



Offer and Acceptance

State of Arizona
State Procurement Office

100 N. 15th Ave. Suite 201
Phoenix, AZ 85007

SOLICITATION NO.: ADSP016-00005912 Request
for Qualifications: 2016 Annual Professional
Services List

PAGE
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Offeror: Kittelson

OF
1

OFFER

TO THE STATE OF ARIZONA:

The Undersigned hereby offers and agrees to furnish the material, service or construction in compliance with all terms, conditions, specifications and amendments in the Solicitation and any written exceptions in the offer. Signature also certifies Small Business status.

Kittelson & Association, Inc.

Company Name

2 East Congress Street, Ste 705

Address

Tucson

AZ

85629

City

State

Zip

jschoen@kittelson.com

Contact Email Address

Signature of Person Authorized to Sign Offer

James Schoen

Printed Name

Senior Principal Engineer

Title

Phone: 520-382-4703

Fax:

By signature in the Offer section above, the Offeror certifies:

1. The submission of the Offer did not involve collusion or other anticompetitive practices.
2. The Offeror shall not discriminate against any employee or applicant for employment in violation of Federal Executive Order 11246, State Executive Order 2009-9 or A.R.S. §§ 41-1461 through 1465.
3. The Offeror has not given, offered to give, nor intends to give at any time hereafter any economic opportunity, future employment, gift, loan, gratuity, special discount, trip, favor, or service to a public servant in connection with the submitted offer. Failure to provide a valid signature affirming the stipulations required by this clause shall result in rejection of the offer. Signing the offer with a false statement shall void the offer, any resulting contract and may be subject to legal remedies provided by law.
4. The Offeror certifies that the above referenced organization IS/ X IS NOT a small business with less than 100 employees or has gross revenues of \$4 million or less.

ACCEPTANCE OF OFFER

The Offer is hereby accepted.

The Contractor is now bound to sell the materials or services listed by the attached contract and based upon the solicitation, including all terms, conditions, specifications, amendments, etc., and the Contractor's Offer as accepted by the State.

This Contract shall henceforth be referred to as Contract No. ADSP016-00005912

The effective date of the Contract is March 1, 2016

The Contractor is cautioned not to commence any billable work or to provide any material or service under this contract until Contractor receives purchase order, contract release document or written notice to proceed.

State of Arizona
Awarded this 29 day of February 20 16

Procurement Officer



**ANNUAL REQUEST FOR QUALIFICATIONS
AND EXPERIENCE NO: ADSP016-00005912**

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.
 - 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).



ANNUAL REQUEST FOR QUALIFICATIONS AND EXPERIENCE NO: ADSP016-00005912

- 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.

List of Disciplines (Function Codes) for Question 2

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

List of Experience Categories (Profile Codes for Question 3)

**ANNUAL REQUEST FOR QUALIFICATIONS
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Acoustics, Noise Abatement
Aerial Photography; Airborne Data and Imagery Collection and Analysis
Activity Centers
Air Pollution Control
Airports; Nav aids; 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
Desalination (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 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



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

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

1. Annual Request for Qualifications

a. FIRM (OR BRANCH OFFICE) NAME:	Kittelson & Associates, Inc.
b. FIRM (OR BRANCH OFFICE) STREET:	2 East Congress Street, Suite 705
c. FIRM (OR BRANCH OFFICE) CITY:	Tucson
d. FIRM (OR BRANCH OFFICE) STATE:	Arizona
e. FIRM (OR BRANCH OFFICE) ZIP CODE:	85701

f. YEAR ESTABLISHED:	1985
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(g1). OWNERSHIP - TYPE:	Corporation
(g2). OWNERSHIP - SMALL BUSINESS STATUS:	N/A

h. POINT OF CONTACT NAME AND TITLE:	Jason Simmers
i. POINT OF CONTACT TELEPHONE NUMBER:	520-382-4707
j. POINT OF CONTACT E-MAIL ADDRESS:	jsimmers@kittelson.com

k. NAME OF FIRM (If block 1a is a branch office):	
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Department of Administration
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a. FIRM (OR BRANCH OFFICE) NAME:	Kittelson & Associates, Inc.
b. FIRM (OR BRANCH OFFICE) STREET:	3200 N Central Avenue, Suite 250
c. FIRM (OR BRANCH OFFICE) CITY:	Phoenix
d. FIRM (OR BRANCH OFFICE) STATE:	Arizona
e. FIRM (OR BRANCH OFFICE) ZIP CODE:	85012

f. YEAR ESTABLISHED:	1985
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(g1). OWNERSHIP - TYPE:	Corporation
(g2). OWNERSHIP - SMALL BUSINESS STATUS:	N/A

h. POINT OF CONTACT NAME AND TITLE:	Radu Nan
i. POINT OF CONTACT TELEPHONE NUMBER:	602-648-5484
j. POINT OF CONTACT E-MAIL ADDRESS:	rnan@kittelson.com

k. NAME OF FIRM (If block 1a is a branch office):	
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4. Resumes of Key Personnel Proposed for this Contract (Complete one Section #4 for each key person.)

a. NAME Jason Simmers, PE	b. ROLE IN THIS CONTRACT Associate Engineer	c. YEARS EXPERIENCE	
		1. TOTAL 15	2. WITH CURRENT FIRM 10
d. LOCATION (City and State) Tucson, AZ			
e. EDUCATION (DEGREE AND SPECIALIZATION) BS Engineering, University of Arizona		f. PROFESSIONAL TRAINING - REGISTRATIONS PE: AZ (41968)	
g. OTHER PROFESSIONAL QUALIFICATIONS (Organizations, Awards, etc.) American Society of Civil Engineers, Member Illumination Engineering Society of North America, Member			

H. RELEVANT PROJECTS

	(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
		Professional Services	Construction (if applicable)
1.	TANGERINE ROAD FINAL DESIGN - ORO VALLEY, AZ (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Jason is serving as Project Manager for the Thornydale Road and La Cañada Drive section of the Tangerine Road final design in Pima County, AZ. The project is split between two consulting firms, the other designing a three-mile section to the west. Jason is directing all aspects of the work, including roadway, drainage, and slope design, traffic design, pavement design, utility coordination, and development of PS&E as well as coordinating with the other consulting firm. The preliminary engineering and design concept have been completed and the 100% plans are ready for submittal. Fee: \$900,000	<input checked="" type="checkbox"/>	Check if project performed with current firm
2.	SILVERBELL ROAD - GORET ROAD TO GRANT ROAD - TUCSON, AZ (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Jason is currently serving as project engineer for the final design for the widening of a 1-mile section of Silverbell Road in Tucson, AZ. He is directing all aspects of the work, including roadway, drainage, and slope design, traffic design, pavement design, utility coordination, and development of PS&E. This project is currently under construction and estimated to be complete October 2016. Fee: \$1,431,735	<input checked="" type="checkbox"/>	Check if project performed with current firm
3.	ADOT LOCAL GOVERNMENTS ON-CALL DESIGN - (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Jason is the Project Manager for Kittelson's Local Governments On-Call Design contract. Task assignments have involved the preparation of scoping and final design documents for a range of roadway improvements. Through this contract, KAI has obtained extensive knowledge of the ADOT design standards and process, including the environmental clearance process and requirement, materials, utility, and right-of-way clearance processes. Additionally, KAI has been exposed to the process of working with various PMs and with ECS to develop a complete scope and fee proposal that can be used to reach a successful project. KAI currently has six task orders on this contract at various stages of completion: <ul style="list-style-type: none"> • Rio Rico Dr/Pendleton Rd Intersection Improvements, Santa Cruz County: Design of an intersection reconstruction to provide exclusive turn lanes and a new signal ; 80% completed • St Johns Pavement Preservation, St Johns: Design of two miles of pavement rehabilitation. Design completed 2015. • Avenue E Widening, San Luis: Design widening of existing facilities from two to four lanes divided. Design completed 2014 • Church Street Reconstruction, Thatcher: Design of the roadway reconstruction to provide improved safety and operations. 60% complete • Riverview Widening, Bullhead City: Design of roadway widening , 75% complete 	<input checked="" type="checkbox"/>	Check if project performed with current firm
4.	LIBERTY BIKE BOULEVARD - TUCSON, AZ (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Jason is the project principal for the development of a project assessment, environmental clearance and final construction documents for a new bike boulevard along Liberty Blvd that will link center Tucson to the south area of Tucson city limits. The key improvements of this project include the construction of 3 different signalized bike and pedestrian crossings of arterial roadways and several neighborhood traffic calming circles. Additionally, Safe Routes to School funding will be used to construct missing sidewalk links near an elementary school within the project limits. Preliminary design completed 2015..Fee: \$49,000	<input checked="" type="checkbox"/>	Check if project performed with current firm
5.	(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	



**ANNUAL REQUEST FOR QUALIFICATIONS
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SANTA CATALINA CHURCH DRIVEWAY

Professional Services
2015

Construction (if applicable)
2015

(3) **BRIEF DESCRIPTION** (*Brief scope, size, cost, etc.*) AND SPECIFIC ROLE
Jason was the project manager for the design of a new driveway to service a church in Catalina, AZ. The driveway tied into SR 77. Fee: \$38,500

Check if project performed with current firm



**ANNUAL REQUEST FOR QUALIFICATIONS
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4. Resumes of Key Personnel Proposed for this Contract (Complete one Section #4 for each key person.)

a. NAME Jim Schoen, PE	b. ROLE IN THIS CONTRACT Senior Principal Engineer	c. YEARS EXPERIENCE	
		1. TOTAL 31	2. WITH CURRENT FIRM 10

d. LOCATION (City and State) Tucson, AZ/Phoenix, AZ

e. EDUCATION (DEGREE AND SPECIALIZATION)
BS Engineering, University of Arizona

f. PROFESSIONAL TRAINING - REGISTRATIONS
PE: AZ (25991)

g. OTHER PROFESSIONAL QUALIFICATIONS (Organizations, Awards, etc.)

TRB Committee A3A10, Highway Capacity and Quality of Service, Past Member
Institute of Transportation Engineers, Member
Pima County Regional Transportation Authority, Technical and Management Committee – Member
Arizona APWA: Arizona APWA - 2007 Project of the Year: Project Manager for the design of intersection improvements
Publications
NCHRP 3-33 – Capacity and Level of Service Procedures for Rural and Suburban Multilane Highways NCHRP 3-35 –Speed-Change Lanes User Design Guidelines NCHRP 3-45 – Speed-Flow Relationships for Basic Freeway Segments NCHRP 3-75 – Analysis of Freeway Weaving Sections ITE Freeway and Interchange Geometric Design Handbook – Chapter Author

H. RELEVANT PROJECTS

	(1)TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
		Professional Services	Construction (if applicable)
1.	BROADWAY BLVD IMPROVEMENTS, EUCLID AVE TO COUNTRY CLUB RD-TUCSON, AZ		
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE This project included the planning and preliminary design improvements to provide for safe and efficient multi-modal operations, increase roadway capacity, support the implementation of high capacity transit, and create a more complete street on Broadway Blvd. Jim led the traffic engineering component of the work, including establishing existing and future multi-modal needs, identifying and evaluating options to create an environment that encourages walking between neighborhoods and area businesses, bicycle commuting and greater transit usage. He performed the traffic operations analysis, including identifying needed intersection capacity improvements, traffic control to provide safe pedestrian crossings, and evaluating the effect of developing dedicated transit lanes. 75% complete. Fee: \$248,000	<input checked="" type="checkbox"/>	Check if project performed with current firm
2.	SILVERBELL ROAD - GORET ROAD TO GRANT ROAD - TUCSON, AZ		
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Jim is currently serving as Project Manager for the final design of roadway widening to the first mile of the Silverbell Corridor improvements in Tucson, AZ. He is overseeing all project elements, including roadway and drainage design, environmental clearance, 404 permitting, public outreach, and coordination with adjacent property owners. This project is currently under construction and estimated to be complete in 2016. Fee: \$1,431,735	<input checked="" type="checkbox"/>	Check if project performed with current firm
3.	I-10/QUARTZSITE INTERCHANGE EVALUATION: QUARTZSITE, AZ		
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Jim evaluated the impacts of a proposed travel center on the adjacent interchange per ADOT requirements. He identified and evaluated interim capacity and operational improvements to the rural diamond interchange that would allow the development to occur..Fee: \$35,000	<input checked="" type="checkbox"/>	Check if project performed with current firm
4.	MARANA CENTER TRAFFIC SIGNAL AND LIGHTING DESIGN -MARANA, AZ		
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Jason was the project principal for the traffic signal and lighting designs for the proposed Marana Retail Center development located on the southeast corner of Interstate 10 and Twin Peaks Road . The project included the design of a full signal on Twin Peaks Road and roadway lighting on Marana Center Drive. All designs conformed to the updated Town of Marana signal design guidelines and standards. Fee: \$38,500	<input checked="" type="checkbox"/>	Check if project performed with current firm
5.	(1)TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	



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I-10 PHOENIX CORRIDOR SAFETY STUDY- PHOENIX, AZ

Professional Services
2015

Construction (if applicable)

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE

Jim led the study to evaluate safety performance and identify effective crash mitigation measures for the 7-mile section of I-10 that includes the downtown Phoenix deck park tunnel. This study applied advanced methodologies and tools for freeway safety performance evaluation and calibrated these tools for use on all Arizona urban freeways. The project was conducted in close collaboration with an ADOT core technical team to allow for a transfer of knowledge, as well as broader participation from ADOT staff to educate and promote the value of the application of advanced safety management tools provided in the Highway Safety Manual. Fee: \$369,995

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 Felipe Ladrón De Guevara, PhD, PE, PTOE	b. ROLE IN THIS CONTRACT Associate Engineer	c. YEARS EXPERIENCE	
		1. TOTAL 14	2. WITH CURRENT FIRM 2
d. LOCATION (City and State) Tucson, AZ			
e. EDUCATION (DEGREE AND SPECIALIZATION) PHD Civil Engineering (Transportation/Planning), University of Arizona MS Civil Engineering (Transportation), University of Arizona BS Civil Engineering, Universidad de Sonora		f. PROFESSIONAL TRAINING - REGISTRATIONS PE: AZ (49936)	

g. **OTHER PROFESSIONAL QUALIFICATIONS (Organizations, Awards, etc.)**
Southern Arizona Chapter (SAITE), Board of Directors 2006-Present; President for 2008-2009; Vice President for 2007-2008; Treasurer/Secretary for 2006-2007

American Society of Civil Engineers (ASCE), Member
Transportation Research Board (TRB), Member
Construction Management Association of America (CMAA), Member

2012 APWA State Transportation Project of the Year
2015 Exceptional Paper Award : TRB Traffic Signal Systems Committee
2015 TRB Annual Meeting Exceptional Paper Award by the Committee on Traffic Signal Systems

Publications

- Ladrón de Guevara, F., Washington, S., and Oh J. "Forecasting Crashes at the Planning Level: Simultaneous Negative Binomial Applied in Tucson, Arizona". Transportation Research Record No.1897, National Research Council, Washington, DC, 2004, pp. 191-199.
- Improving Safety at Highway-Railroad Crossings in Pima County, AZ, Presented at the 2007 ITE Annual Meeting and Bicycle and Pedestrian Treatments at Starr Pass Boulevard and Mission Road, Presented at the 2013 ITE Western District Annual Meeting Highway/Railroad Crossings: A Pre-Signal Application, Presented at the 2008 Arizona Conference on Roads and Streets
- Evaluation of Resonant Cycles, Presented at the 88th TRB Annual Meeting in Washington, DC, 2009.
- Resonant Cycles, Presented at the 89th TRB Annual Meeting in Washington, DC, 2010.
- Starr Pass Boulevard and Mission Road Intersection Improvements, Presented at the 2012 Arizona APWA Annual Meeting
- Resonant Cycles Under Various Intersection Spacing, Speeds, and Traffic Signal Operation Treatments presented at the 94rd Annual Meeting of the Transportation Research Board, Washington, DC. 2015

H. RELEVANT PROJECTS

	(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
		Professional Services	Construction (if applicable)
1.	QUEEN CREEK SYNCHRO MODEL UPDATE- QUEEN CREEK, AZ	2015	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Felipe served as Project Manager for the update of Queen Creek's Synchro model. The project included the preparation of signal timing plans for nine intersections and reevaluation of pedestrian and vehicular clearance intervals for 28 signalized intersections...Fee: \$29,953	<input checked="" type="checkbox"/> Check if project performed with current firm	
2.	QUARTZSITE PROJECT ASSESSMENT – QUARTZITE, AZ	2015	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Felipe served as the Project Manager to revise a Traffic Impact Study to assess a proposed truck station and restaurant adjacent to Interstate 10 near the Arizona and California border. The project also included drainage analysis and a project assessment...Fee: \$15,000	<input checked="" type="checkbox"/> Check if project performed with current firm	
3.	ELOY MAIN STREET IMPROVEMENT PROJECT - ELOY, AZ		
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Felipe served as Lead Traffic Engineer for improvements to Main Street in Eloy, AZ. Improvements include modifying the roadway cross section to enhance pedestrian and bicycle facilities including improved sidewalks and crosswalks, reducing through lanes and providing a raised median, and improve access and on street parking. A landscape and hardscape theme is being developed to coordinate with the surrounding corridor to promote economic and community development. This project is currently 30% complete Fee: \$434,817	<input checked="" type="checkbox"/> Check if project performed with current firm	
4.	(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	



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CHURCH STREET, STADIUM AVE TO SR 70	Professional Services	Construction (if applicable)
<p>(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Felipe was the quality control reviewer for the design of Church St in downtown Thatcher, AZ. Church St provides access to Eastern Arizona College and Thatcher High School. Through community feedback the initial concept was adjusted to meet the desires and needs of the residents, with Church St to become a multi-modal roadway, better suited to serve the needs of all users. The existing roadway will be re-utilized to provide parking, a safer route for pedestrians and cyclists, and better definition of the different land uses along the corridor. Safety, drainage and Right of Way impacts were major design constraints that were assessed during the preliminary design stage. This project is currently 90% complete Fee: \$395,165</p>	<input type="checkbox"/> Check if project performed with current firm	
<p>(1) TITLE AND LOCATION (City and State) TANGERINE ROAD FINAL DESIGN - ORO VALLEY, AZ</p>	<p>(2) YEAR COMPLETED</p>	
<p>(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Felipe is providing the quality control review for the Thornydale Road and La Cañada Drive section of the Tangerine Road final design in Pima County, AZ. The project is split between two consulting firms, the other designing a three-mile section to the west. The preliminary engineering and design concept have been completed and the 100% plans are ready for submittal. Fee: \$1,000,000</p>	<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 Andrew Bailey	b. ROLE IN THIS CONTRACT Engineering Associate	c. YEARS EXPERIENCE	
		1. TOTAL 6	2. WITH CURRENT FIRM 6
d. LOCATION (City and State) Tucson, AZ			
e. EDUCATION (DEGREE AND SPECIALIZATION) B.Tech, Queensland University of Technology BS Civil Engineering, Queensland University of Technology		f. PROFESSIONAL TRAINING - REGISTRATIONS n/a	

g. OTHER PROFESSIONAL QUALIFICATIONS (Organizations, Awards, etc.)

Institute of Engineers Australia, Member
Urban Development Institute of Australia, Member
Association of Consulting Engineers in Australia, Corporate Member
PedBikeTrans, Member

H. RELEVANT PROJECTS

	(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
		Professional Services	Construction (if applicable)
1.	TANGERINE ROAD FINAL DESIGN - ORO VALLEY, AZ		
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Andrew is serving as the lead designer for the two-mile long roadway widening for Tangerine Road between Thornydale Road and La Cañada Drive in Pima County, AZ. The project is split between two consulting firms, the other designing a three-mile section to the west. Andrew's role includes coordination with the client and design team, final roadway design, pavement drainage analysis and design, and cross drainage design. Some foreseen issues along the corridor are wildlife crossings, utility impacts and coordination, and management of overland flow. The preliminary engineering and design concept have been completed and the 100% plans are ready for submittal. Fee: \$1M.	<input checked="" type="checkbox"/>	Check if project performed with current firm
2.	BROADWAY BLVD IMPROVEMENTS, EUCLID AVE TO COUNTRY CLUB RD- TUCSON, AZ		
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Andrew is playing a key role in the analysis and planning of the Broadway Boulevard corridor improvement project, a multi-modal improvement plan for a 2-mile commercial section of Broadway Boulevard just east of Downtown. The corridor has over 200 access points for residential and commercial properties, HAWK pedestrian signals, multiple unsignalized intersections and five signalized intersections. Andrew took the lead in the VISSIM model development and analysis, which was used to help guide the Citizen Task Force as they tried to understand the impacts of multiple alternatives. The project also used the MMLOS methodology to help stakeholders understand the impacts of the alternatives, and areas in which the corridor could be modified to help improve conditions for all modes using the corridor. In addition, the Highway Safety Manual methodologies were used to assess and compare the safety performance of the alternatives. . 70% complete. Fee: \$248,000	<input checked="" type="checkbox"/>	Check if project performed with current firm
3.	CHURCH STREET – THATCHER, AZ		
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Andrew led the preliminary design of Church St in downtown Thatcher, AZ. Church St provides access to Eastern Arizona College and Thatcher High School. Through community feedback the initial concept was adjusted to meet the desires and needs of the residents, with Church St to become a multi-modal roadway, better suited to serve the needs of all users. The existing roadway will be re-utilized to provide parking, a safer route for pedestrians and cyclists, and better definition of the different land uses along the corridor. Safety, drainage and Right of Way impacts were major design constraints that were assessed during the preliminary design stage. This project is currently 90% complete Fee: \$395,165	<input checked="" type="checkbox"/>	Check if project performed with current firm
4.	SILVERBELL ROAD - GORET ROAD TO GRANT ROAD - TUCSON, AZ		
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Andrew is assisting in the final design of Silverbell Road between Grant Road and Goret Road. The corridor runs along an environmentally-sensitive area adjacent to the Santa Cruz River, requiring the design to avoid impacts to the river floodway and floodplain and mitigate impacts to existing wildlife corridors. Andrew has led the pavement drainage analysis and design and helped in the design of the many sidestreets and driveways along the corridor. This project is currently under construction and estimated to be complete in 2016. Fee: \$1,431,735	<input checked="" type="checkbox"/>	Check if project performed with current firm
5.	PARK AVE FINAL DESIGN- TUCSON, AZ		



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	01/2015	2015
<p>(3) BRIEF DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE Andrew was the project manager for the final design of the Park Ave Enhancements. The project provided a continuous, ADA compliant environment for alternative transportation choices in walking and biking along the corridor and connects the neighborhoods to transit services. Pedestrian and bicycle connectivity will be improved through a pedestrian path and bike lanes along the length of Park Avenue, from Speedway Boulevard to Fort Lowell Road. The proposed path was constructed along only one side of Park Avenue to avoid utility and right-of-way conflicts. Water harvesting and landscape improvements were also included in the design. Fee: \$126,408</p>	<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 TERENCE RADDEMAN	b. ROLE IN THIS CONTRACT Senior Designer	c. YEARS EXPERIENCE	
		1. TOTAL 21	2. WITH CURRENT FIRM 12
d. LOCATION (City and State) Tucson, AZ			
e. EDUCATION (DEGREE AND SPECIALIZATION) AAS Computer Aided Drafting, MTI Technical Institute		f. PROFESSIONAL TRAINING - REGISTRATIONS IMSA - Work Zone Safety: IMSA Traffic Signal Design/Engineer II: IMSA Traffic Signal Technician I:	
g. OTHER PROFESSIONAL QUALIFICATIONS (Organizations, Awards, etc.) International Municipal Signal Association, Member			

H. RELEVANT PROJECTS

	(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
		Professional Services	Construction (if applicable)
1.	TANGERINE ROAD FINAL DESIGN - ORO VALLEY, AZ		
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Terry is leading the design and modeling of side streets and driveways for the two-mile long roadway widening for Tangerine Road between Thornydale Road and La Cañada Drive in Pima County, AZ. He is also providing traffic signal design, photometric analysis, intersection lighting design, and signing and striping services. To help streamline the process and reduce costs Terry developed programs to assist in automation of plan production, estimates and quantities. The preliminary engineering and design concept have been completed and the 100% plans are ready for submittal. Fee: \$1M.	<input checked="" type="checkbox"/>	Check if project performed with current firm
2.	SILVERBELL ROAD - GORET ROAD TO GRANT ROAD – TUCSON, AZ		
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Terry served as Lead Traffic Designer for the final design for the widening of a one-mile section of Silverbell Road in Tucson, AZ. He lead traffic signals, photometric analysis, corridor street lighting design, and signing and striping. He also assisted in the design and modeling of various driveways, side streets, and retaining walls. Terry provided several illustrated 3D design models to aid the public involvement process and achieve public approval. This project is currently under construction and estimated to be complete in 2016. Fee: \$1,431,735	<input checked="" type="checkbox"/>	Check if project performed with current firm
3.	I-10 VAL VISTA TO I-8 – MARICOPA COUNTY, AZ		
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Terry participated as lead traffic designer on a 10-mile section of I-10 between Tucson and Phoenix, AZ. The new design widens the mainline, completes the frontage road system, and reconstruct four interchanges. Terry developed the interchange traffic signals, which were coordinated with the interchange ramps. The interstate ramp lighting utilized AASHTO standards for light placement configuration, and Terry used photometric software to develop luminaire spacing while maintaining the desired lighting uniformity. This project is 95% complete Fee: \$250,000	<input checked="" type="checkbox"/>	Check if project performed with current firm
4.	MARANA CENTER TRAFFIC SIGNAL AND LIGHTING DESIGN – MARANA, AZ		
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Terry served as the lead designer for the traffic signal and lighting design of the proposed Marana Retail Center development located on the southeast corner of Interstate 10 and Twin Peaks Road . The project included the design of a full signal on Twin Peaks Road and roadway lighting on Marana Center Drive. The design conformed to the updated Town of Marana signal design guidelines and standards. Fee: \$38,500	<input checked="" type="checkbox"/>	Check if project performed with current firm
5.	CITY OF TUCSON, ROAD RECOVERY PROJECTS – TUCSON, AZ		
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Terry was the lead designer and prepared plans, specifications, and estimates for the pavement rehabilitation of several City of Tucson roadways, including Broadway Blvd, Speedway Blvd, 22nd St, and Old Spanish Trail. Rehabilitation varied from mill and overlay to full reconstruction. The designs included paving, striping, and minor modifications to lighting and signal equipment. This is an ongoing contract. Fee: \$34,740	<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 Radu Nan, PE	b. ROLE IN THIS CONTRACT Senior Engineer	c. YEARS EXPERIENCE	
		1. TOTAL 10	2. WITH CURRENT FIRM 10
d. LOCATION (City and State) Phoenix, AZ			
e. EDUCATION (DEGREE AND SPECIALIZATION) BS Civil Engineering - Information Technology, Rensselaer Polytechnic Institute		f. PROFESSIONAL TRAINING - REGISTRATIONS PE: AZ, FL	
g. OTHER PROFESSIONAL QUALIFICATIONS (Organizations, Awards, etc.) Institute of Transportation Engineers, Member American Society of Civil Engineers, Member			

H. RELEVANT PROJECTS

	(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
		Professional Services	Construction (if applicable)
1.	CHURCH STREET WIDENING - THATCHER, AZ (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Radu is serving as project manager and lead engineer for this ADOT Local Government Assistance project. He oversaw the evaluation of roundabouts, mini-roundabouts, and other traffic calming treatments along a mile long local street. Mr. Nan is currently leading the construction documentation effort that includes final design plans, special provisions, and construction cost estimates. This project is currently 90% complete Fee: \$395,165	<input checked="" type="checkbox"/> Check if project performed with current firm	
2.	GISS PARKWAY AT I8 RAMP ROUNDABOUT- YUMA, AZ (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Radu is currently serving as project manager and lead engineer in the final design of a multilane roundabout at the interchange of I-8 with Giss Parkway in Yuma, Arizona.. Radu is responsible for refining previous conceptual layouts to prepare the final roadway designs, signing and markings, and lighting. The final deliverables will include: final plans, specifications, and cost estimates. Is 95% complete. Fee: \$ 291,058	<input checked="" type="checkbox"/> Check if project performed with current firm	
3.	RIVERVIEW DRIVE WIDENING – BULLHEAD CITY, AZ (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE KAI is leading the planning and engineering team to conduct preliminary engineering, environmental studies and final design for the Riverview Drive reconstruction project located in the Bullhead City. The project involves widening the two-lane roadway to add a center turn lane to improve traffic safety and operations. A 10-foot wide shared-use path will be built along the entire length of the corridor to accommodate pedestrians and bicyclists. Off-street parking serving an adjacent park is also planned as part of this project. This project is currently 95% complete Fee: \$437,731	<input checked="" type="checkbox"/> Check if project performed with current firm	
4.	ALAMEDA DRIVE BIKE BOULEVARD (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Radu is serving as the Project Mnager and lead engineer for the concept and preliminary design for the Alameda Drive Bike Boulevard from Rural Road to 48th Street in Tempe. The project involved assessing the characteristics of each segment of Alameda Drive, identifying and evaluating alternatives for enhancing bicycle operations and safety and improving the environment to encourage more biking. Alternative concepts incorporated landscape enhancements, ADA and sidewalk improvements, lighting, enhanced street crossings, buffered or protected and green bike lanes to transform Alameda to a premier bicycle boulevard. Stakeholder engagement and public outreach has been an important part of the concept development process for Alameda. . Fee: \$ 74,986	2015	
5.	LIBERTY BIKE BOULEVARD - TUCSON, AZ (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Radu was Project Manager for the development of a project assessment, environmental clearance and final construction documents for a new bike boulevard along Liberty Blvd that will link center Tucson to the south area of Tucson city limits. The key improvements of this project include the construction of 3 different signalized bike and pedestrian crossings of arterial roadways and several neighborhood traffic calming circles. Additionally, Safe Routes to School funding will be used to construct missing sidewalk links near an elementary school within the project limits. Preliminary design completed 2015 . Fee: \$85,884.	<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 Joel Amarillas	b. ROLE IN THIS CONTRACT Transportation Analyst	c. YEARS EXPERIENCE	
		1. TOTAL <1	2. WITH CURRENT FIRM <1
d. LOCATION (<i>City and State</i>) Tucson, AZ			
e. EDUCATION (DEGREE AND SPECIALIZATION) BS Civil Engineering, University of Arizona		f. PROFESSIONAL TRAINING - REGISTRATIONS	
g. OTHER PROFESSIONAL QUALIFICATIONS (<i>Organizations, Awards, etc.</i>) American Society of Civil Engineers Arizona Section, Associate Member American Society of Civil Engineers U of A Chapter, 2015 External Vice-president Institute of Transportation Engineers U of A Chapter, Member			

H. RELEVANT PROJECTS

	(1) TITLE AND LOCATION (<i>City and State</i>)	(2) YEAR COMPLETED	
		Professional Services	Construction (if applicable)
1.	PEORIA INTERSECTION STUDIES – PEORIA, AZ	2015	
	(3) BRIEF DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE Joel assisted with the evaluation of capacity and safety improvements for two intersections in the City of Peoria. Using the HiSafe software, he generated existing and predicted conditions for intersection crashes using field measured data. complete. Fee: \$16,296	<input checked="" type="checkbox"/> Check if project performed with current firm	
2.	TANGERINE ROAD FINAL DESIGN - ORO VALLEY, AZ		
	(3) BRIEF DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE Joel is serving as transportation analyst for the two-mile long roadway widening of Tangerine Road between Thornydale Road and La Cañada Drive in Pima County, AZ. He is working on various aspects of the final design and preparing construction documents including sewer, utilities, and demolition. Joel used multiple references to better design a multi-use path to improve user safety. The preliminary engineering and design concept have been completed and the 100% plans are ready for submittal. Fee: \$900,000.	<input checked="" type="checkbox"/> Check if project performed with current firm	
3.	BROADWAY BOULEVARD IMPROVEMENTS – TUCSON, AZ		
	(3) BRIEF DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE Joel conducted the noise analysis for the multi-modal improvement plan for a 2-mile commercial section of Broadway Boulevard just east of Downtown. He used the Federal Highway Administration's traffic noise modeling software to simulate existing noise levels in the area and compute an accurate scenario for future conditions. This project is currently 70% complete. Fee: \$437,731	<input checked="" type="checkbox"/> Check if project performed with current firm	



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

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

a. TITLE AND LOCATION <i>(City and State)</i> SILVERBELL ROAD FINAL DESIGN, GRANT ROAD TO GORET ROAD – TUCSON, AZ	b. YEAR COMPLETED	
	PROFESSIONAL SERVICES 2015	CONSTRUCTION <i>(If applicable)</i>

23. PROJECT OWNER'S INFORMATION

c. PROJECT OWNER City of Tucson	d. ORIGINAL BUDGET/NTE AMOUNT OF PROJECT \$ 1,159,603.00	e. TOTAL COST OF PROJECT \$1,400,000
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f. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (include scope, size, and length of project)
KAI was the prime consultant for Prime contractor for developing the design concept and environmental studies for the 8-mile Silverbell Road corridor, and preparing the final design and PS&E for the first construction phase, from Grant Road to Goret Road. KAI led all technical evaluations, environmental studies and environmental clearance, coordination with the US Corps of Engineers and Section 404 permitting, roadway and drainage design, utility coordination, right-of-way acquisition, and public outreach.. Silverbell Road is an environmentally sensitive corridor, containing substantial archaeological/cultural resources, and has some 78 drainage crossings, over 50 of which are designated jurisdictional waters of the U.S. The design concept (also done by Kittelson) provided recommendations to address roadway and intersection capacity, eliminate deficient and unsafe roadway geometry, eliminate all at-grade drainage crossings, provide pedestrian and bicycle facilities, enhance several wildlife corridors, and minimize impacts to the Santa Cruz River floodplain and archaeological sites. Improvements to this section included a curbed, four-lane divided roadway with raised median island, bike lanes, a sidewalk on the west side of Silverbell Road, a multi-use path on the east side of Silverbell Road, drainage crossing improvements, LED street lighting, traffic signal improvements at the Grant and Goret intersections, bus stop improvements, native landscape, retaining walls at the large slopes, and public art. This project is currently under construction. This is relevant to the Annual Professional Services list because it demonstrates Kittelson's experience in a wide range of the requested categories including Highways; Streets; Airfield Paving; Lighting (Exteriors; Streets.), Civil, Engineering, and Traffic and Transportation Engineering. This project demonstrates our skills in roadway design-from preliminary engineering to final design; lighting, signing and striping; paving, traffic operations, and multimodal improvements.

5b

a. TITLE AND LOCATION <i>(City and State)</i> INA ROAD-ORACLE ROAD INTERSECTION IMPROVEMENTS -	b. YEAR COMPLETED	
	PROFESSIONAL SERVICES 2013	CONSTRUCTION <i>(If applicable)</i> 2014

23. PROJECT OWNER'S INFORMATION

c. PROJECT OWNER Pima County DOT	d. ORIGINAL BUDGET/NTE AMOUNT OF PROJECT \$494,897	e. TOTAL COST OF PROJECT \$539,897
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f. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (include scope, size, and length of project)
Ina Road at Oracle Road (SR 77) is a major intersection in Pima County, carrying well over 100,000 vpd. During peak hours, queues often extend for 0.5 miles. Studies have identified the need to construct a grade-separated intersection—however, available funding would only support limited improvements to improve operations and safety. Working with Pima County, KAI identified and evaluated potential cost-effective solutions, including adding dual left-turn and right-turn lanes; a quadrant left-turn configuration; and indirect or U-turn left-turns. Utilizing Synchro and SimTraffic, KAI conducted extensive analysis of improvement alternatives. The evaluation determined that the indirect left-turn configuration would potentially reduce intersection delay by 25 percent, and substantially reduce queuing during peak traffic periods. Subsequently, KAI led the final design of the indirect left-turn improvements, which included adding dual right-turn turn lanes, extended storage bays, adding sidewalks and bus pull outs, and improving the transit stops. The key component of this project is an innovative intersection type, referred to as the indirect-left turn, which incorporates an intricate geometric design, as well as signal coordination principles. This is relevant to the Annual Professional Services list because it demonstrates Kittelson's experience in a wide range of the requested categories including Highways; Streets; Airfield Paving; Lighting (Exteriors; Streets.), Civil Engineering, and Traffic and Transportation Engineering. This project demonstrates our skills in roadway design-from preliminary engineering to final design; lighting, signing and striping; paving, traffic operations, and multimodal improvements.

5c

a. TITLE AND LOCATION <i>(City and State)</i>	b. YEAR COMPLETED
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UNIVERSITY DRIVE SIGNAL TIMING OPTIMIZATION;- MARICOPA COUNTY	PROFESSIONAL SERVICES 2014	CONSTRUCTION <i>(If applicable)</i>
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23. PROJECT OWNER'S INFORMATION

c. PROJECT OWNER Maricopa Association of Governments	d. ORIGINAL BUDGET/NTE AMOUNT OF PROJECT \$19,730	e. TOTAL COST OF PROJECT \$19,730
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- f. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (include scope, size, and length of project)
This MAG On-Call ITS assignment involved developing, implementing, and evaluating traffic signal timing plans to improve signal coordination and progression along a 3-mile section of University Drive that includes both City of Mesa and Maricopa County signals. Kittelson developed timing plans for four time periods, weekday a.m., mid-day, and p.m. and weekend. Based on evaluation results, the timing plans were adjusted to provide optimal coordination.
This is relevant to the Annual Professional Services list because it demonstrates Kittelson's experience in Intelligent Transportation Systems and Traffic Engineering.

5d

a. TITLE AND LOCATION <i>(City and State)</i> I-10 VAL VISTA TO I-8 - MARICOPA COUNTY, AZ	b. YEAR COMPLETED	
	PROFESSIONAL SERVICES 2014	CONSTRUCTION <i>(If applicable)</i>

23. PROJECT OWNER'S INFORMATION

c. PROJECT OWNER Arizona Department of Transportation	d. ORIGINAL BUDGET/NTE AMOUNT OF PROJECT \$500K	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)
Preliminary engineering and final design of a 10 mile section of I-10 between Tucson and Phoenix. The project will widen the mainline, complete the frontage road system, and reconstruct four interchanges. The initial phase will produce a design concept report, followed by the final design and preparation of construction documents. KAI is preparing signal and lighting design. This project is 95% complete and is expected to come in on budget.
This project is relevant to the Annual Professional Services list because it demonstrates Kittelson's experience in Lighting (Exteriors; Streets.) and Traffic and Transportation Engineering. This project demonstrates our skills in lighting design and traffic operations.

a. TITLE AND LOCATION <i>(City and State)</i> AVENUE E FINAL DESIGN - SAN LUIS, AZ	b. YEAR COMPLETED	
	PROFESSIONAL SERVICES 2014	CONSTRUCTION <i>(If applicable)</i> 2015

23. PROJECT OWNER'S INFORMATION

c. PROJECT OWNER Arizona Department of Transportation	d. ORIGINAL BUDGET/NTE AMOUNT OF PROJECT \$231,627	e. TOTAL COST OF PROJECT \$231,627
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- f. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (include scope, size, and length of project)
KAI led the development and design for the widening of a two mile section of Avenue E that serves the new commercial border crossing in San Luis Arizona. The project, constructed using federal border infrastructure funds, is widening the roadway to a 4-lane divided section. KAI prepared the project assessment report, led the environmental clearance process, secured utility and right-of-way clearances, and prepared the design and construction documents. The project is currently in construction and KAI is providing post design service support. Project design was completed in 2014 and construction was completed in 2015.
This project is relevant to the Annual Professional Services list because it demonstrates Kittelson's experience in a wide range of the requested categories including Highways; Streets; Airfield Paving; Civil Engineering, and Traffic and Transportation Engineering. This project demonstrates our skills in roadway design-from preliminary engineering to final design; signing and striping; paving, and traffic operations.



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6. ADDITIONAL INFORMATION

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

KAI is a leader in completing applied transportation research projects at the local, state, and national levels. This leadership contributes to an improved transportation profession by ensuring that our technical analyses and policy recommendations are based on relevant, current transportation theories and practices. The KAI team successfully develops State and Federal guidelines and manuals including the *Highway Safety Manual*; the *FHWA Road Safety Audit Guidelines*, *Signal Timing Manual*, and *Roundabout Design Guide*.

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:	73%
b. Percentage of Total Work Attributable to Non-Government Work:	27%

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

Signature *James M. Schoen* Date:12/18/15
Name: James Schoen Title: Senior Principal Engineer