraulic gradeline criteria, and siting of a new water storage tank and booster pump station in up to five locations. Provided design and construction services for approx. 17,000 lf of 8" and 12" water main, new water tank, BPS, and miscellaneous upgrades to pump stations and distribution system. \$8.7M.		

**RFQ# ADSP014-00003465, Annual Request for Qualifications and Experience  
REVISED - Attachment I – General Qualifications**

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

a. NAME Ryan P. Cain, P.E., Project Engineer	b. ROLE IN THIS CONTRACT Project Engineer	c. YEARS EXPERIENCE	
		1. TOTAL 6	2. WITH CURRENT FIRM 6
d. FIRM NAME AND LOCATION (City and State) Tata & Howard, Inc., Marlborough, MA			
e. EDUCATION (DEGREE AND SPECIALIZATION) BS, Civil and Environmental Engineering, Worcester Polytechnic Institute, 2007		f. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE) Massachusetts, Civil Engineer	
g. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.) Concentrated experience in water and wastewater design			

**H. RELEVANT PROJECTS**

1)	(1) TITLE AND LOCATION (City and State) City of Goodyear, Arizona	Ongoing	(2) Year Completed
		Professional Services General Services	Construction (if applicable) Construction Admin.
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Project Engineer. Update of existing water and sewer system models using InfoWater and InfoSewer computer programs; review of the impact of proposed developments and proposed extensions to the City's systems. Provided design and construction services associated with improvements to the Corgett WRF including: filter system, low lift pump station, modifications to the sand filter, and instrumentation upgrades. \$400K.		
2)	(1) TITLE AND LOCATION (City and State) Wildcat and Rio De Flag Wastewater Treatment Plants City of Flagstaff, Arizona	Ongoing	(2) Year Completed
		Professional Services General Services	Construction (if applicable) Construction Admin.
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Project Engineer. Conduct evaluation to determine the aeration process basis of design, new turbo blower design criteria, design layout, ancillary system requirements, pre and proposed energy consumption, and ROI on implementation of turbo blower technology. Providing design services for the replacement of existing aeration turbo blowers. Provide SCADA and PLC programming and design for the installation of new turbo blowers. \$390K		
3)	(1) TITLE AND LOCATION (City and State) Wildcat Barscreen Replacement City of Flagstaff, Arizona	Ongoing	(2) Year Completed
		Professional Services Design	Construction (if applicable) Construction Admin.
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Project Engineer. Provide engineering services to prepare bid documents for the replacement of bar screens at the Wildcat Hill WWTP. Engineer's estimate of probable construction costs provided and construction project management. \$330K		
4)	(1) TITLE AND LOCATION (City and State) Bio Gas Piping System City of Flagstaff, Arizona	Ongoing	(2) Year Completed
		Professional Services Design, Evaluation	Construction (if applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Project Engineer. Providing engineering design services for an above grade bio gas piping system to replace the below grade system that is not operating. \$43K		
5)	(1) TITLE AND LOCATION (City and State) Town of Winchester, New Hampshire	Ongoing	(2) Year Completed
		Professional Services General Services	Construction (if applicable) Construction Admin.
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Project Engineer. Facilities plan permitting, preparation of plans and specifications, resident observation and administration of construction for the Winchester WWTF, and preparation of an operation and maintenance manual. Preparation of a comprehensive Infiltration/Inflow (I/I) Evaluation and Rehabilitation Program. Design of the Phase 2 improvements to the wastewater treatment facility. \$359K.		

**RFQ# ADSP014-00003465, Annual Request for Qualifications and Experience  
REVISED - Attachment I – General Qualifications**

**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	
Hydraulic Modeling Services, Corgett Facility Plan, & Water Reclamation Facility Improvements City of Goodyear, Arizona	PROFESSIONAL SERVICES 2012	CONSTRUCTION <i>(If applicable)</i> 2012

**23. PROJECT OWNER'S INFORMATION**

c. PROJECT OWNER City of Goodyear, Arizona	d. DOLLAR AMOUNT OF PROJECT Contract Value: \$200,000 Construction Value: \$1,350,000	e. TOTAL COST OF PROJECT \$1,550,000
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f. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(include scope, size, and length of project)*

Tata & Howard provided engineering services associated with the update of existing water and sewer system models using InfoWater and InfoSewer computer programs. The water model included fire flow testing, C-value tests and calibration of the InfoWater hydraulic model. The wastewater collection system model included installation of six flow monitoring stations in three sub-basins, calibration of the model, development of a cost allocation model, and preparation of a technical report. Provided reviews of the impact of proposed developments and proposed extensions to the City's system. Prepared a facilities plan for the Corgett Water Reclamation Facility. The plan addressed the need for process redundancy and recommended improvements for increased flows and Class A+ effluent. Provided ongoing support services to address operational needs and to assess the impact of new developments on the system. Provided design, bidding, construction administration, resident observation, and construction services associated with improvements to the Corgett WRF including: filter system, low lift pump station, modifications to the sand filter, and instrumentation upgrades.

April 2008 - December 2012

**RFQ# ADSP014-00003465, Annual Request for Qualifications and Experience  
REVISED - Attachment I – General Qualifications**

**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> On-Call Engineering Services City of Flagstaff, Arizona	b. YEAR COMPLETED	
	PROFESSIONAL SERVICES Ongoing	CONSTRUCTION <i>(If applicable)</i> Ongoing

**23. PROJECT OWNER'S INFORMATION**

c. PROJECT OWNER City of Flagstaff, Arizona	d. DOLLAR AMOUNT OF PROJECT Contract Value: \$558,000 Construction Value: \$2,580,000	e. TOTAL COST OF PROJECT \$3,138,000
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f. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (include scope, size, and length of project)

Tata & Howard was selected to provide on-call engineering services for water, wastewater, and energy related projects for the City of Flagstaff, AZ. Working with Valentine Environmental Engineers, several options for replacement of the blowers were evaluated and presented to the City in a report. The report recommended the installation of appropriately sized turbo blowers and upgrading the controls logic to automate dissolved oxygen controls. Plans and specs were prepared for the procurement of the new turbo blowers. Design and construction services will be provided after the City selects a turbo blower manufacturer.

The City has been experiencing long term maintenance issues with the existing biogas piping at the Wildcat WWRF. Currently the piping to the co-generator is not providing an adequate supply of gas from the digesters which, if operating, could save the City approximately \$200,000 in annual power costs. The goals of this project are to restore the ability to run the generator on biogas, utilize the heat generated by the sludge digestion process to further reduce energy costs, reduce maintenance time to operate the biogas system, and have a positive impact on the environment.

We assisted the City with the evaluation of replacing the existing barscreens at the Wildcat WWRF. The project included the evaluation of different barscreens, design, preparation of procurement documents, solicitation of Quotes and construction administration services.

Key findings of recent energy efficiency studies completed by Tata & Howard on the Flagstaff, Arizona water and wastewater systems have assisted the City in prioritizing improvements that will provide the City significant savings associated with electrical consumption and result in a high return on investments, with a focus payback of less than 10 years. For the City's water system alone, the pumps and motors were consuming over 3,300 horsepower daily on average, while the remaining electrical load represent 60 horsepower. Clearly, the pumps and motors are the greatest consumers of electricity, representing 95 percent of the power usage. This represented approximately \$1.8 million of the City's \$3.8 million dollar water budget. The results of the water system study included an estimated cost of approximately \$1.5 million for upgrades, \$500,000 in APS rebates, annual electrical savings of approximately \$350,000, and an average payback of approximately 2.5 years.

Estimated construction cost:

Turbo Blower \$2,000,000

Barscreens \$330,000

Biogas \$250,000

December 2011 - Ongoing

**RFQ# ADSP014-00003465, Annual Request for Qualifications and Experience  
REVISED - Attachment I – General Qualifications**

**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> CMOM, Comprehensive WW Management Plan, WWTP upgrades Town of Milford, MA	b. YEAR COMPLETED	
	PROFESSIONAL SERVICES Ongoing	CONSTRUCTION <i>(If applicable)</i> Ongoing

**23. PROJECT OWNER'S INFORMATION**

c. PROJECT OWNER Town of Milford, MA	d. DOLLAR AMOUNT OF PROJECT CMOM \$40,000; CWMP \$470,000; Design \$30,000; On-Call Svcs \$100,000/yr; Construction \$150,000	e. TOTAL COST OF PROJECT \$690,000 + yearly contract
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f. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (include scope, size, and length of project)

The Town of Milford retained Tata & Howard to assist with meeting the requirements of an Administrative Order, which included the preparation of a Capacity, Management, Operation and Maintenance (CMOM) Program document. The CMOM Program document includes an updated map of the collection system, improvements being implemented to preserve the existing infrastructure and prevent overflows, a condition assessment program, recommendations for improvements over a six year period, an implementation schedule, and a cost estimate associated with the improvements. The CMOM Program document was prepared based on previous infiltration/inflow (I/I) investigations and repair and rehabilitation projects to remove infiltration/inflow, record plans and observations from Town personnel. Tata & Howard has assisted the Town of Milford in implementing the recommended improvements referenced in the CMOM Program document.

In addition, Tata & Howard has an on-call services agreement with the Town of Milford and has prepared the Town of Milford's Comprehensive Wastewater Management Plan (CWMP), which evaluated the ability of the Milford Wastewater Treatment Facility (WWTF) to accommodate existing and projected flow conditions and meet more stringent discharge limitations for copper and phosphorus.

Tata & Howard provided all design and construction services related to a treated wastewater pump station at the Town's advanced wastewater treatment facility. This station has a capacity in excess of 1 mgd and is used to pump treated wastewater to a gas turbine power generation facility where it is used for cooling water. Included in this project was the preparation of plans and specifications and the monitoring of water quality effects on the Charles River.

The Birch Street Pump Station is a submersible pump station consisting of two 700 gallons per minute pumps. Under maximum day flow conditions, the station has operated well above its current capacity and pump run times of 24 hours have been recorded. Therefore, prior to accepting additional flows would require upgrades to be completed. In 2013, Tata & Howard worked with the Town of Milford and was retained by a developer to design proposed upgrades to the Birch Street Pump Station which include upgrades to the existing submersible pumps, electrical and instrumentation and controls.

1996 - Ongoing

**RFQ# ADSP014-00003465, Annual Request for Qualifications and Experience  
REVISED - Attachment I – General Qualifications**

<b>5. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT</b> <i>(Present no more than five (5) projects. Complete one Section 5 for each project.)</i>		
a. TITLE AND LOCATION <i>(City and State)</i> Kachina Village Improvement District City of Flagstaff, Arizona	b. YEAR COMPLETED	
	PROFESSIONAL SERVICES 2013	CONSTRUCTION <i>(If applicable)</i>

<b>23. PROJECT OWNER'S INFORMATION</b>		
c. PROJECT OWNER City of Flagstaff, Arizona	d. DOLLAR AMOUNT OF PROJECT Contract Value: \$36,000; Construction Value \$330,000	e. TOTAL COST OF PROJECT \$366,000

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

Tata & Howard, Inc. was retained by the Kachina Village Improvement District (KVID) to create a hydraulic model and conduct an energy study of the water production assets of the KVID and its distribution system. During the course of the study, the well pumps and booster pumps were evaluated relative to their efficiency and the operational practices of the distribution were reviewed. The results of the study indicated that the pump efficiency's ranged from 27% to 60%. It was recommended that the KVID replace several low performing pumps with the potential to save approximately \$23,000 in annual power costs and be eligible for a rebate from APS of approximately \$20,000. The estimated savings over a ten year period is approximately \$134,000.

March 2013 - October 2013

**RFQ# ADSP014-00003465, Annual Request for Qualifications and Experience  
REVISED - Attachment I – General Qualifications**

**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> Two Zone Pressure System Project – Design and Construction, Capital Efficiency Plan™ Town of Spencer, Massachusetts	b. YEAR COMPLETED	
	PROFESSIONAL SERVICES 2012	CONSTRUCTION <i>(If applicable)</i> 2012

**23. PROJECT OWNER'S INFORMATION**

c. PROJECT OWNER Town of Spencer, Massachusetts	d. DOLLAR AMOUNT OF PROJECT Contract Value: \$715,000; Construction Value: 8,000,000	e. TOTAL COST OF PROJECT \$8,715,000
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f. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (include scope, size, and length of project)

Tata & Howard provided design and construction administration services for a new 0.5 million gallon cast-in-place concrete water storage tank, booster pump station, approximately 17,000 linear feet of new 8-inch and 12-inch diameter water main, and miscellaneous distribution system upgrades. Construction of in-line isolation valves, removal of existing pressure-reducing valve (PRV) vaults, a new system wide SCADA system and new high lift pumps at the water treatment facility and well site were also included in Tata & Howard's design. The purpose of this project was to separate the current single zone system into two pressure zones as required by an Administrative Consent Order from the Massachusetts Department of Environmental Protection.

The creation of a two pressure zone system required the replacement of the existing 200 horsepower (hp) pump at the Meadow Road Water Treatment Facility and 150 hp pump at the Cranberry Brook Well with lower head, high efficiency pumps and motors. The Meadow Road facility is the Town's primary water supply source; therefore, pump modifications and construction sequencing to minimize the time this source was off-line required coordination with the Department of Utilities and Facilities.

Tata & Howard also verified the Town's hydraulic model, which was used to select the best location for the new tank and select water main sizes for transmission and fire protection. The model was also used to determine the boundary line between the two pressure zones. A Capital Efficiency Plan™ was prepared that identified recommended infrastructure improvements. This project was funded by the American Recovery and Reinvestment Act through the Massachusetts State Revolving Fund (SRF). Due to an aggressive schedule required under the funding requirements, all design; permitting associated with planning, zoning, and wetlands; and project bidding were completed and approved within a six-month period.

2009 - 2012

**6. ADDITIONAL INFORMATION**

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

**Please see attached Qualifications and Experience.**

**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:	82%
b.	Percentage of Total Work Attributable to Non-Government Work:	18%

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

Signature: \_\_\_\_\_

Date: 12/12/2013

Name: Donald J. Tata

Title: President

## **Additional Qualifications & Services Tata & Howard, Inc**

Founded in 1992, Tata & Howard, Inc. is a specialized water, wastewater, stormwater, and hazardous waste consulting engineering firm. We have a reputation for consistently delivering cost-effective, innovative project solutions by working as a cohesive team with our clients, and our focus provides clients with the attentive service of a small firm, yet the experience of a large firm. In 2011, we opened up a branch office in Flagstaff, Arizona to better service our clients in Arizona, which we have been servicing since 2005. This is a new office and is currently staffed by two highly experienced Professional Engineers (Randy Pellatz and Shira McWaters) that are fully supported by more than 50 professionals in the main office.

Randy Pellatz, P.E., Associate, has over 40 years engineering and municipal experience with specialized expertise in water and wastewater treatment. He is an Arizona Grade 4 Water and Wastewater Treatment Operator and has a proven record of working with limited funding, developing and simplifying procedures, and finding innovative solutions. He holds a BS in Civil Engineering from the University of Nebraska.

Shira McWaters, P.E., Associate, has over 20 years engineering experience with expertise in evaluation of utility systems, design, and construction management. She co-manages Tata & Howard's Flagstaff, AZ office with Mr. Pellatz. She holds a BS in Civil Engineering from Worcester Polytechnic Institute. Ms. McWaters's Arizona P.E. is currently pending comity with the State of Arizona Board of Technical Registration.

### **Water**

Our team has concentrated experience in development, design, and construction of municipal water supply, distribution, and treatment infrastructure. Tata & Howard is a leader in hydraulic analyses, treatment, and infrastructure designs for water systems. We have excellent working relationships with regulatory agencies and have successfully secured state and federal funds for several clients. Our water experience includes exploration of new water supplies, associated permitting, design of pumping and treatment facilities and the design of infrastructure. We have completed hydraulic water distribution system models for the City of Goodyear and for the Kachina Village Improvement District. In addition, we have provided subdivision reviews for proposed new development in the City of Goodyear. For the Bellemont Water Company, we assisting them in addressing several ADEQ issues including the completion of a 4-log Removal for viruses form and preliminary design for the associated improvements needed for the system to meet the 4-log requirement.

### **Wastewater**

The Tata & Howard team has identified innovative solutions to challenging problems related to the collection, pumping, and treatment of wastewater. These solutions include processes to reduce phosphorous, nitrogen, and metals in wastewater to meet strict discharge permit limitations. Additionally, we provide services related to comprehensive wastewater management planning, infiltration/inflow reduction, groundwater discharge permits, and grant assistance. Our team has extensive experience in the design of new wastewater treatment facilities or the rehabilitation of existing facilities to meet new permit requirements. We recently completed upgrades to the Goodyear Coregett WWTF providing design and construction administration services for the installation of a new tertiary filtration system comprised of disk filters installed within the structure of the existing 0.6 million gallons per day (mgd) traveling bridge sand filter. We are currently providing design and construction services for the replacement of up to six turbo blowers for the City of Flagstaff and two bar screens. The existing aeration blowers are oversized and operate below recommended efficiency levels. The replacement of the existing

blowers with new turbo blower technology will result in greater efficiency of operation and a reduction in the City's annual electrical costs associated with the equipment.

### **Capital Efficiency Plans™**

We are leaders in water system capital improvement planning, having completed over 100 studies. We believe it is essential to optimize "Capital Efficiency". That is, identify those areas of your water, stormwater, and wastewater systems needing rehabilitation or replacement, while making the most efficient use of limited infrastructure dollars. We find that a systematic capital management approach that combines the concepts of hydraulic modeling, system criticality, and asset management into a single comprehensive report is a useful tool that can be used by municipalities. Each report is customized to the individual utility distribution system. When completed, the Capital Efficiency Plan™ (CEP) report provides utilities with a database and Geographic Information System (GIS) representation for each pipe segment within the underground piping system. The CEP report prioritizes water, wastewater, and stormwater distribution system piping improvements and provides estimated costs for replacement and rehabilitation. If water, wastewater, and stormwater improvements are compared on a street by street basis and overlapped, then several improvements can be completed simultaneously, while only opening the road and disrupting traffic and customers only once. This methodology is not only practical and understandable, but also defensible when justifying projects and procuring funding or justifying the need to raise rates. It is also a transferable document from one utilities manager to another, should a change in personal occur and is an important document that can be used to help secure federal, state, and local funding.

### **Energy Audits**

Tata & Howard has found creative and cost effective solutions to meet the energy needs of our clients. The cost of energy can account for the majority of the overall life cycle costs of a typical pump or blower. For this reason, it is critical to optimize pump and blower systems to consume as little energy as possible while still meeting all operation constraints. We have provided the following services to the City of Flagstaff and for the Kachina Village Improvement District:

- Design of efficient pump and blower systems,
- Troubleshooting inefficient pump and blower systems,
- Wire to water efficiency studies on pumps,
- Wire to air efficiency studies on blowers,
- Implementation of energy efficiency control schemes.

Tata & Howard is a certified trade ally with Arizona Public Service (APS) and a qualified service provider for the Salt River Project (SRP) PowerWise® Program. We have successfully assisted the City of Flagstaff in obtaining incentives through APS in the form of cash reimbursements of up to \$150,000, and annual power cost saving of up to \$500,000.