Horrocks.



April 1, 2025

Arizona Department of Transportation
Engineering Consultants Section
205 S. 17th Avenue, Mail drop 616E
Phoenix, AZ 85007

RE: Project Development On-Call (PDOC), Contract No. 2025-011

Dear Members of the Selection Committee:

Horrocks LLC (Horrocks) is a full-service transportation engineering firm with the designers, engineers, technicians, and specialty resources necessary for the full range of services required on this contract. We appreciate the opportunity to work with Arizona Department of Transportation (ADOT) and **are very interested in being selected to deliver projects on budget and schedule as a key team for this PDOC contract.**

COMMITMENT

We fully commit the key personnel identified in this submittal to the extent necessary to meet ADOT's quality and schedule expectations. As Consultant Principal, Erin Kline, PE (AZ PE #52633), will take responsibility for this contract and Clark Clatanoff, PE, PTOE (AZ PE #20206, PTOE #602) will serve as Project (Contract) Manager. Clark has successfully completed more than 100 ADOT projects, including multiple projects along the I-10 corridor, numerous Local Public Agency projects, as well as a wide range of design-bid-build projects across the state. Throughout his 46-year career, he has worked with all ADOT technical groups and understands ADOT's on-call processes and delivery requirements.

KEY BENEFITS

Experience. Our team has decades of extensive ADOT experience and excels in understanding their standards, processes, and procedures, fostering a history of successful collaboration. We are committed to delivering innovative solutions and will work closely with the Project Management Group to ensure timely bid advertisement of on-call tasks. By implementing strong metrics and strategies, we effectively manage project scopes, budgets, and schedules, while prioritizing bidability and constructability to minimize contractor claims. ADOT can trust us for exceptional client service and high-quality workmanship.

Resources. Our Phoenix team, comprised of 43 local professionals and supported by more than 950 Horrocks staff and subconsultants, possesses a thorough understanding of ADOT standards and funding mechanisms. With extensive experience in statewide transportation, traffic, drainage, and bridge project development, we stand ready to deliver high-quality solutions that meet ADOT's expectations. From planning and predesign through final design and construction, Horrocks has the expertise to guide ADOT's projects across all phases of the project life cycle, ensuring a superior experience.

Partnering. Our team is dedicated to delivering services both effectively and efficiently while upholding the high-quality standards of Horrocks and ADOT. Horrocks promotes an environment in which the needs of the customer are the top priority. Our staff is accessible 24-hours-a-day, seven-days-a-week. In partnership with ADOT, we commit to providing personnel equipped with the necessary training and experience to meet the requirements of each task effectively.

As Prime Consultant, **Horrocks will meet ADOT's established 11.96% DBE goal** for each task order and the total contract. We have selected seven reputable certified DBE firms with whom our firm and key team members have achieved successful results on previous contracts. **Horrocks is not a certified DBE firm** so we partner with qualified DBE firms to share opportunities and help responsibly grow the industry.

Horrocks is excited about the opportunity to continue serving ADOT and its key stakeholders, acting as an extension of ADOT's staff to successfully deliver projects under this contract. We are eager to strengthen our collaboration with your team and appreciate your consideration. For any questions, please reach out to Erin Kline at 520.614.6801 or erink@horrocks.com.

Sincerely,

Erin Kline, PE
Principal, Horrocks
erink@horrocks.com
Principal/Authorized SOQ Signer

Clark Clatanoff, PE, PTOE
Project Manager, Horrocks
clarkc@horrocks.com

Engineering Consultants Section
SOQ Proposal Certifications Form

Contract #: 2025-011 Consultant Name: Horrocks LLC

Please read the fifteen (15) statements below. The statements are to ensure Consultants are aware and in agreement with Federal, State and ECS guidelines related to the award of this contract. Consultants shall submit the specific Certification form attached to each RFQ advertised, as revisions to the form may occur from time to time. Failure to sign and submit the certification form specified in the RFQ with the SOQ proposal will result in the SOQ proposal being rejected.

Submission of the SOQ by the Consultant certifies that to the best of its knowledge:

1.	The Consultant and its subconsultants have not engaged in collusion with respect to the contract under consideration.
2.	The Consultant, its principals and subconsultants have not been suspended or debarred from doing business with any government entity.
3.	The Consultant shall have the proper Arizona license(s) and registration(s) for services to be performed under this contract. Furthermore, the Consultant shall ensure that all subconsultants have the proper Arizona license(s) and registration(s) for services to be performed under this contract.
4.	The Consultant's signature on any SOQ proposal, negotiation document or contract constitutes that a responsible officer of the Consultant has read and understands its contents and is empowered any duly authorized on behalf of the Consultant to do so.
5.	The Consultant's Project Team members are employed by the Consultant on the date of submittal.
6.	All information and statements written in the proposal are true and accurate and that ADOT reserves the right to investigate, as deemed appropriate, to verify information contained in proposals.
7.	Key members of the Project Team, including subconsultants, are currently licensed to provide the required services as requested in the RFQ package.
8.	All members of the Project Team who are former ADOT employees did not have or provide information that gives the Consultant a competitive advantage; and either (1) concluded their employment with ADOT at least 12 months before the date of the SOQ or (2) have not made any material decisions about this project while employed by ADOT.
9.	Work, equating **at least 51%** of the contract value, shall be completed by the Consultant unless otherwise specified in the SOQ or contract.
10	No Federally appropriated funds have been paid or shall be paid, by or on behalf of the Consultant for the purpose of lobbying.
11.	The Consultant understands that it is required to have a compliant accounting system, in accordance with Generally Accepted Accounting Principles (GAAP), Federal Acquisition Regulation (FAR) of Title 48, Code of Federal Regulations (CFR)-Part 31, applicable Cost Accounting Standards (CAS), and ADOT Advance Agreement Guideline.
12.	If project is funded with Federal Aid funds, the Consultant affirmatively ensures that in any subcontract entered into pursuant to this advertisement, Disadvantaged Business Enterprises will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award, in accordance with Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 U.S.C. §§ 2000d to 2000d-4) and the Regulations.
13.	The Consultant shall utilize all Project Team members, subconsultants and DBE firms, if applicable, submitted in the SOQ, and shall not add other Project Team members or subconsultants, unless the Consultant has received prior written approval from ADOT.
14.	The Consultant shall either meet its DBE goal commitment and any other DBE commitments or make Good Faith Efforts to meet the DBE goal commitments as stated in its SOQ proposal or Cost Proposal and shall report on a timely basis its DBE utilization as detailed in the contract.
15.	If selected, the Consultant is committed to satisfactorily carry out the Consultant's commitments as detailed in the contract and its SOQ proposal.

I hereby certify that I have read and agree to adhere to the fifteen (15) statements above and/or that the statements are true to the best of my knowledge as a condition of award of this contract.

Print Name: Erin Kline, PE Title: Principal

Signature: Erin Kline Date: April 1, 2025

Revised 2/11/2022

ARIZONA DEPARTMENT OF TRANSPORTATION
ENGINEERING CONSULTANTS SECTION
PARTICIPATION IN BOYCOTT OF ISRAEL - CONSULTANT CERTIFICATION FORM
ADOT ECS Contract No.: 2025-011

This Certification is required in response to legislation enacted to prohibit the State from contracting with companies currently engaged in a boycott of Israel. To ensure compliance with A.R.S. §35-393, this form must be completed and returned with any response to a solicitation (SOQ), Contract Cost Proposals, and Contract Time Extensions. The Consultant understands that this response will become public record and may be subject to public inspection.

Please note that if any of the following apply to this Solicitation, Contract, or Contractor, then the Offeror shall select the "Exempt Solicitation, Contract, or Contractor" option below:

- The Solicitation or Contract has an estimated value of less than $100,000;
- Contractor is a sole proprietorship;
- Contractor has fewer than ten (10) employees; OR
- Contractor is a non-profit organization.

Pursuant to A.R.S. §35-393.01, public entities are prohibited from entering into contracts "unless the contract includes a written certification that the company is not currently engaged in, and agrees for the duration of the contract to not engage in, a boycott of goods or services from Israel."

Under A.R.S. §35-393:

1. "Boycott" means engaging in a refusal to deal, terminating business activities or performing other actions that are intended to limit commercial relations with entities doing business in Israel or in territories controlled by Israel, if those actions are taken either:

   (a) Based in part on the fact that the entity does business in Israel or in territories controlled by Israel.
   (b) In a manner that discriminates on the basis of nationality, national origin or religion and that is not based on a valid business reason.

2. "Company" means an organization, association, corporation, partnership, joint venture, limited partnership, limited liability partnership, limited liability company or other entity or business association, including a wholly owned subsidiary, majority-owned subsidiary, parent company or affiliate, that engages in for-profit activity and that has ten or more full-time employees.

…

5. "Public entity" means this State, a political subdivision of this State or an agency, board, commission or department of this State or a political subdivision of this State.

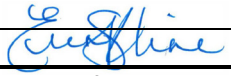
The certification below does not include boycotts prohibited by 50 United States Code Section 4842 or a regulation issued pursuant to that section. *See* A.R.S. §35-393.03.

In compliance with A.R.S. §§35-393 *et seq*., all offerors must select one of the following:

☒ The Company submitting this Offer **does not** participate in, and agrees not to participate in during the term of the contract, a boycott of Israel in accordance with A.R.S. §§35-393 *et seq*. I understand that my entire response will become public record in accordance with A.A.C. R2-7-C317.

☐ The Company submitting this Offer **does** participate in a boycott of Israel as described in A.R.S. §§35-393 *et seq*.

☐ **Exempt Solicitation, Contract, or Contractor.**
Indicate which of the following statements applies to this Contract:
☐ Solicitation or Contract has an estimated value of less than $100,000;
☐ Contractor is a sole proprietorship;
☐ Contractor has fewer than ten (10) employees; and/or
☐ Contractor is a non-profit organization.

Horrocks LLC Company Name	 Signature of Person Authorized to Sign
2600 North Central Avenue, Suite 550 Address	Erin Kline, PE Printed Name
Phoenix AZ 85004 City State Zip	Principal April 1, 2025 Title Date

FORCED LABOR OF ETHNIC UYGHURS BAN
Certification Form

Forced Labor of Ethnic Uyghurs Ban

Please note that if any of the following apply to the Consultant, then the Offeror shall select the "Exempt Consultant" option below:

- Consultant is a sole proprietorship;
- Consultant has fewer than ten (10) employees; OR
- Consultant is a non-profit organization.

Pursuant to A.R.S. § 35-394, the State of Arizona prohibits a public entity from entering into or renewing a contract with a company unless the contract includes written certification that the company does not use the forced labor, or any goods or services produced by the forced labor, or use any consultants, subconsultants, or suppliers that use the forced labor or any goods or services produced by the forced labor of ethnic Uyghurs in the People's Republic of China.

Under A.R.S. §35-394:

1. "Company" means an organization, association, corporation, partnership, joint venture, limited partnership, limited liability partnership, limited liability company or other entity or business association, including a wholly owned subsidiary, majority-owned subsidiary, parent company or affiliate, that engages in for-profit activity and that has ten or more full-time employees.

   (a) Based in part on the fact that the entity does business in Israel or in territories controlled by Israel.
   (b) In a manner that discriminates on the basis of nationality, national origin or religion and that is not based on a valid business reason.

2. "Public entity" means this State, a political subdivision of this State or an agency, board, commission or department of this State or a political subdivision of this State.

In compliance with A.R.S. §§ 35-394 et seq., all offerors must select one of the following:

☒	The Company submitting this Offer does not use, and agrees not to use during the term of the contract, any of the following: • Forced labor of ethnic Uyghurs in the People's Republic of China; • Any goods or services produced by the forced labor of ethnic Uyghurs in the People's Republic of China; or • Any Consultants, Subconsultants, or suppliers that use the forced labor or any goods or services produced by the forced labor of ethnic Uyghurs in the People's Republic of China.
☐	The Company submitting this Offer **does** participate in use of Forced Uyghurs Labor as described in A.R.S. § 35-394.
☐	**Exempt Consultant.** Indicate which of the following statements applies to this Consultant (may be more than one): ☐ Consultant is a sole proprietorship; ☐ Consultant has fewer than ten (10) employees; and/or ☐ Consultant is a non-profit organization.

Horrocks LLC
Company Name

2600 North Central Avenue, Suite 550
Address

Phoenix | AZ | 85004
City | State | Zip

Signature of Person Authorized to Sign

Erin Kline, PE
Printed Name

Principal
Title

ADOT Project Development On-Call - Consultant Services Matrix
ADOT Contract No.: 2025-011
Prime Consultant Name: __Horrocks LLC_____

Please indicate in the Matrix below whether the prime Consultant and/or Subconsultant in-house resources will provide services for the following Key Technical Disciplines.

Key Technical Discipline	Technical Sub Areas	Prime Consultant	Subconsultant(s) (include firm name)	ADOT Technical On-Call**
Roadway Design		Horrocks		N/A
	Fringe-Urban Highway Design	Horrocks		N/A
	Rural Highway Design	Horrocks		N/A
	Controlled Access Urban Highway.	Horrocks		N/A
	Local Roads	Horrocks		N/A
	Roundabout	Horrocks		N/A
	Intersection Improvements	Horrocks		N/A
	ADA/Sidewalk/MUP	Horrocks		N/A
	Climbing Lanes	Horrocks		N/A
	Shoulder Widenings	Horrocks		N/A
	Interchange Improvements	Horrocks		N/A
Survey & Mapping		Horrocks	Trace Consulting, LLC Aerotech Mapping	N/A
	Aerial Survey, Mapping		Trace Consulting, LLC Aerotech Mapping	N/A
	Field Survey		Trace Consulting, LLC Aerotech Mapping	N/A
	Bathymetric Survey		Trace Consulting, LLC Aerotech Mapping	N/A
Landscape and Irrigation Design & Erosion Control		Horrocks	Corral Design Group J2 Design	N/A
	Erosion Control	Horrocks	Corral Design Group J2 Design	N/A
	Irrigation Design	Horrocks	Corral Design Group J2 Design	N/A
	Hardscape Aesthetics		Corral Design Group J2 Design	N/A
	Landscape Design		Corral Design Group J2 Design	N/A
	SWPPP	Horrocks	Corral Design Group J2 Design	N/A
	Seeding Mix Design		Corral Design Group J2 Design	N/A
Materials Design			Ethos Engineering, LLC	N/A
	Asphaltic Pavement		Ethos Engineering, LLC	N/A
	Concrete Pavement		Ethos Engineering, LLC	N/A
	Pavement Life Extension		Ethos Engineering, LLC	N/A
	Rockfall Mitigation		Ethos Engineering, LLC	N/A
	Life Extension Projects		Ethos Engineering, LLC	N/A
				N/A
	PBPD		Ethos Engineering, LLC	N/A
Bridge/Structural Design		Horrocks		N/A
	Bridge	Horrocks		N/A
	Deck Overlay	Horrocks		N/A
	Deck Replacement	Horrocks		N/A

	Screen Wall	Horrocks		N/A
	ABC	Horrocks		N/A
	Retaining Wall	Horrocks		N/A
	Noise Wall	Horrocks		N/A
	Signal/Lighting/Sign Foundations	Horrocks		N/A
	Sign/Pole Design	Horrocks		N/A
	Steel Structures	Horrocks		N/A
Geotechnical Studies/Design			Ethos Engineering, LLC	N/A
				N/A
				N/A
	FWD		Ethos Engineering, LLC	N/A
	Pavement Coring		Ethos Engineering, LLC	N/A
	Drilling/Foundation Design		Ethos Engineering, LLC	N/A
	Slope Stability /Soil Nail		Ethos Engineering, LLC	N/A
	Rockfall Mitigation, Rock Scaling		Ethos Engineering, LLC	N/A
	Drilled Shaft		Ethos Engineering, LLC	N/A
	MSE Walls		Ethos Engineering, LLC	N/A
Drainage Design		Horrocks	Riley Engineering, Inc. J2 Design	N/A
	Pipe Culvert/Box Culvert	Horrocks	Riley Engineering, Inc. J2 Design	N/A
	Drainage Retrofit	Horrocks	Riley Engineering, Inc. J2 Design	N/A
	Hydraulic/Hydrologic Drainage Analysis - HEC RAS, HEC1	Horrocks	Riley Engineering, Inc. J2 Design	N/A
	2D Hydraulic Modeling	Horrocks		N/A
	Drainage Channel and Structures	Horrocks		N/A
	Bridge Hydraulics	Horrocks		N/A
	LOMR / CLOMR	Horrocks		N/A
	Scour Analysis/Retrofit	Horrocks		N/A
Traffic/Safety Engineering Design		Horrocks	Y2K Engineering	N/A
	Temporary Traffic Control	Horrocks		N/A
	Signing/Pavement Marking/Striping	Horrocks		N/A
	Traffic Signal Design	Horrocks		N/A
	Street Lighting Design	Horrocks		N/A
	Intersection Lighting Design	Horrocks		N/A
	High Mast Lighting	Horrocks		N/A
	RSA		Y2K Engineering	N/A
	VISSIM	Horrocks		N/A
	Intersection Control Evaluation (ICE)	Horrocks		N/A

	Dynamic Messaging Signs (DMS)	Horrocks		N/A
	Smart Work Zones	Horrocks		N/A
Intelligent Transportation Systems		Horrocks		N/A
	Broadband, Fiber Optic	Horrocks		N/A
	Speed Feedback	Horrocks		N/A
	Wrong Way Detection	Horrocks		N/A
	CCTV	Horrocks		N/A
	DMS	Horrocks		N/A
Cost Estimations/Specifications		Horrocks		N/A
	Unit Cost Verification	Horrocks		N/A
	Bid Justification	Horrocks		N/A
	Special Provisions	Horrocks		N/A
				N/A
				N/A
Environmental Services**			Tierra Right of Way Services, Ltd. Pinyon Environmental, Inc.	
	Noise Analysis		Tierra Right of Way Services, Ltd. Pinyon Environmental, Inc.	
	404 Permit / 408 Permit		Tierra Right of Way Services, Ltd. Pinyon Environmental, Inc.	
	Cultural Surveys		Tierra Right of Way Services, Ltd. Pinyon Environmental, Inc.	
	Air Quality Analysis		Tierra Right of Way Services, Ltd. Pinyon Environmental, Inc.	
	Biological Evaluation		Tierra Right of Way Services, Ltd. Pinyon Environmental, Inc.	
	Section 4(f) analysis		Tierra Right of Way Services, Ltd. Pinyon Environmental, Inc.	
	Hazardous Materials Analysis		Tierra Right of Way Services, Ltd. Pinyon Environmental, Inc.	
	Public Involvement		Tierra Right of Way Services, Ltd. Pinyon Environmental, Inc.	
	Other NEPA Documentation		Tierra Right of Way Services, Ltd. Pinyon Environmental, Inc.	
Right-Of-Way Mapping, & Plans**		Horrocks	Tierra Right of Way Services, Ltd.	
	Legal Description	Horrocks		
	Right of Way Plans	Horrocks		
	TCE	Horrocks		
	Right of Way Cost Determination		Tierra Right of Way Services, Ltd.	
Utility Locating - SUE**		Horrocks		
Facilities/Maintenance Design (e.g. Rest Area, Port of Entry, Airport etc.)		Horrocks	Pearson Engineering Associates	N/A
	Vertical Design	Horrocks		N/A
	MEP		Pearson Engineering Associates	N/A
	ADEQ Approvals	Horrocks	Pearson Engineering Associates	N/A
List any Other expertise that pertains to the	Independent Cost Estimating (ICE)	Horrocks		N/A

project	3D Modeling Visual Simulations Public Relations Cost Risk Analysis Value Engineering	Horrocks		

** Consultants may, but are not required to, include the prime Consultant's in-house resources or subconsultants to provide services associated with ROW Mapping & Plans, Utility Locating (SUE) and Environmental Services as part of their team. Prime Consultants must identify in the Consultant Services Matrix if they are proposing to include their firm's resources or Subconsultants (or both) to perform these services or if they elect to utilize consultants contracted through existing ADOT ROW, or EP on-call contracts to perform these services. Evaluation scores and comments will not be affected by the prime Consultant's decision to include or exclude these services as part of their SOQ/proposal or future Task Order Assignments.

- *Prime Consultant's electing to perform these services with their own in-house resources or Subconsultants must demonstrate their technical qualifications in their SOQ proposal (following the SOQ Technical Evaluation Criteria) and perform these services in conformance with the Scope of Work and minimum state and federal standards/regulations.*

- *Consultants electing to use available ADOT EP or ROW on-call contracts will not be included as part of the consultant selection process associated with these on-call contracts, but will still be responsible for managing and delivering the project per the agreed upon scope, schedule and budget for the associated task order they were assigned.*

SOQ TECHNICAL EVALUATION CRITERIA

1. UNDERSTANDING AND APPROACH

a) GENERAL CONTRACT AND DESIGN PROCESS

The Project Development On-Call (PDOC) contract features a variety of organizational, institutional, and funding elements that will require careful coordination to achieve compliance. Horrocks is well-versed and competent in each of these elements and will work alongside Arizona Department of Transportation (ADOT) to proactively resolve all project issues while delivering each project and task accurately, on time, and within budget.

We have focused our submittal for this contract on delivering ADOT with a comprehensive approach that generates the greatest benefits:

- Operate in full transparency as an extension of ADOT staff.
- Fully support ADOT's Project Manager (PM) and technical leads.
- Proactively engage ADOT teams and stakeholders.
- Offer a technically knowledgeable team proficient in resolution.
- Take personal ownership of the project and stay on schedule.
- Embrace the LEAN process initiative, 50 days to contract goal.
- Support the Task Order Assignment Schedule Tracker (TOAST).
- Work within ADOT's Standards and Technical Guidelines.

The Horrocks team will provide engineering and environmental scoping studies and documents; plans, specifications, and estimates (PS&E) in final design; and post-design engineering and related services for various assigned tasks. We will coordinate project management with ADOT's PM and organization units; federal, state, and local stakeholders; and utilities.

Horrocks will initiate the three major phases on each task to deliver the project:

- Scoping: Develop the project scope of work, discover stakeholders, and identify issues.
- Final Design: Complete Stages III, IV, and V PS&E and bidding.
- Environmental: Perform project-specific due diligence and reporting with ultimate ADOT/Federal Highway Administration (FHWA) approval to complete the design and construction.

The Horrocks team will execute each of the key disciplines within these three overarching phases. Our approach is centered on client and stakeholder interaction, meeting design requirements, and performing on schedule and within budget.

The Project Development Process Chart (shown to the right) describes the major activities and milestones involved in developing on-call assignments for scoping documents and final design.

Project Development Process/Task Order Assignments

50-Day TOAST Process

1. Notification of Selection
2. Stakeholder Kick-off Meeting for Scoping (within 10 days of notification)
3. Prepare and Submit Scope of Work and Fee Proposal in conjunction with the Dictionary of Standardized Work Tasks (DSWT)
4. First Draft (within 7 days of scoping meeting)
5. Revise Scope of Work and Fee per ADOT's Comments (within 7 days of receiving comments)
6. ADOT Issues Notice to Proceed

Scoping Document Task Order

Project Initiation (2 Weeks)

- Identify Team Member/Stakeholders
- Schedule Kick-off Meeting

Background Data (1 Month)

- Record Drawings/Permit Log
- Technical Data
- Right-of-Way (ROW) Plans
- Survey/Mapping

Field Review/Scoping (2 Weeks)

- Identify Issues/Discuss Schedule
- Conduct Field Review/Project Photos/Prepare Minutes
- Agency/Public Scoping Meeting

AASHTO Report (2 Weeks) (When Required)

- Analyze Controlling Design Criteria
- Prepare Summary Report
- Prepare Design Exception/Variance Letter
- American Association of State Highway and Transportation Officials (AASHTO) Controlling Design Criteria

Initial Project Assessment (PA) (2 Months) *

- Introduction
- Background Data
- Project Scope
- Development Considerations
- Other Requirements
- Cost Estimate
- PPAC Action
- Involvement Sheet
- Concept Drawing

Initial Design Concept Report (DCR) (6 Months) *

- Introduction
- Traffic/Crash Data
- Location Analysis
- Design Concept Alternatives
- Preferred Alt. Cost Estimate
- Project Implementation
- Environmental Overview
- Typical Sections/Plans

Summary of Comments

- Prepare Summary of Comments
- Hold Comment Resolution Meeting
- Distribute Summary of Comments

Final PA (2 Weeks)

- Prepare Final PA
- Project Determination Form (Signatures)
- Distribute PA

Final DCR (4 Months)

- Incorporate Comments
- Recommendations
- Access Management Plan
- Initial Bridge/Drainage Report
- Environmental Mitigation Measures
- Finalize/Distribute DCR Overview
- Typical Sections/Plans

Final Design Task Order

Project Initiation (2 Weeks)

- Hold Kick-off Meeting and Field Review

Data Collection (1 Month)

- Scoping Documentation
- Record Drawings/ Permit Log
- Technical Reports
- ROW Plans

Preliminary Engineering - 30% (2 Months)

- Mapping & Supplemental Surveys
- Geotechnical Investigations
- Initial Materials Design Report (MDR)
- Utility Designation & Conflict Identification
- Stakeholder & Public Involvement
- ROW Requirements
- Environmental Reports
- Preliminary Plans

Final Design - 60%/95%/100% (6 Months)

- Stage Plan Deliverables
- Comment Resolution
- Utility Conflict Review and Resolution
- ROW Acquisition Assistance
- Construction Schedule and Special Provisions
- Environmental Supplement
- Obtain Permits and Clearances (Utility, Environmental, ROW)
- Final MDR

Bid Advertisement (2 Months)

- Prepare Final PS&E
- Assist Contract & Specification (C&S) Process
- Respond to Contractor's Inquiries
- Prepare Addenda

Post-Design Services (Throughout Construction)

- Assist C&S Process
- Respond to Contractor's Inquiries
- Shop Drawing Review
- Prepare Addenda

* **Additional Scoping and Preliminary Engineering Reports May Include:** Americans with Disabilities Act (ADA) Compliance Evaluation, Drainage Study, Traffic Analyses, Lighting Report, Change of Access, and Joint Project Agreements (JPA).

KEY TECHNICAL/INSTITUTIONAL DISCIPLINES, POTENTIAL ISSUES, AND APPROACH

ADOT's Contract Manager (CM) and the Project Management Group (PMG) Manager will identify a PMG PM for each task, recognizing that the Local Public Agency's (LPA) scope of work can often be incomplete. Our strategy for addressing these gaps begins promptly upon task assignment. Clark Clatanoff, PE, PTOE (Project (Contract) Manager), will work with the ADOT PM, District, technical disciplines, LPAs, and tribal agencies to clearly define the scope, schedule, and budget. We are committed to adhering to ADOT's 11.96% DBE goal for each task order (TO) and the overall contract. We will work closely with the Business Engagement and Compliance Office to ensure compliance. We will perform and complete all tasks in accordance with the ADOT Project Development Process Manual or the ADOT LPA Manual. The following table on Pages 10-14 defines the key technical disciplines, describes potential issues with each, and outlines Horrocks' approach to each issue. Horrocks will develop and track a custom risk register as applicable for each TO during project development.

Key Technical Disciplines, Potential Issues, and Approach Table

Technical Institutional Elements/Tasks	Potential Risks & Issues	Approach to Resolve	Proof
ROADWAY DESIGN Conceptual roadway design and alternatives; horizontal and vertical geometry; 3D modeling; interchanges; medians; intersections; widenings and pavement preservation; roundabouts; roadside hazard review; access; earthwork and estimates; ADA compliance; shared use pathway/trail and bike lanes; AASHTO controlling criteria reports; and PA and DCR documents. ADOT Roadway Design Guidelines adherence; Performance-Based Practical Design (PBPD).	• **Impacts to existing** physically constrained facilities, utilities, sensitive ROW and environmental conditions.	• Initiate coordination with key stakeholders at project kickoff. Complete survey mapping and a detailed field analysis early to identify constraints and issues. **Provide innovative design with cost-benefit analysis** to ADOT for impacted facilities.	• Horrocks has a history of evaluating existing conditions and creating innovative designs that reduce physical impacts. On SR 189, International Border to Grand Ave (SR 189), our PBPD design **reduced significant ROW impacts** and allowed a Carl's Jr to remain in place. Additionally the Mariposa Wash Bridge was widened rather than a full reconstruction. Horrocks' **innovations yielded approximately $9M in savings** to ADOT.
	• Design criteria **changes result in redesign.**	• Provide ADOT with **clear and transparent design criteria** at project on-set and confirm along project milestones.	• For Coolidge Main Street, our team provided a **special provision** for the contractor to test gutter flow before paving. This **eliminated the risk** of paving the street, then finding out the stormwater would not reach it's outfall.
	• Roadway improvements **fall outside the project budget.**	• Seek to **understand the root need of scope and propose alternative recommendations** that reduce cost and provide similar value.	• Our team has a history of creating alternatives that reduce cost. Clark and Sean Nugent, a Task Order Project Manager (TOPM) for this contract, revised the SR 90, E Buffalo Soldier Trail/Hatfield PDOC Task scope from a full reconstruct project to widening and pavement rehabilitation, **reducing construction cost** by more than **$1M to keep the construction cost within budget.**
	• **Revisions to geometry or missing bid items** affect all disciplines and project cost.	• Confirm **project scope and baseline alignments** through Stage II scoping documents. Utilize internally audited Quality Assurance/Quality Control (QA/QC) procedure.	• Our team members have designed more than $3 billion of roadway improvements in Arizona, and are **knowledgeable of QA/QC procedures.** SR 189 had more than 100 QA/QC packages formally certified by ADOT with no rejections, which **maximized the design delivery and construction schedule.**
SURVEY & MAPPING Control Surveys (horizontal and vertical); aerial surveys (LiDAR and photogrammetry) and terrestrial surveying and mapping; (topographic, LiDAR/Scanning, supplemental mapping, engineering, utility, staking); point cloud data.	• Inaccurate survey will **affect design and construction.**	• **Adhere** to ADOT survey standards. **Maintain** QC throughout the project. **Verify** control with existing data.	• Our survey team of Trace Consulting, LLC (Trace) and Aerotech Mapping have performed hundreds of surveys for ADOT projects. They are **knowledgeabl of ADOT survey standards,** Arizona State Control, simple intersections to complex freeways, and QC practices.
	• **Accelerated schedule** dictates the design must start prior to completion of survey.	• Utilize LiDAR technology, in conjunction with record drawings, for **early concept design** and later verify with hard survey at critical tie-in locations.	• Horrocks has a successful practice of accelerating survey with LiDAR technology. In Nogales, our team used LiDAR to **complement the aerial topography** ADOT provided along Mariposa Rd to **model existing conditions and meet the schedule. This provided increased accuracy and flexibility for design alternatives.**
LANDSCAPE Landscape architecture; bridge and wall aesthetics; slope treatments; contour grading; native plant inventory; plant salvage; plant design; topsoil salvage and plating; seeding; irrigation system design; control for noxious and invasive species.	• Landscape enhancement requests **outside of project scope.**	• Coordinate with ADOT PM and stakeholders to **confirm expectations, and identify cost and funding sources.**	• Corral Design Group (CDG) worked with ADOT to create butterfly designs on the ADOT flyover bridges at I-19 in Nogales as they **stayed within the construction budget and met the contract requirements.**
	• **Limited** water source **availability** for landscape.	• **Develop** a water source connection. When that is not feasible, **implement** a temporary system with water tanks or utilize hardscaping in lieu of plant materials.	• For the ADOT Houghton TI project, no water source was located near the project limits. J2 Design **worked with the contractor to design water tanks to irrigate the new plant material for one year.** This successfully established the landscape for this interchange meeting the contract requirements.

Key Technical Disciplines, Potential Issues, and Approach Table (continued)

Technical Institutional Elements/Tasks		Potential Risks & Issues	Approach to Resolve	Proof
EROSION CONTROL	Stormwater Pollution Prevention Plans (SWPPPs)/ erosion control plans & details; revegetation plan; Best Management Practices (BMPs); mitigate flows and scour at culverts and bridges; revegetation (seeding) stabilization plans.	• **On- and off-site** drainage and erosion **impacts.**	• Perform a **detailed scour analysis** at drainage infrastructure throughout the project. **Recommend BMPs and mitigation measures** for construction and post construction.	• Our drainage TOPM, Richard Lozano, recently performed significant scour analysis along one-mile of semi-rural Sanders Rd. (Marana) due to **consistent pavement and embankment slope deterioration.** Channel lining was proposed to **eliminate the deterioration and increase the traveling public's safety** near this local high school corridor.
		• **Revegetation plan impacted** by equipment areas and stormwater during construction.	• **Develop** a plan with ADOT Roadside Development and **discuss expectations** for revegetation plan. **Assure compliance** with National and Arizona Pollutant Discharge Elimination System requirements.	• CDG, teamed with Horrocks, worked alongside ADOT Roadside Development on the SR 189 project to **avoid impacts** to sensitive vegetative areas and **provide a revegetation plan** along three miles of urban roadway in Nogales. This environmentally sensitive area **remained environmentally compliant** throughout construction.
		• Long term **adherence** for slope stabilization.	• **Evaluate slope stabilization methods** along flat slopes (seeding, silt fences, and sediment wattles) to steep slopes (mini benching, rock sculpting, rounding, warping and staining).	• Our team members worked with J2 Design on US 93: Carrow to Stephens, which included 100-foot tall excavation cuts. J2 Design worked with the lead designer, Sean Nugent, to provide three miles of **erosion control design,** including crown ditches, wattles, rock protection, mini benching, and seeding. This corridor is now **well vegetated and stable** to the Nevada-bound travelers.
MATERIALS	Existing pavement and subgrade conditions; establish R-value; pavement structural sections; mitigation of subgrade issues; MDR; and Pavement Design Report.	• Variability in **existing site conditions**/poor subgrade conditions.	• **Develop** thoughtful site investigation plans which include detailed recordings of existing conditions. Provide **alternative subgrade mitigations,** such as recompaction/ replacement, over-excavation, prewetting and vibratory compaction, and geosynthetic reinforcement.	• Ethos geotechnical staff have extensive experience (working with ADOT Bridge Group and Geotechnical Services) in **scoping, planning, and executing cost-effective** field exploration plans for roadway subgrade. • On several LPA projects there was a balance between the typical ADOT requirements and the LPA budget. Ethos proposed **cost savings** by increasing the spacing of borings from 800 feet to 1,600 feet for shoulder widening projects to reduce the overall boring count.
STRUCTURES	***Preservation Services:*** Evaluate existing structures for replacement versus rehabilitation, including structural/scour assessments and load ratings. ***Design Services:*** Prepare bridge selection reports; determine bridge layout and type; design and detailing of new bridges and foundations; bridge widening; retaining and sounds walls; sign structures; non-standard culverts; and barriers/railings. ***Post-Design Services:*** Shop drawing review and request for information (RFI) responses.	• **Maintain access** to the traveling public or facility.	• **Develop** MOT plan to simplify bridge construction, **reduce** travel impacts, **provide** temporary ADA routes, and shorten construction schedule.	• On the Chase Creek bridge replacement PDOC task, Horrocks developed a plan to offset the proposed bridge from the existing bridge alignment. The existing bridge was kept in place to serve as a crossing for pedestrians. The benefit to the Town of Clifton was a **public relations, schedule, and budgetary win. The benefit to the traveling public was uninterrupted access and enhanced user safety.**
		• **Constrained** design **schedule** or construction schedule.	• **Communicate** the schedule to the entire bridge design team, **clearly define** individual tasks, and **frequently coordinate** with all team members to ensure they are staying on track.	• On SR 189, the EN and SW ramps were critical-path construction tasks. The Horrocks team **expedited** the field work, foundation, and superstructure designs, finishing in less than six months and using early release packages. This benefited ADOT by **keeping the project on schedule and minimizing the impacts to the traveling public.**
		• **Load rating** requirements not met by existing bridge.	• Typical load ratings are performed using a line girder analysis. When load ratings are a concern, a **3D structural system analysis** can be used to determine a more accurate load rating.	• The Horrocks structures team has performed hundreds of load ratings, including 3D, finite element models. The benefit to ADOT is the pace at which **issues are identified and realistic options are available to improve conditions.**
		• Constrained bridge **funding.**	• Create innovative design or rehabilitation recommendations to **meet the project budget while meeting the basic functions** of the structure.	• On the Chase Creek bridge replacement PDOC task, Horrocks explored different foundation and superstructure types to **identify the most cost effective solution** to this budget-constrained project. The benefit to ADOT and the Town of Clifton was a **construction budget that minimized overruns.**

Key Technical Disciplines, Potential Issues, and Approach Table (continued)

Technical Institutional Elements/Tasks		Potential Risks & Issues	Approach to Resolve	Proof
GEOTECHNICAL	Geotechnical investigations and recommendations; field sampling; soils lab testing; foundation evaluation; settlement analysis; rockfall mitigation; slope stability mitigation; subgrade characterization and mitigation; prepare boring logs; and geotechnical/ foundation reports.	• **Difficult field conditions,** steep terrain, or drill refusal.	• **Optimize** data collection through **cost-effective** explorations, modify boring parameters, determine if remote access type rigs are needed, and **provide assessment** of subsurface conditions.	• On the Moon Canyon PDOC task, Ethos determined the use of a truck-mounted drill rig with rock-coring capabilities in combination with geophysical survey were necessary to obtain information for design. Ethos' expertise with **innovative field exploration techniques** supported ADOT in moving this unique project successfully forward.
		• **Geotechnical profile** and potential **geologic hazards** not well understood to provide adequate investigation.	• Prior to finalizing the scope of work, **research historical records** and **perform early site visit** to address conditions, access methods, and equipment required to get to the borings.	• On SR 89 Center Turn Lanes PDOC task, due to environmental clearance delays existing geotechnical data was reviewed and preliminary pavement recommendations provided. This led to the field investigation confirming these assumptions, while keeping the project submittals on schedule. The **accelerated review** of the final report **allowed for the project to meet** the aggressive bid schedule.
		• **LPA expectations and constraints** compared to ADOT requirements.	• **Coordinate** with ADOT and project team **to develop** suitable field investigation to provide recommendations.	• On the Golf Course Rd PDOC task, Ethos reduced the boring layout along with pavement design to **optimize budget and develop recommendations.**
		• **Safety assessment** may not be included for all projects.	• Utilize site-specific safety plan that **addresses all aspects** of the project.	• On all tasks, Ethos **develops a site-specific health and safety plan** to help field staff be aware of field issues.
DRAINAGE	Hydraulic and hydrologic analysis; off- and on-site drainage evaluation; floodplain/floodway impacts; culvert /channel/storm drain analysis and design; detention/ retention basin design; stormwater pump design; 2D modeling; temporary drainage; Section 404 Permit requirements; drainage memos and reports.	• FEMA **floodplain impacts** require **CLOMR/LOMR.**	• **Early identification** of floodplain encroachment is critical to pass through the CLOMR process. **Communicate** with local floodplain managers to reduce permitting process time and avoid schedule delays.	• Cindy DePonti is a technical expert in floodplain modeling and FEMA coordination, which **reduces review time and eliminates rework.** Her work on Loop 303 Lake Pleasant to I-17 consisted of eight wash crossings with new dike, embankment, and channel designs that were **approved within minimal turnaround times** through FEMA and adjacent municipalities.
		• **Limited ROW space** for proposed drainage improvements.	• **Develop design alternative** to avoid unnecessary ROW acquisition, reduce 404 permit needs, and obtain drainage easements, if required.	• Horrocks has significant experience designing drainage facilities within constrained ROW. Our team **eliminated additional ROW acquisition** along Thornton Road in Casa Grande, by designing temporary retention, saving the City more than $1M in acquisition.
		• **Shallow flooding** in braided streams with known sediment issues.	• **Review** available hydraulic models or **establish** the need for 2D modeling with sediment transport to **determine** flow direction and discharge rates for design.	• Our team has a history of complex flow regimes, sediment, and erosion control issues. Cindy's work on SR 86 from Valencia Road to Kinney Road improvements in Pima County required the burial of large box culverts and guide dikes in sheet flooded areas. Her modeling provided **cost-effective drainage solutions** to the area.
TRAFFIC	Traffic data collection; traffic operations; capacity and level-of-service analysis; traffic simulation/modeling; signal warrant analysis and design; HAWK design; railroad pre-emption turn/auxiliary lane analysis; signing and marking; photometric analysis for lighting; maintenance of traffic (MOT); impact studies; Transportation System Management and Operations (TSMO) strategies.	• **Traffic operations analysis** not included for all projects.	• **Research** historical data within project limits and **confirm initial assumptions** to analyze simulation and visualization modeling. **Perform** new traffic counts.	• Horrocks provided traffic operations analysis of the Town of Quartzsite's I-10 MP 17 TI Alternatives Analysis Report in 2023. We developed an **AZ SMART grant application** for the Town, **securing their design funding** for a future improvement project.
		• **MOT phasing** not vetted for constructability.	• **Verify** minimum shoulder/barrier offsets are provided for **safe work zones. Evaluate** vertical deltas between interim construction phases and existing conditions and model temporary conditions.	• Horrocks has successfully completed multiple alternative delivery contracts requiring **detailed large-scale multi-layered MOT phasing** programs. On SR 189, we provided phasing that allowed the contractor to complete 3,600 feet of bridge in a single phase, **saving time and cost** for ADOT.
		• Traffic signal or light pole **conflicts with existing** utilities or facilities.	• **Conduct SUE** investigation to verify existing utilities. **Modify design to reduce** impacts and **coordinate** with utility companies when relocation is necessary.	• On the Trekell signalized intersection project, Clark Clatanoff and the Horrocks team **created a custom davit light pole design** to avoid OH power lines in a utility confined urbanized area, a **standard Casa Grande is formally adopting** for future projects.
		• **Lighting recommendations vary** per local jurisdictions.	• **Choose correct** ANSI/IES Luminance or Illuminance criteria. **Coordinate** with LPAs on luminaire color or dark sky ordinances.	• Horrocks provided a lighting report and design for the first roundabout in Nogales in ADOT's ROW, **increasing driver visibility at night** for this heavily truck-traveled corridor.

Key Technical Disciplines, Potential Issues, and Approach Table (continued)

	Technical Institutional Elements/Tasks	Potential Risks & Issues	Approach to Resolve	Proof
SAFETY	Apply Highway Safety Manual (HSM) methodologies; Road Safety Audits (RSA); crash analysis; and pedestrian and multi-modal safety analysis.	• **Safety assessment** not included for all projects.	• Utilize team expertise to **incorporate a safety audit matrix** while evaluating roadway and traffic considerations.	• Y2K has conducted multiple RSAs, which have led to **corridor improvement projects that provide an opportunity to enhance safety** and improve the traveling public experience.
ITS	System-wide schematics; cable schematics; segment schematics; splice schematics; splice details; Freeway Management System (FMS); trunkline conduit; pull box locations; broadband; node building and equipment design; Dynamic Message Sign (DMS) design, detectors; wrong-way warning; signal connectivity; ramp meter design; CCTV; rural and wireless systems. ITS Design Guide Levels 1 through 5 adherence.	• Technology is continually **evolving.**	• **Research optimal products** to select the most current elements, such as ether net switches, panels, controllers, and fiber optics to provide ADOT with ITS solutions.	• Horrocks is working closely with ADOT's Broadband group on the I-40 BB (East) fiber project. We are **providing cutting-edge broadband, node building, and equipment design** to connect 159 miles of northern Arizona. Additionally, this project will allow ADOT to lease conduit space to generate future revenue.
		• **Long lead times** on equipment.	• **Continually interface** with manufacturers to understand equipment availability and make **alternative recommendations** for equivalent products.	• Clark Clatanoff worked with the ADOT equipment yard to help supply the Town of Quartzsite with used poles and signal equipment so they could install new HAWKS and signalize intersections, **increasing** the Town's **safety,** and **saving the Town hundreds of thousands of dollars.**
		• ITS design **does not meet adequate** requirements.	• **Use the five levels** of design identified in the ADOT ITS Design Guide, to **create detailed schematics and plans.**	• Our team has a successful history of designing ITS facilities. On SR 189, we **designed the first ITS trunkline** in the City of Nogales, and **connected to the Tucson Regional Transportation Data Network,** a significant geographical increase to the ADOT FMS.
		• **Maintain operation** of existing ITS system during construction.	• **Develop construction strategy** with ITS Maintenance, TSMO, and the Traffic Operations Center to **identify existing equipment** to be maintained during construction and phasing of new facilities.	• Horrocks has significant experience **creating phasing plans for construction.** On our Reno Spaghetti Bowl Xpress (SBX) project, we developed a phasing plan during design that was adopted by Nevada DOT and the contractor for the expansion of the system.
COST	Unit cost verification, bid justification, special provisions, QA/QC, construction schedule.	• **Inaccurate** item **costs,** quantity derivations, or special provisions.	• Use our QA/QC process to **verify the accuracy** of quantities and utilize our close relationships with contractors to provide unit rate insight.	• Our Arizona team's work with alternative delivery projects has us consistently working side-by-side with contractors who continually educate Horrocks on **current unit costs.** For two adjacent CMAR projects in Casa Grande, we worked with the contractors, Ellison-Mills and Willmeng, to revise our preliminary estimates and **we provided real world vetted costs.** This allowed the City to allocate the appropriate funds and **stay within budget.**
ENVIRONMENTAL	National Environmental Policy Act (NEPA) documentation (Categorical Exclusions (CE), Environmental Assessments (EA)), and Environmental Impact Statements (EIS); biological evaluation; cultural resources survey; hazardous materials survey; air quality; noise studies; socioeconomics and environmental justice; Clean Water Act Section 404 and 401 permitting; public outreach; geotechnical clearance; and scoping letters.	• Changes to the project scope may affect the type of required **NEPA clearance,** impacting the schedule.	• **Early and open communication** with the ADOT PM and Environmental Planning (EP) to **identify the appropriate level of NEPA clearance** for the project. Identify the needs of outside agencies, such as the Bureau of Indian Affairs (BIA) or tribal entities that may have their own requirements. **Identify any probable scope additions** and determine if the NEPA process could be affected by future changes.	• On Iron Springs Road at Tonto Road PDOC task, project limits were expanded after the draft initial resource reports. Pinyon was able to clear the new limits with the ADOT HAZMAT and biological resource specialists and coordinated with ADOT HPT to revise the consultation materials to include the additional clearance area. Absorbing this scope change, the **project moved forward with minimal impacts to the schedule and attained successfully NEPA clearance.**
		• **Waterways/Waters of the US (WOTUS).**	• **Facilitate coordination** with ADOT to determine the level of effort based on current definition of Waters; to delineate Waters and **Prepare Clean Water Act (401 & 404) permit** applications as needed; **work with the engineer** to determine a clear understanding of the project scope.	• On the I-40 BB East project, Horrocks worked closely with ADOT EP to understand the impacts of fiber construction along the numerous downstream ends of existing culverts. At Stage IV we **modified the geometry to avoid all WOTUS impacts with no alternation of the design schedule or additional fee,** and eliminated the need for any delineation or permits.

Key Technical Disciplines, Potential Issues, and Approach Table (continued)

Technical Institutional Elements/Tasks		Potential Risks & Issues	Approach to Resolve	Proof
ENVIRONMENTAL (CONT.)		• Establishing the presence of **unknown cultural resources and/or avoidance areas** that may affect the schedule or construction budget.	• **Establish clear lines of communication** with the engineering team and **educate them on the ramifications** of changing the project footprint without notification. **Communicate** the project scope and schedule early on with ADOT EP to start the process. **Diligent execution** of the clearance process is critical to schedule success.	• On Iron Springs Road at Skyline Drive PDOC TO, Pinyon identified both previously recorded and newly recorded cultural sites. Based on new avoidance buffer guidance from ADOT, one of these sites required flagging. They worked closely with ADOT HPT to **develop an avoidance figure** utilizing the new guidance. Mitigation measures were developed for the contractor's use with **no significant impacts to the project.**
		• **Presence of sensitive items;** threatened & endangered species, or hazardous materials.	• **Complete due diligence** (records search, etc.) prior to surveys; **prioritize technical reports** (biological, cultural, hazardous material) to **identify** potential impacts; work with the engineer to determine a clear understanding of the scope.	• During the scope and fee phase of ADOT's US 66 at Fort Rock Road project, Tierra found a potential for the endangered black footed ferret to occur in the project vicinity. They contacted AGFD to determine the nearest known location. **Appropriate scope was coordinated with the ADOT biologist preventing future delays.**
ROW	Results of survey and ROW plans; research records, deeds, legal descriptions, title reports, and maps for ownership encumbrances; new acquisition, appraisals, and easement delineation; cost determination; ADOT ROW coordination and support.	• **Changes to ROW/ temporary construction easement** (TCE) delineation after Stage II may affect clearances.	• 3D model cut/fill slopes, drainage ways, MOT, and items that affect the project footprint (prior to Stage II) to **accurately delineate ROW requirements.**	• During Tucson's Broadway Boulevard project, Tierra provided support to the City and engineering team to reduce ROW impacts to mitigate potential relocations or significant takings. The benefit to the City was the **minimization or elimination of ROW acquisitions, resulting in project savings.**
		• **Existing ROW** not defined before Stage II.	• **Use assessor maps and record drawings** to **approximate existing ROW** while we confirm the precise limits.	• During Tucson's Grant Road Phases 1-4, Tierra reviewed the existing public ROW, existing features, and structures to reduced ROW impacts. The benefit to the City was **minimizing or eliminating ROW acquisitions resulting in savings.**
		• **Unknown** ROW ownership.	• **Field locate** monuments to investigate ownership. **Work with** title companies to research gaps in ownership. **Engage with property owners** to determine history.	• On SR 189, Tierra completed the project acquisitions and relocations for construction of the public improvements. The benefit to ADOT was that the **project schedule and budget were maintained** for operation of the public improvements.
UTILITIES	As-built & facility map review; Arizona 811 coordination; field survey; utility designation; utility locating (potholes); traffic control for field locating; prepare utility base map; prepare pothole reports; conflict identification and resolution; utility coordination; utility clearance report and clearance letter.	• **Existing facility maps or records** do not accurately define utilities.	• **Connect** with Arizona 811 and local agencies to **identify all** utility owners. **Immediately engage** with owners to attain maps or records and identify existing facilities. **Provide design** plans to owners and request their verification of utilities.	• Horrocks is an expert in utility designation. Horrocks has supported the ADOT SUE on-call since 2017 and **has successfully delivered** more than 25 designating tasks to ADOT. • Horrocks operates two SUE exploration trucks daily across AZ. We can **respond immediately** to designating and SUE needs.
		• Inaccurate/incomplete **existing utilities identification** at Stage II.	• **Coordination,** to determine utility locations, must begin immediately with ADOT Utility and Railroad, Arizona 811, and local agencies. **SUE Phase I** (designating) to be done prior to Stage I, and **SUE Phase II** (potholes) to be shown at Stage III.	• Horrocks has extensive 3D mapping/GIS capabilities. On SR 189, utilities were found that the utility companies were not aware of within the project limits. We coordinated with the utility companies, ADOT, and contractor to **execute a plan.** We were able to **rapidly modify** the bridge flyover design after **identifying** an unknown sewer interceptor location, at no additional cost.
		• Utility is **not found or damaged** by pothole.	• **Engage utility owner early** to focus exploration efforts. When required, **engage an owner's field agent** to be on-site. If damage occurs, **immediately** contact the owner to repair.	• On the Thornton Road project, multiple intersections were designed with new traffic signals. Through our internal potholing, we identified all existing utilities. **No impacts occurred** during construction and stayed **on schedule and within budget.**
FACILITIES	Design and rehabilitation of rest areas, architectural design; state parks, pump and lift stations; water/wastewater system design; MEP; ADEQ approvals.	• Retrofitting **existing facilities and equipment.**	• Knowledge of latest OSHA standards, **identifying safety issues, current code, and regulations.**	• Pearson has extensive experience in retrofitting existing facilities. They specialize in **following ADEQ standards, MEP design, and HVAC facility improvements**.
		• EPA/water quality regulations may not be met by existing facilities.	• **Evaluate the existing conditions** to determine the root cause that does not meet the regulatory threshold. **Provide a cost-benefit analysis** with proposed alternatives to address concerns.	• Horrocks provided water/wastewater engineering for Hunters Reservoir and Booster Pump Station, where we **designed new facilities and guided the owner** through Block **Grant applications,** while coordinating with USDA, SEPA, and NEPA.

b) TASK ORDER SCOPE OF WORK

Horrocks has a successful working relationship with the ADOT and will engage with the ADOT PM, technical disciplines, and key stakeholders to derive the optimal scope of work for each project. **The work flow for establishing scope shown below** has an integrated approach to refine scopes for delivery of tasks.

1. RESEARCH	Identify our PM with the most effective knowledge for the project.	Meet with ADOT PM, stakeholders, and technical leads to gather the critical project parameters.	Review record drawings, reports, and historical documents correlated to the project limits.	Schedule a site visit and speak with local business owners and residents when appropriate.
2. SCOPE AND SCHEDULE DERIVATION	Determine the critical path clearance tasks for the schedule: NEPA, geotech, utility, and ROW.	Draft schedule from critical path tasks and overlay project specific parameters to outline project length: program funding, right-of-entry permits, other permits, LPA funding approvals (where applicable)	Establish alternatives that could optimize the project, remove unnecessary items, and refine the schedule and budget. See Predesign and Final Design Schedules below.	TOAST process facilitates the initial scoping meeting. Provide the opportunity for all parties to present their goals and objectives and gain a project consensus.
3. DESIGN FEE PROPOSAL	Develop a fee proposal that encompasses all scope.	Perform independent quality reviews of the scope, schedule, and fee to verify that each task meets the core needs of the project.	Verify fee with ADOT PM for concurrence. If there are discrepancies, we will discuss with the ADOT PM and evaluate modifications without sacrificing project goals.	Be effective and efficient with our resources to design the project at the optimized fee.

EFFICIENT CONSTRUCTION DOCUMENTS AND ELIMINATE UNNEEDED PLAN SHEETS

Workfront was implemented by ADOT as their project management software to streamline document management and project scheduling, issue identification and resolution, document review and proofing, and project tracking. We have experience using Workfront on ADOT's Chase Creek Bridge, I-40 BB East, and Battaglia Road Sidewalk projects; and it will be a key tool for communication and development of efficient construction documents.

Roll Plots may be utilized during predesign to readily convey the key project elements and reduce preliminary plan sheet production. We are currently utilizing roll plots in the scoping phase of Battaglia Road Sidewalk project.

Innovative Design strategies can reduce the project footprint and the effort to complete environmental and ROW clearances. A design that utilizes a less stringent design criteria and AASHTO minimizes or eliminates ROW acquisitions and TCEs can accelerate the schedule.

Digital Delivery: Horrocks has significant experience in delivering fully digital-based projects, which can eliminate plan sheets and increase the accuracy of the 3D models the contractor develops for construction.

Quantity Summary Sheets: Projects may eliminate summary table sheets and identify quantities on the plans and in the bid tab.

Meetings: Utilize virtual meetings, when appropriate, to eliminate excessive travel time, document meeting notes, and streamline project development.

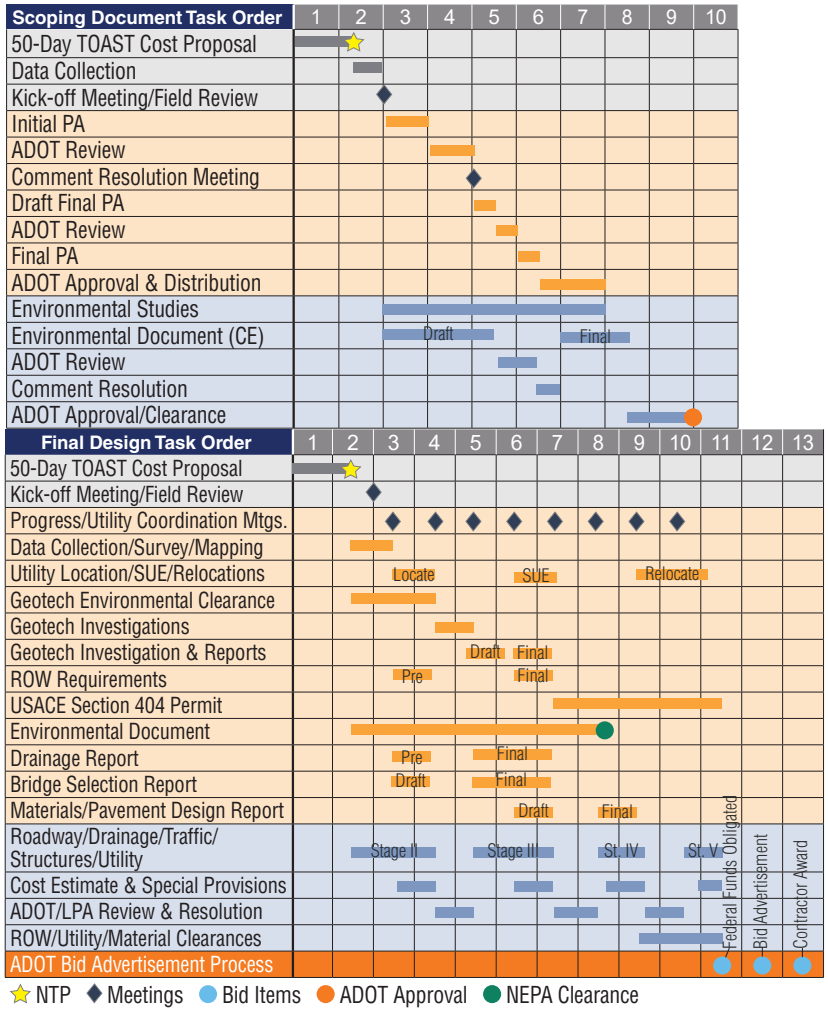
Signing/Marking: We have eliminated signing and marking plan sheets for simple projects through guiding the contractor to as-built the existing pavement markings and replace after the new pavement is completed.

Erosion Control Plan Sheets: These plans (not within sensitive areas) can often be replaced with details and reduce total sheet count.

PBPD: When unique project circumstances arise, our team will engage PBPD practices to identify solutions that can reduce the project scope while meeting the project intent.

Design Simplification: On projects where the scale of scope is minimal, the design may be simplified to reduce page count. A typical section and alignment may be all that is required to convey the construction limits to the contractor. Alignment data may be detailed on the plans rather than separate sheets. Specifications may be utilized to eliminate plan sheets or details.

ADDED VALUE: For the Battaglia Road Sidewalk Project, Horrocks proposed a lump sum traffic control bid item with custom special provisions to reduce sheet count and design costs to stay within limited design funding.



2. TEAM EXPERIENCE AND QUALIFICATIONS

Our team is comprised of individuals who are committed to exceptional client service and bring technical excellence to our team. The selected team for this contract have worked with ADOT for many years and maintain a proven track record on their previous ADOT projects. Our team will be led by Clark Clatanoff as Project (Contract) Manager and Erin Kline as Project Principal. Having performed both contract and TO management on several ADOT on-call contracts, Clark and Erin understand what is required to successfully complete projects with ADOT. Through our work on the projects described and identified in the **Project Experience Matrix below,** we have gained relevant experience in reviewing and responding to all aspects required by PDOC contracts. We have established key relationships and an in-depth understanding of ADOT processes.

a) Project Experience Matrix

R Roadway Design
S Survey & Mapping
M Materials
D Drainage
L Landscape/Irrigation Design/Erosion Control
B Bridge/Structures
G Geotechnical Studies
T Traffic/Safety
I ITS
C Cost Estimates /Specifications
E Environmental
A ROW Mapping
U SUE/Utility Locating
F Facilities/Maintenance

Key Technical Disciplines	Scope	Roles	Horrocks PM and Key Technical Leads	Record of Schedule Performance
ADOT Project Development On-Call, Battaglia Road: Eleven Mile Corner Road to Sunshine Boulevard, Eloy, AZ				
R S U G T C E D M	Horrocks is providing **preliminary and final design services** to add one mile of curb and gutter, five-foot sidewalk, ADA ramps, and scuppers with spillways along Battaglia Road. The intent of this project is to improve the pedestrian circulation within the surrounding residential area. The scope includes project management, survey, environmental studies; roadway, drainage, traffic, and SWPPP design; geotechnical and pavement design; various clearances; specifications; bid item list and cost estimate. Cost Est.: $1.678M	Prime: Horrocks R D T C U Subs: Pinyon E, Ethos M G, Trace S	S. Nugent (PM) R C M. Wilke U	This project is on schedule in the Scoping Letter phase.
ADOT Project Development On-Call, Chase Creek Bridge Replacement, Clifton, AZ				
B R S G T C E D M U	Horrocks was selected to **design the replacement of the existing two-lane, single-span bridge** at Frisco Avenue over Chase Creek. The new bridge is a single span consisting of adjacent prestressed voided slab girders supported by stub abutments on drilled shafts with rock sockets offset from the existing bridge. The layout and structure type were selected to maintain the existing historic bridge and retaining walls for pedestrian use. Cost Estimate: $1.252M	Prime: Horrocks R B D T C U Subs: Tierra E, Ethos M G, Trace S	J. Carota (PM) B S. Nugent R T C. Clatanoff T E. Kline	This project was completed on time.
ADOT, I-40 Broadband Fiber, Flagstaff to New Mexico State Line				
I U A E F S C M T	The Horrocks team is **designing the broadband installation along I-40** from Flagstaff to New Mexico (159 miles) including full design and preconstruction activities for the project. Horrocks is designing a seven-way microduct bundle for the entire project length, four regeneration huts/shelters, and accommodation of third-party broadband providers to access the conduit for middle-mile purposes. Additional tasks include ROW investigation and verification, NEPA approval, utility coordination, Native American Tribal coordination, bridge attachments, power source coordination, and railroad coordination. Cost Estimate: $42.675M	Prime: Horrocks I U F T C Subs: Ethos M, Aerotech S	S. Nugent (PM) I C M. Wilke U	This project is on schedule and 95% complete.
ADOT, I-40/West Ash Fork TI, Ash Fork, AZ				
R T U C D	Horrocks provided **roadway and traffic engineering services** for this ADOT permit project of the reconstruction of B-8 (Lewis Ave) to accommodate the development of a truck stop. To manage the queues from the heavy truck traffic and the approved design added bi-directional left turn lanes between the ramp intersections. Lighting design at the ramp intersections, and signing, striping, and pavement marking design was completed per ADOT standards and specifications. Additionally drainage analysis, utility coordination, and estimating services were performed by Horrocks. Cost Estimate: $3.879M	Prime: Horrocks R T U C D	C. Clatanoff (PM) R T C A. Littman T	This project was completed on time.
ADOT, I-15/Littlefield TI, Mohave County, AZ				
R T U C D	Horrocks provided **roadway and traffic engineering services** for this ADOT permit project to reconstruct County Hwy 91 to accommodate the development of a truck stop. To manage the queues from the heavy truck traffic and the approved design added bi-directional left turn lanes between the ramp intersections. Lighting design at the ramp intersections, and signing, striping, and pavement marking design was completed per ADOT standards and specifications. Additionally drainage analysis, utility coordination, and estimating services were performed by Horrocks. Cost Estimate: $3.811M	Prime: Horrocks R T U C D	C. Clatanoff (PM) R T C	This project was completed on time.

a) Project Experience Matrix (continued)

Technical Disciplines	Scope	Roles	Horrocks PM and Key Technical Leads	Schedule Performance
City of Casa Grande, Thornton Road: Peters Road to Selma Highway DCR and Final Design, Casa Grande, AZ				
R D A G T S B U M C	Horrocks **developed the DCR and final plans** for Thornton Road to widen a rural two-lane facility to an urban four-lane section with left- and right-turn lanes. Five new signalized intersections were designed, along with lighting, on-site retention basins, 36-inch irrigation pipe, and multiple gate structures, signing, striping, new ROW, and coordination with Casa Grande, Pinal County, ADOT, Lucid, WAPA, Salt River Project (SRP), APS, SCIP Power, SCIP Irrigation, and AZ Water. Cost Estimate: $8.764M	Prime: Horrocks R D T B U C A	C. Clatanoff (PM) T S. Nugent R C. DePonti D J. Carota B	This project was completed on time.
ADOT, SR 189: International Border to Grand Avenue, Nogales, AZ				
R S M D B I T U L E G A	The SR 189 project included reconstruction of 3.75 miles of roadway, widening from five to seven lanes; traffic signals and auxiliary lane reconfigurations at eight intersections; commercial and residential driveways; roadway safety improvements; new and widened bridge structures; drainage; utilities coordination, identification, clearance, and relocation; geotechnical engineering; environmental compliance; significant MOT design; public involvement; LiDar survey; and ROW/TCE verification. Cost Estimate: $82.146M	Prime Designer: Horrocks R B T I U S Subs: Corral Design Group L, Pinyon E, Tierra A	S. Nugent R T J. Carota B C. Clatanoff I T M. Wilke U	575/540 days, due to ADOT directed scope additions.

3. TEAM CAPABILITY

We have assembled a team of Horrocks staff and subconsultants to provide the technical capabilities to support the PDOC. The following charts provide our team's key personnel along with their applicable licenses and certifications relevant to each key discipline indicated in the RFQ. **Our team has relevant experience with past and current PDOC TOs and we are excited for the opportunity to expand our experience with this on-call.**

Founded in 1968, Horrocks provides a full spectrum of civil engineering services, including transportation, traffic, structures, environmental, water resource, wastewater and sewer, SUE, ITS, and fiber optics design, drainage, survey, ROW, public involvement, construction administration and management, and site planning. We offer the strength of more than 950 employees throughout 26 offices across the West. Our Arizona offices include 43 professionals including civil engineers, construction inspectors, designers, and drafters.

Two-page resumes are included for our key personnel and TOPMs in the attachments section at the end of this SOQ. The resumes include the required corporate responsibilities, titles, education, registration/certifications, and availability/commitment to work to be performed under this contract.

Horrocks Team Strengths	
A consistent history of projects staying on schedule with task managers who routinely manage multiple projects simultaneously.	A roadway team who has designed projects spanning single intersection ADA improvements to major traffic interchanges.
A focus on listening, understanding the other person's point of view, and keeping lines of communication open.	A traffic team with extensive experience modeling traffic operational analysis, signal and lighting design, HAWK, signing and marking, and a specialization in construction phasing traffic control.
We consistently receive challenging tasks due to our ability to innovate and deliver.	An environmental team with a history of attaining NEPA clearance on schedule.
Our team has written multiple scoping documents, bridge, drainage, and traffic reports.	A utilities team who can perform in-house SUE, designation, conflict analysis, and attain clearance.
Deep pool of multidisciplinary resources allows us to deliver as the need arises.	A survey/ROW team who can perform multiple levels of mapping, identify ROW, and guide the process of acquisition when required.
A team who emphasizes responsiveness to address clients concerns.	A structures team with strong design experience in different structure types that will reduce project costs.

Organizational Chart

ARIZONA DEPARTMENT OF TRANSPORTATION

= Key Personnel

Orange = TOPM

Project Principal
Erin Kline, PE

Project (Contract) Manager
Clark Clatanoff, PE, PTOE

TOPMs/Technical Team

ROADWAY
Sean Nugent, PE

SURVEY & MAPPING
Horrocks
Trace Consulting
Aerotech Mapping

LANDSCAPE/ IRRIGATION/ EROSION CONTROL
J2 Design
Corral Design Group

MATERIALS/ GEOTECHNICAL
Ethos Engineering

BRIDGES/ STRUCTURAL
Jason Carota, PE

DRAINAGE
Richard Lozano, PE
Cindy DePonti, PE, CFM
Riley Engineering
J2 Design

TRAFFIC/ SAFETY/ITS
Sean Nugent, PE
Aaron Littman, PE, PTOE
Y2K Engineering

COST ESTIMATION/ SPECIFICATIONS
Horrocks

ENVIRONMENTAL
Pinyon Environmental
Tierra

ROW MAPPING/ PLANS
Horrocks
Tierra

UTILITY LOCATING/SUE
Mike Wilke, PE

FACILITIES/ MAINTENANCE
Horrocks
Pearson Engineering

Additional Services

Independent Cost Estimator
3D Modeling
Visual Simulations
Cost Risk Analysis
Public Relations
Value Engineering

a) Team Knowledge, Skills, and Abilities

Team Member	Role	Firm	Years of Experience	AZ Registrations/Certifications	Roadway Design								Survey		Land-scape			Materials		
					Rural Highway	Controlled Access & TIs	Local Roads	Roundabout	Intersection Improvements	ADA/Sidewalk/MUP/Bike	Climbing Lanes	Shoulder Widenings	Aerial & Mapping	Field & Bathymetric Survey	Erosion Control/SWPPP Seeding	Landscape & Irrigation	Hardscape Aesthetics	Pavement Design	Pavement Life Extension	PBPD
Erin Kline	Project Principal	H	20	52633	■	■	■		■	■		■			■					
Clark Clatanoff	Project (Contract) Manager	H	46	20206	■	■	■	■	■	■	■	■			■			■		
Sean Nugent	TOPM-Traffic & Roadway	H	18	59561	■	■	■	■	■	■	■	■			■					■
Jason Carota	TOPM-Structures	H	22	50744	■	■	■			■		■								
Richard Lozano	TOPM-Drainage	H	31	36847	■	■	■		■	■		■			■	■				
Aaron Littman	TOPM-Traffic	H	25	72693			■		■	■										
Mike Wilke	TOPM-Utilities	H	23	48640	■	■	■		■	■										
Scott Bishop	Survey	H	26	53078									■	■						
Brian Christensen	ITS/Broadband	H	26	48970																
David Locher	Traffic/ITS	H	15	60694		■	■		■	■		■			■					
Matt Rowley	Structures	H	11	75387																
Midhat Hassan	Structures	H	29	48185																
Harshit Sehrawat	Roadway	H	12	73426	■	■	■	■	■	■	■	■								
Elizabeth Barnes	Roadway	H	12	68597	■	■	■		■	■	■	■			■					
Cindy DePonti	Drainage	H	24	45155																
Richard Anderson	Survey	T	34	36487									■	■						
Eric Phan	Survey & Mapping	A	24	60371									■	■						
Ronson Chee	Drainage	R	17	54056																
Ed Corral	Landscape/Aesthetics	C	40	28447											■	■	■			
Jeff Holzmeister	Drainage	J	42	23170																
Laura Mielcarek	Landscape/Aesthetics	J	27	46501											■	■	■			
Pancho Garza	Geotech/Materials	E	22	47676														■	■	■
Keith Dahlen	Geotech/Materials	E	40	25151														■	■	■
Chris Williams	RSA/Traffic/ITS	Y	24	52513			■		■	■										
Scott Epstein	Environmental	P	22	n/a																
Ashton Koons	Environmental	P	10	n/a																
Jennifer Jennings	Environmental	W	33	n/a																
Myrlene Francis	ROW Acquisition	W	28	n/a																
Jeff Ruthstrom	Facilities Design	G	34	31184																

Team Member	Structures				Geotech						Drainage					
	Bridge	Wall	ABC	Foundations	FWD	Pavement Coring	Drilling/Foundation Design	Slope Stability/Soil Nail/MSE Walls	Rockfall Mitigation, Rock Scaling	Drilled Shaft	Pipe Culvert/Box Culvert	Drainage Retrofit	Hydrology	2D Hydraulic Modeling	LOMR/CLOMR	Scour Analysis/Retrofit
Erin Kline																
Clark Clatanoff											■	■			■	
Sean Nugent											■	■			■	
Jason Carota	■	■	■	■												
Richard Lozano											■	■	■		■	■
Aaron Littman																
Mike Wilke																
Scott Bishop																
Brian Christensen																
David Locher																
Matt Rowley	■	■	■	■												
Midhat Hassan	■	■	■	■												
Harshit Sehrawat																
Elizabeth Barnes																
Cindy DePonti											■	■	■	■	■	■
Richard Anderson																
Eric Phan																
Ronson Chee											■	■	■	■	■	■
Ed Corral																
Jeff Holzmeister											■	■	■	■	■	■
Laura Mielcarek																
Pancho Garza					■	■	■	■	■	■						
Keith Dahlen					■	■	■	■	■	■						
Chris Williams																
Scott Epstein																
Ashton Koons																
Jennifer Jennings																
Myrlene Francis																
Jeff Ruthstrom																

Team Member	Traffic/Safety								ITS			Cost Est.	
	Temporary Traffic Control	Signing/Pavement Marking/Striping	Traffic Signal Design	Lighting Design	RSA	VISSIM	Intersection Control Evaluation (ICE)	Smart Work Zones	Broadband, Fiber Optic	Speed Feedback/Wrong Way/DMS	CCTV	Unit Cost Verification/Justification	Special Provisions
Erin Kline	■	■						■	■			■	■
Clark Clatanoff	■	■	■	■		■	■	■			■	■	■
Sean Nugent	■	■	■	■		■	■	■	■	■	■	■	■
Jason Carota	■											■	■
Richard Lozano	■											■	■
Aaron Littman	■	■	■	■		■	■	■	■	■	■	■	■
Mike Wilke	■	■							■			■	■
Scott Bishop													
Brian Christensen									■	■	■	■	■
David Locher	■	■	■	■			■	■	■	■	■	■	■
Matt Rowley												■	
Midhat Hassan												■	
Harshit Sehrawat	■	■	■	■				■	■	■	■	■	■
Elizabeth Barnes	■	■	■	■				■				■	■
Cindy DePonti												■	
Richard Anderson													
Eric Phan													
Ronson Chee													
Ed Corral												■	■
Jeff Holzmeister													
Laura Mielcarek												■	■
Pancho Garza												■	■
Keith Dahlen												■	■
Chris Williams	■	■	■	■	■		■	■				■	■
Scott Epstein													
Ashton Koons													
Jennifer Jennings													
Myrlene Francis													
Jeff Ruthstrom												■	■

Team Member	Environmental								ROW			Utilities		Facilities
	Noise Analysis	404 Permit/408 Permit	Cultural Surveys	Air Quality Analysis	Biological Evaluation	Section 4(f) analysis	Hazardous Materials Analysis	Public Involvement	Legal Description/TCE	Right of Way Plans	Right of Way Cost Determination	Utility Coordination	Utility Locating - SUE**	Vertical Design/MEP/ADEQ
Erin Kline								■				■	■	
Clark Clatanoff		■						■	■	■		■		
Sean Nugent		■						■	■	■		■		
Jason Carota								■	■			■		
Richard Lozano		■						■	■			■		
Aaron Littman								■						
Mike Wilke								■	■	■		■	■	
Scott Bishop									■	■	■			
Brian Christensen								■						
David Locher								■						
Matt Rowley												■		
Midhat Hassan												■		
Harshit Sehrawat												■	■	
Elizabeth Barnes								■						
Cindy DePonti		■												
Richard Anderson									■	■	■			
Eric Phan														
Ronson Chee								■						
Ed Corral								■						
Jeff Holzmeister								■						
Laura Mielcarek								■						
Pancho Garza														
Keith Dahlen														
Chris Williams								■						
Scott Epstein	■	■	■	■	■	■	■	■						
Ashton Koons	■	■	■	■	■	■	■	■						
Jennifer Jennings		■			■	■		■						
Myrlene Francis								■	■		■			
Jeff Ruthstrom														■

H=Horrocks, A=Aerotech Mapping, C=Corral Design Group, E=Ethos Engineering, J=J2 Design, P=Pinyon Environmental, G=Pearson Engineering, R=Riley Engineering, W=Tierra Right of Way, T=Trace Consulting, Y=Y2K

SOQ NON-TECHNICAL EVALUATION CRITERIA

1. KEY PERSONNEL

Our key personnel have the capacity, flexibility, resources, and multidisciplinary expertise to respond to the TO assignments that will be part of this on-call. Our extensive experience and established relationships with ADOT will provide efficient coordination and quality deliverables.

a) PROJECT PRINCIPAL

ERIN KLINE, PE | ARIZONA AREA MANAGER

Erin will be our Project Principal for this contract. As the Arizona Area Manager, she **has the authority to commit firm resources to successfully complete tasks assigned as part of this contract. She will take the lead regarding contractual matters, disputes, quality, delivery of services, and will be aware of any major decisions or issues pertinent to this contract.** Erin has been in the engineering industry for more than 20 years working for contractors, ADOT, and consultants. She has worked alongside many entities including ADOT, City of Tucson, Pima County, FHWA, USACE, Arizona Department of Environmental Quality (ADEQ), utility companies, and multiple contractors. She is an expert in reviewing contract documents, agency requirements, and can manage teams who work with contractors to ensure that contractual and other obligations are fulfilled. For this contract, Erin will ensure that project submittals are complete, and will perform quality assurance checks to make sure all quality control procedures are followed by the design team. Erin will also verify that all ADOT standards are met while serving as the last line of defense for checked deliverables and inclusion of all necessary documents.

Record of Past Performance: Erin has a strong record of past performance on transportation projects throughout Arizona. For nearly 12 years, Erin has been responsible for contracting, staffing, and delivering projects on time and within budget for a variety of clients around the state. Erin has served as the Project Principal on the following:

- ADOT Project Development On-Call (Current Contract)
- ADOT, Temp. Technical Engineering Personnel Services, Statewide (2022/2017)
- City of Tucson, Construction Surveillance Services On-Call, Tucson, AZ
- ADOT, I-10 Tucson Gap (sub to AECOM)
- City of Tucson On-Call Civil Engineering Services (2024)

In her tenure overseeing the Temporary Technical Engineering Personnel Services contract, Erin and her team have consistently achieved a 4 out of 5 rating in annual evaluations from the ADOT Project Manager, demonstrating our commitment to high-quality performance and client satisfaction.

Responsiveness to Client Needs: Erin has an excellent reputation with all of Horrocks' clients for being responsive and engaged whenever warranted. She ensures that each client has the appropriate resources and the team is delivering with the quality and responsiveness expected by our team. Additionally, Erin facilitated regular check-ins with clients to ensure their evolving needs are met promptly and effectively. Working the past several years with ADOT on the Temporary Technical Engineering Personnel contract, **Sherri Ross says, "Erin and all of the staff at Horrocks has been very responsive to any requests I have made. We have had a very good working relationship over the past seven years and I can always count on the Horrocks team to provide prompt replies to any questions I have."**

Erin's responsiveness to clients' needs is not just a commitment; it is the foundation of success, ensuring listening, adaptation, and delivery of exceptional solutions tailored to unique challenges.

b) CONTRACT MANAGER

CLARK CLATANOFF, PE, PTOE |
ARIZONA HEAVY HIGHWAYS DEPARTMENT MANAGER

Clark has 46 years of experience including on-call contract management, on-call task management, and technical expertise in transportation planning, traffic, and roadway design. During this tenure, he has assisted dozens of local, county, and state transportation agencies with their planning, predesign, and final design projects for their streets, roads, and multi-modal facilities. Clark is well-established Contract Manager for five past ADOT on-call contracts:

- ADOT 2014, 2017, 2022 Project Development On-Calls
- ADOT 2011 On-Call Services for Roadway Engineering Group
- ADOT 2011 Statewide and Valley On-Call District Minor Project Design
- ADOT 2011 On-Call Statewide Services for Traffic Safety Section
- ADOT 2011 Statewide On-Call for Traffic Engineering Services

Relevant Knowledge, Skills, and Abilities: From 2006 to 2009 Clark served ADOT Predesign Section as a Supplemental PM; providing him with an intimate understanding of the inner workings of ADOT. He continued his service to ADOT as a contract, project and task manager. He has the knowledge to prepare the correct documents for processing contracts, task orders, and change orders through ECS. In addition he has the technical background to manage the scope of work and execution of every discipline on a consultant team. Clarks knowledge, skills and abilities provide the framework for a team that discovers unknown issues early in the project development process; and identifies cost effective solutions from which the LPA and/or ADOT can review and decide the best solution for any given situation.

Responsiveness to Client Needs: The event that lead to the ADOT Predesign Manager's request for Clark to apply for the role as a Supplemental PM was his responsiveness to questions raised during a monthly meeting on a CIty of Glendale DCR for the proposed Bethany Home and Maryland TI's along SR 101L. This example exemplifies his philosophy that prompt responses to clients and team members leads to better results. Clark's goal is to provide an initial response within 2-hours of receipt and no later than 24-hours. The response is oft times advising of the schedule to complete the response; but this provides an opportunity for the coordinating party to express the urgency or acceptance of the proposed schedule.

Record of Past Performance: The following are two examples of Clark's "can do" attitude. I-10, Dysart Rd to I-17: ADOT asked Clark to add one mile of widening along WB I-10 between 35th Ave to 43rd Ave to any project nearing 60% completion; but retain the current fiscal year schedule. Working with the ADOT team, a streamlined review process was established. The agreed upon schedule did push the timeline forward 2-3 months, but stayed within the planned FY. County Route 1/Golden Shores/Oatman Hwy: following the 30% design submittal, the County asked ADOT and Clark if they could acquired R/W from ASLD to expand a retention basin. ADOT approved with the caveat the project could not move out of the planned construction FY. Clark and the ADOT PM teamed together to contact ASLD, set a meeting to immerse ourselves in the process and establish an expedited path to obtain the ROW.

The above factors illustrate why Clark's teams routinely scored 03s and 04s on all categories for the annual reviews.

c) TO PROJECT MANAGEMENT EXPERIENCE

Sean Nugent, PE | TOPM-Roadway/Traffic: Sean has 18 years of transportation experience and is currently PM for two ADOT projects. He has delivered more than 25 ADOT on-call project assignments. On the current PDOC TO for Battaglia Road, Sean is driving innovation to create three multi-tiered alternatives. For the ADOT I-40 East BB project, Sean is leading the team to effectively secure environmental, materials, utility, and ROW clearances, while staying on schedule. Sean has held leadership positions on more than 30 multi-modal corridor development projects, completed multiple ADA compliance reports, and directly coordinated with hundreds of utility owners and stakeholders. The ADOT PM for I-40 East BB has noted on multiple occasions how responsive Sean has been and how well the project has stayed on schedule.

Jason Carota, PE | TOPM-Structures: Jason has 22 years of structural experience and has successfully completed more than 25 on-call projects in Arizona for various entities, including ADOT. He has more than five years of PM experience. As PM on the PDOC TO Chase Creek Bridge Replacement, Jason was responsible for obtaining clearances (ROW, environmental, and utility), managing subconsultants, and coordinating with ADOT/Town of Clifton starting from the alternative selection process through final design. For over half of Jason's career, he has been responsible for management of discipline submittals, maintaining schedules, and keeping tasks/projects within budget for ADOT and other LPAs. He has dedicated his career to client service and understands the responsiveness needed to deliver a project.

Richard Lozano, PE | TOPM-Drainage: Richard has 31 years of drainage engineering experience with almost 20 years of PM experience in both the public and private sectors delivering small-scale drainage/flood control projects to leading design teams on multi-disciplinary projects. As a Discipline Lead Project Manager of the NDOT I-15/515 Auxiliary Lane and Viaduct Rehabilitation project in Las Vegas, Nevada, Richard was responsible for management of the drainage team efforts including submittal preparation for reports and plans, maintaining project schedules, and coordination with other teams/disciplines. He understands the importance of effective and timely communication in successful project delivery as well as placing importance on maintaining a high level of client service.

Michael Wilke, PE | TOPM-Utilities: Michael has 23 years of total experience and 15 years of PM experience leading utility coordination and SUE tasks on more than 30 on-call projects in Arizona for various agencies, including ADOT. This includes more than 20 on-call tasks successfully completed as PM on the ADOT SUE on-call contract. On the ADOT SR 189 project, Michael successfully coordinated all utility involvement and clearances as well as management of all SUE investigation for this time-critical project. Through open communication and close working relationships, he has been successful in working through complex issues with ADOT, agencies, and utility owners to meet schedules.

Aaron Littman, PE, PTOE | TOPM-Traffic: Aaron is a seasoned Project Manager with a proven track record of managing on-call contracts and tasks for the past 25 years. He has provided innovative and leading-edge technical solutions, including the development of an audio/video-based crash recording and alert system, a stop sign violation system, and a mobile data collection equipment platform under Ohio DOT on-call contracts and delivered dozens of traffic study and design projects. Aaron is a trusted, client-focused resource in the traffic engineering field evidenced by the award of successive traditional and on-call contracts, including all three phases of the City of Cincinnati Traffic Control System Upgrades.

2. QA/QC

Quality and Schedule Control: Our successful record with ADOT and other DOTs in the western region demonstrates our team's commitment to meeting and exceeding expectations. Horrocks' comprehensive QA/QC Program **ensures that all deliverables conform to project scope, address project risks, and are free from errors or omissions,** including schedule control composed of a detailed schedule with overall and task-specific milestone dates. This internal control allows us to make timely adjustments to maintain schedule and stay within budget.

Quality Engineer's Estimate: Our Arizona team's work with alternative delivery projects has us consistently working side-by-side with contractors who continually educate Horrocks on current unit costs. Our diverse project experience has built extensive relationships with product vendors. Working closely with contractors and vendors, we provide real world vetted costs. Simultaneously, we use our QA/QC process to verify the accuracy of quantities.

a) TEAM'S QUALITY CONTROL PROGRAM

Our team provides a well proven, robust design quality process that complies with ISO 9001 Standards and sets in place systematic procedures for ensuring quality of design.

- **Standards and contract conformity review:** Prior to the initiation of final Design Quality Check (DQC) Review, we will conduct a Standards and Contract Conformity Review to verify the submittal conforms to the requirements of the contract and adheres to the expected standards and format. All design, plans, reports, specifications, and quantities/estimates will be reviewed.
- **Independent Technical Review:** The Horrocks team will utilize independent technical reviewers as a part of the quality team to provide independent reviews of the design work necessary for the project. Our **Construction Management team will provide this review for all engineer's estimates to ensure unit prices accurately capture the project complexity.**
- **Constructability Review:** In conjunction with the design conformity review, Horrocks will review all design, plans, reports, and specifications to **provide early identification and resolution of issues** that could impact the quality, schedule, costs, and intent of construction activities.
- **Interdisciplinary Technical Review (ITR):** Discipline leads will review design submittals to ensure the elements are compatible with each respective discipline. **This will provide early identification and resolution of issues that could result in conflicts and subsequent design changes tracked with an ITR matrix.**
- **Quality Control Check (QCC):** The QCC provides a controlled process to check, back-check, correct, and verify necessary changes have been incorporated. Documents produced for a project will be checked by an individual with more experience than the originator, whose sole purpose is to verify the accuracy.
- **Quality Assurance (QA) Review:** The QA Review will evaluate the implementation and effectiveness of the design quality procedures to ensure the quality procedures have been followed and necessary documentation compiled and made available to ADOT.
- **QA/QC Success:** On SR 189, we used our QA/QC process to create accurate plans that generated minimal RFIs and changes in the field. Our submittals passed QA audit with 100% acceptance through the design phase and no design-build submittals were rejected.

3. DBE COMMITMENT

As previously noted in our introductory letter, **Horrocks is committed to meet or exceed the 11.96% DBE goal** established for this contract. **Of our 10 subconsultant teammates, seven of them are certified DBEs, i**ncluding AeroTech Mapping, Inc.; Corral Design Group, Inc.; Ethos Engineering, LLC; J2 Design; Riley Engineering, Inc.; TRACE Consulting, LLC; and Y2K Engineering, LLC. For each PDOC TO that Horrocks pursues, we will assess the specific scope of work and project needs, and then propose a team that has the required expertise and availability to complete the work. Therefore, we will have the DBE goal confirmed at the time we submit a TO proposal.

PDOC TO Battaglia Rd is exceeding the DBE goal by 1.78%.

CORPORATE ROLE/TITLE
Arizona Area Manager

AVAILABLE/COMMITTED
70% depending on task order needs

EDUCATION
BS, Civil Engineering, University of Arizona

REGISTRATIONS
AZ PE No. 52633

YEARS OF EXPERIENCE
Total Years of Experience: 20
Years with Horrocks: 8

ADDED VALUE TO ADOT

- Project principal on five current ADOT on-call contracts
- Thorough knowledge of ADOT processes
- Proactive communication style with Horrocks and ADOT Project Managers
- Record of past performance for delivering quality deliverables
- Stakeholder coordination

ERIN KLINE, PE

Project Principal

For 20 years, Erin has distinguished herself in the field of engineering. Erin began her career as a field engineer with a local contractor in southern Arizona and later earned her Professional Engineering license. While in the private sector, she developed her passion for engineering and construction as she worked on and completed a variety of projects, including multiple improvement projects along Interstate 10 between Tucson and Phoenix. After nine years of working in a variety of engineering and managerial roles in the private sector, Erin chose to diversify her experience and began working for ADOT as a Resident Engineer and, subsequently, was promoted to Senior Resident Engineer. There, she managed and completed the $40 million Interstate 19 and Ajo Way Traffic Interchange project. Erin joined Horrocks Engineers in 2017 as a Resident Engineer and, soon after became the Arizona Construction Management Group Manager. While at Horrocks, she has worked on multiple projects, including the $36 million Interstate 10 improvement project from Interstate 8 to Early Road for ADOT and the $1.2 billion Border Wall for U.S. Army Corps of Engineers.

In 2023, Erin was named Horrocks' Arizona Area Manager, and has set herself apart in the engineering field, **navigating leadership and management roles in the workforce** with both strength and grace. She oversees a diverse group of professionals, including design and technical staff, as well as construction management and administration personnel. Under her guidance, the Arizona operations have flourished, creating an environment where creativity and teamwork thrive.

Additionally, Erin has a **proven track record of success in managing and delivering projects to exceed client expectations.** She possesses extensive expertise in overseeing the construction and development of infrastructure projects and is skilled in leading multidisciplinary teams and **ensuring the successful completion of client projects within budget and on schedule.** Erin also has a keen eye for detail, a dedication to quality, and consistently drives excellence in her team. Her quality control experience is supported by her previous role as an ADOT Resident Engineer and Senior Resident Engineer on numerous projects. She is familiar with ADOT's quality and testing parameters, standards, and specifications, as well as workmanship requirements.

RELEVANT EXPERIENCE:

ADOT, Project Development On-Call | Statewide, AZ | Project Principal. Erin is the project principal for the current Project Development On-Call contract responsible for the overall technical and administration aspects of the contract. She oversees the staff assigned to on-call tasks and **ensures project deliverables meet the contractual requirements.** The current task under this assignment includes:

- Battaglia Road: Eleven Mile Corner Road to Sunshine Boulevard

ADOT, SR-189: International Border to Grand Avenue Design-Build, Nogales, AZ | Quality Control Manager. Erin was responsible for **quality control oversight** for this $84 Million roadway improvement project. The goal of this project was to improve safety, capacity, operations, and business access from the Nogales Port of Entry (POE) to Interstate 19 and Business Route 19. Design elements included two new flyover ramp bridges, one bridge widening, three bridge rehabilitations, reconstruction of 3.75 miles of SR-189, new roundabout construction, roadway safety improvements, retaining wall installations, drainage and traffic improvements, utility coordination, MOT, environmental, and aesthetics.

ADOT Project Development On-Call, Chase Creek Replacement, Clifton, AZ | Quality Control/Principal. Horrocks was selected to design the replacement of the existing two-lane, single-span bridge at Frisco Avenue over Chase Creek. The new bridge is a single span consisting of adjacent prestressed voided slab girders supported by stub abutments on drilled shafts with rock sockets offset from the existing bridge. The bridge layout and structure type were selected to minimize the impacts to the existing, historic bridge and retaining walls. Erin **supported the quality control review efforts for this project.**

ADOT, Temporary Technical Engineering Personnel Services, Statewide, AZ | Principal/Contract Manager. As the Arizona Construction Group Manager, Erin was responsible for Construction Management, Administration, and Inspection services around the State of Arizona. She oversaw Horrocks staff assigned to the ADOT Temp Tech assignments. Projects included conventional design-bid-build, design-build, construction manager at risk, and job-order-contracting delivery methods. She **assigns, develops, markets, trains, mentors, and maintains oversight to meet ADOT requirements.**

Maricopa County DOT, On-Call Construction Inspection Services, Maricopa County, AZ | Contract Manager/Project Principal. As a subconsultant on multiple teams, Erin is managing the Horrocks contract to provide Construction Inspection services to the Maricopa County DOT. She is responsible for oversight of staff assignments, and management to meet requirement of contract.

City of Tucson, On-Call Construction Surveillance Services for Transportation Projects, Tucson, AZ | Principal/Contract Manager. Erin is responsible for Construction Surveillance and Inspection services for the City of Tucson. She oversees Horrocks staff assigned to on-call tasks for transportation projects. Projects include conventional design-bid-build and job-order-contracting delivery methods. She manages, assigns, develops, markets, trains, mentors, and maintains oversight to meet requirements of the City. Some tasks under this contract include:

- Broadway Boulevard: Euclid to Country Club
- Houghton Road: Valencia to Mary Ann Cleveland
- Grand Road Phase 2: Stone to Park

Pima County DOT, On-Call Construction Surveillance Services, Pima County, AZ | Contract Manager/Project Principal. Erin is managing the contract for Construction Management and Inspection services for the Pima County DOT. **She is responsible for oversight of staff assignments, and management to meet requirement of contract.** Some tasks under this contract include:

- Blanco Wash Bridge
- Mission Road Bridge

Town of Queen Creek, On-Call Construction Management Services, Queen Creek, AZ | Construction/Contract Manager. Erin was responsible for Construction Management and Inspection services for the Town of Queen Creek. She oversaw the Horrocks staff assigned to on-call tasks for transportation projects. Projects included conventional design-bid-build and job-order-contracting delivery methods. She managed, assigned, and maintained oversight to meet the Town's requirements. Some tasks under this contract include:

- Chandler Heights Road: Recker to Via Del Arroyo
- Power Road: East Brooks Farm to Chandler Heights

ADOT, I-10: Earley Road to I-8, Pinal County, AZ | Resident Engineer. This $38 Million Bid Build (A+B Construction) is located in Pinal County on Interstate 10 between Milepost 186.65 and Milepost 208.83, through the City of Casa Grande. The proposed work encompassed widening Interstate 10 between Milepost 196.42 and Milepost 199.34 from four lanes to six lanes including two new bridges over Jimmie Kerr Boulevard and the Union Pacific Railroad. A fiber optic trunkline was installed between Milepost 186.65 to Milepost 208.83, including armored single-mode fiber optic cable and two node buildings. Other work consists of constructing widened roadway, mill and replace asphaltic concrete pavement, concrete barrier, pipe lining, guardrail, signing, pavement marking, directional drilling, and other miscellaneous work. Erin's responsibilities included **administration and ensuring that the project was built according to plans and specifications. She coordinated construction activities with federal, state, local and private entities to assure conflicts are minimized and the public was well served.**

ADOT, SR 86: Valencia Road to Kinney Road, Pima County, AZ | Resident Engineer. This $40 million Bid-Build project consisted of adding two lanes to create four travel lanes from Valencia Rd to Sheridan Road and six travel lanes from Sheridan Road to Kinney Road. The work also consists of improvements to local streets connecting to SR 86. The work consists of grading, paving, extending existing box culverts, construction new box culverts, constructing new closed frame continuous concrete slab bridges, improving local streets connecting to SR 86, installing guardrail end terminals, placing pavement markings, installing traffic signals, signing, seeding, relocating water and sewer facilities and other miscellaneous work. Erin's responsibilities included administration and ensuring that the project was built according to plans and specifications. **She coordinated construction activities with federal, state, local and private entities to assure conflicts are minimized and the public was well served.**

ADOT, I-19 at Ajo Way (SR-86) Traffic Interchange, Pima County, AZ | Resident Engineer. This $40 million Bid-Build project consisted of reconstructing the I-19/Ajo Way TI along with work on Ajo Way. The work includes roadway excavation, constructing embankment, grading, furnishing and placing Portland cement concrete pavement and asphaltic concrete, two bridge structures, retaining and sound walls, four RCB culverts, concrete barrier, drainage, pavement marking, signing, lighting, signals, and other related work. **Erin's responsibilities included providing engineering and technical direction for the administration the project to assure work was performed in a manner that provides a functional, durable project that meets design intent and conformance with prevailing construction plans and specifications.** She was responsible for assuring that all work performed complied with ethical and sound engineering practices.

ADOT, Tucson-Benson Hwy (I-10), Tuscon, AZ | Resident Engineer. This $16 million Bid-Build project consisted of four projects; Junction SR-83 to MP 288; Davidson Canyon Bridge WB; Marsh Station to Mescal Road; Mescal Road to Junction SR-90. Construction consists of milling and replacing existing asphaltic concrete pavement, removing and replacing guardrail and guardrail end terminals, replacing bridge deck joints, sealing bridge decks, replacing pavement markings, and other miscellaneous work. In addition, Davidson Canyon Bridge work consists of removing the existing bridge deck and steel girders and replacing them with new concrete deck and pre-stressed concrete AASHTO girders. Erin's responsibilities included providing engineering and technical direction for the administration the project to assure work was performed in a manner that provides a functional, durable project that meets design intent and conformance with prevailing construction plans and specifications. **She was responsible for assuring that all work performed complied with ethical and sound engineering practices.**

City of Surprise, On-Call Construction Inspection Services, Surprise, AZ | Contract Manager/Project Principal. Erin is managing the contract for Construction Inspection services for the City of Surprise. She is responsible for oversight of staff assignments, and management to meet requirements of the contract.

CORPORATE ROLE/TITLE
Arizona Heavy Highways Department Manager

AVAILABLE/COMMITTED
60% depending on task order needs.

EDUCATION
BS, Civil Engineering, University of Nebraska

REGISTRATIONS
AZ PE No. 20206
PTOE No. 602

YEARS OF EXPERIENCE
Total Years of Experience: 46
Years with Horrocks: 7

ADDED VALUE TO ADOT

- Has served ADOT since 1986 providing signing, striping, signal, lighting, and traffic control design for urban and rural interstate, freeway and highway facilities.
- As the PM or Traffic Task lead, he has delivered more than 50 design projects for ADOT.
- Served ADOT as a Supplemental PM for three years.

** Project Experience prior to joining Horrocks*

CLARK CLATANOFF, PE, PTOE

Contract (Project) Manager

Clark has 46 years of experience including on-call contract management, on-call task management, and technical expertise in transportation planning, traffic and roadway design. During this tenure he has assisted **dozens of local, county and state transportation agencies with their planning, predesign and final design projects for their streets, roads and multi-modal facilities.**

Clark was the Contract Manager for five ADOT on-call contacts as follows:

- ADOT 2014, 2017, and 2023 Project Development On-Call Contracts
- ADOT 2011 On-Call Services for Roadway Engineering Group
- ADOT 2011 Statewide On-Call for Traffic Engineering Services
- ADOT 2011 On-Call Statewide Services for Traffic Safety Section
- ADOT 2011 Statewide and Valley On-Call District Minor Project Design

He managed roughly **25 TOs,** as well as mentored his team in: scoping (roadway predesign and environmental studies/categorical exclusions); roadway and traffic design; and utilities and ROW clearances.

RELEVANT EXPERIENCE:

ADOT PDOC, Battaglia Road from Eleven Mile Corner Road to Sunshine Boulevard, Eloy, AZ | Contract Manager. Clark is overseeing and providing quality control reviews for the preliminary and final design services to add curb and gutter, five-foot sidewalk, ADA ramps, and scuppers with spillways along Battaglia Road. The intent of this project is to improve the pedestrian circulation within the surrounding residential area. The scope includes project management, survey, environmental studies; roadway, drainage, traffic and SWPPP design; geotechnical and pavement design; various clearances, specifications; bid item list and cost estimate.

ADOT, Project Development On-Call, Chase Creek Replacement, Clifton, AZ | Quality Control Reviewer. Horrocks was selected to design the replacement of the existing two-lane, single-span bridge at Frisco Avenue over Chase Creek. The new bridge is a single span consisting of adjacent prestressed voided slab girders supported by stub abutments on drilled shafts with rock sockets offset from the existing bridge. The bridge layout and structure type were selected to **minimize the impacts to the existing, historic bridge and retaining walls.** Clark provided quality control reviews for this project.

ADOT, I-40/West Ash Fork TI, Ash Fork, AZ | Roadway/Traffic Lead: Clark was the Roadway and Traffic Task lead for the reconstruction of B-8 (Lewis Ave) to accommodate the development of a truck stop. **To manage the queues from the heavy truck traffic,** the approved design added bi-directional left turn lanes between the ramp intersections. The signing, striping, and pavement marking design was completed per ADOT standards and specifications. Lighting design was developed per ADOT standards and specifications for the ramp intersections.

ADOT I-15/Littlefield TI, Mohave County,AZ | Roadway/Traffic Lead: Clark was the Roadway and Traffic Task lead for the reconstruction of County Hwy 91 to accommodate the development of a truck stop. To manage the queues from the heavy truck traffic, **the approved design added bi-directional left turn lanes between the ramp intersections.** The signing, striping, and pavement marking design was completed per ADOT standards and specifications. Lighting design was developed per ADOT standards and specifications for the ramp intersections and I-15 on-ramp merge areas.

***ADOT, I-10, Dysart Road to I-17, Phoenix, AZ | Task Manager.** This 13-mile urban project included: 1) milled and replaced the existing AR-ACFC; 2) provided ADA pedestrian facility upgrades at the traffic interchanges and grade separation crossroads; 3) spot signing improvements; and 4) constructed an additional general purpose lane (GPL) on west bound I-10 from 35th Ave to 43rd Ave. Services included project management, a PA, an ADA Compliance Report, survey, roadway, traffic, drainage, retaining wall, erosion control design and coordination with ADOT and utility companies. **In the weeks leading up to the Stage IV submittal, ADOT approached Clark to add the GPL work to the project.** This additional work required a traffic operations analysis/simulation to quantify the time savings per vehicle to add the GPL coordination with SRP Water for adjustments to two siphons. Clark led a field review at 60% design to review the plans with ADOT PM, Roadway, Traffic, and District staff.

***ADOT, SR 95 at Mohave Road, Parker, AZ | Task Manager/Scoping Engineer.** This safety improvement project included widening Mohave Road to add a left turn lane and shoulders, installed traffic signals and street lighting at the intersection, provided signing and pavement marking

adjustments, and added minor drainage improvements along SR 95. This project was located on Colorado River Indian Tribe (CRIT) lands. **Incorporating the desires of the CRIT was integral to the success of this project.**

***ADOT, I-10, Dragoon Rd to Johnson Rd (Phase I), Cochise County, AZ | Task Manager.** The goal of this Highway Safety Improvement Program (HSIP) project was to protect motorists from collisions with vertical rock faces by removing large rock outcroppings and constructing guardrail and concrete barrier. **Traffic control plans to narrow the mainline to a single lane, and plans for the relocation of agave were unique aspects of the project.** These dynamics made this project both challenging and exciting. Through a concerted effort, the team worked through the project comments and delivered the project on time and under budget.

***ADOT, I-10, Dragoon Rd to Johnson Rd (Phase II), Cochise County, AZ | Task Manager.** The second phase of this critical HSIP project focused on protecting motorists from collisions with vertical rock faces by removing large rock outcroppings and constructing guardrail and concrete barrier. Phase II of the project included further lengths of new guardrail and barrier, additional rock face removal, and new signing and striping. Through lessons learned in Phase I, a **modified approach to traffic control was developed to further the lengths of temporary concrete barrier creating larger work areas for the contractor.** This led to improved safety and increased construction speed.

***ADOT LPA, SR 87/Randolph Rd Intersection, Coolidge, AZ | Task Manager/Predesign Engineer.** This scoping study and final design project included:

- A traffic impact and signal warrant study
- Safety funding study and federal funding application
- PS&E, construction inspection, and testing for the Randolph Road approach (City Project)
- PS&E for SR 87 (ADOT Project)

Additionally, ROW and utility relocation and clearances were required. Multi-jurisdictional coordination was key to the success of the project. At the planning and predesign level, the design concept evolved to meet conflicting agency needs and minimize utility and ROW impacts. **The early identification of funding shortfalls and ability to assist with federal safety funding commitments were key** to the approval of the project permits from ADOT.

***ADOT/City of Casa Grande, Jimmie Kerr Blvd/Sunland Gin Rd, Casa Grande, AZ | Task Manager/Predesign Engineer.** The **span wire system** was selected to cost effectively implement signals at an intersection with a 45-degree skew. After planning to add additional through and turn lanes, the pole locations were selected to accommodate future roadway widening. As the Union Pacific Railroad (UPRR) main line lies on the south side of Jimmie Kerr Blvd, signal pre-emption and an advanced signal on the south side of the tracks for NB traffic were required by the UPRR. City, MAG, ADOT, and UPRR guidelines and standards were used.

***ADOT LPA, Main Street, Coolidge Avenue to Pinkley Avenue, Coolidge, AZ |Task Manager/Scoping Engineer.** This urban reconstruction project located on Main Street from Coolidge Avenue to Pinkley Avenue (0.4 miles) and on Central Avenue from Main Street to 1st Street (0.2 miles). The goals of the project were to **enhance the aesthetics; bring the sidewalk into ADA compliance;** and replace the sidewalk, curb, gutter, and pavement. Two detention basins were added to relieve localized flooding. Light relocations were coordinated with APS. Landscape areas were incorporated along the diagonal parking and in each corner of the intersection. Conduit was included for future water and electrical service for landscaping. Fire hydrant relocations were provided using Arizona Water Company requirements. City, ADOT, and AWC guidelines, standards, and specifications were used for the PS&E.

***ADOT LPA, Casa Grande Safe Routes to School, Casa Grande, AZ | Task Manager/Scoping Engineer.** This project provided **ADA-compliant sidewalk ramps** adjacent to the property of three schools and **solar lighting** along two paths **approaching the schools.** The final PS&E was assembled using City, MAG, and ADOT guidelines, standards, and special provisions.

***ADOT LPA, Reay Lane/Safford Bryce Road Intersection, Graham County, AZ | Task Manager/Predesign Engineer.** This on-call project provided scoping and design to relocate this intersection with an acute right turn affecting semi-trucks. Unique to the intersection was the close proximity of two irrigation ditches. The design integrated the profile necessary to pass over the canal culverts. As the project was federally funded, **a mixture of local and state guidelines,** standards, and specifications was necessary to meet the stakeholders' needs.

***ADOT LPA - Golf Course Rd Shared Use Path (SUP), Graham County, AZ | Task Manager/Predesign Engineer.** This on-call project provided scoping and design to build a path adjacent to the existing road. During the kick-off meeting field review the team agreed to the location of the path that was selected to minimize impacts to drainage, traffic, and manage the construction cost. The preferred alignment lay within the confines of a flood control dam, **requiring coordination and approval from the Bureau of Land Management.** Local, state, and federal guidelines, standards, and specifications were necessary to meet the project needs.

***ADOT LPA, School Bus Road Pavement Rehabilitation, Eagar, AZ | Task Manager/Predesign Engineer.** This on-call task provided scoping and design for the mill and overlay and pothole maintenance. A unique challenge to this project was that survey was not budgeted. Therefore, **GIS coordinate data at key intersections provided the project backbone** layout and on-line aerial mapping was used to provide the plan background. A safety edge and narrow aggregate structural shoulders were added along the pavement to enhance safety and extend to pavements useful life.

***ADOT LPA, Moon Mountain Avenue and Safe Routes to School Improvements, Quartzsite, AZ | Task Manager/Scoping Engineer.** This on-call task provided for the pavement reconstruction of Moon Mountain Avenue and addition of sidewalks to the school at the north end of the project. Two-inch curbs were used to provide minimal impact to the existing sheet flow drainage. A one-foot rock-filled space was used between the curb and sidewalk to create an ADA-compliant "detection zone" between the street and sidewalk. Additional paths were added at various locations in town to **provide paths with continuity to all schools.**

***ADOT LPA, County Route 1/Golden Shores Pkwy/Oatman Hwy (Six Points Intersection), Mohave County, AZ | Task Manager/Scoping Engineer.** This on-call assignment included an alternatives study, scoping, and final design for portions of County Route 1 (CR 1), Golden Shores Pkwy (GSP), Powell Lake Rd (PLR), Oatman Highway/Route 66 (Oatman Hwy) and their intersections. It was located along historic Route 66, which required special considerations. The purpose of this project was to improve safety by eliminating the six-leg intersection. Roundabouts were selected as they slow traffic, **eliminate severe crashes, and receive 100 percent federal funding.**

CORPORATE ROLE/TITLE
Phoenix Roadway Group Manager

AVAILABLE/COMMITTED
50%

EDUCATION
BS, Civil Engineering, Arizona State University

REGISTRATIONS
AZ PE No. 59571

YEARS OF EXPERIENCE

Total Years of Experience: 18
Years with Horrocks: 8

ADDED VALUE TO ADOT

- Experienced in both Roadway and Traffic Design including geometry, bridge interface and walls, MOT and phasing, signals, lighting, ITS, and S&S.
- Familiarity with ADOT scoping, having written more than 20 SLs, PAs, and DCRs.
- QA/QC process master, having been through five major fully QC audited projects.
- Starts with a "listen first" approach to understanding issues, before jumping to solutions.

* *Project Experience prior to joining Horrocks*

SEAN NUGENT, PE

TOPM-Roadway & Traffic

Sean is a Principal at Horrocks with 18 years of design and management experience. **Sean understands ADOT processes and expectations having delivered more than 25 ADOT on-call project assignments.** When leading his team, Sean's goals are to accurately identify the root cause issues of a project, and then to drive innovation to create multi-tiered alternatives. He has successfully managed alternatives analysis for more than 20 Project Assessments and Scoping Letters. As a lead, his guidance on multiple projects has directly led to **more than $20 million in construction savings over the last four years.** His experience spans roadway, traffic, utility coordination, ITS, and 3D modeling. During his career he held a **leadership position on more than 30 multi-modal corridor development projects.**

Sean's experience leading teams on 25 on-call, DBB, and Design-Build projects in Arizona and across the Southwest allows him to bring perspective and lessons learned from diverse owner interactions. These projects were integrated with compressed schedules that created an environment Sean thrives in. **The ADOT PM for I-40 BB East has noted on multiple occasions how responsive Sean has been and how well the project has stayed on schedule.**

Sean's leadership style provides clear direction for his team and helps remove roadblocks for their success. Prior to his tenure at Horrocks, Sean was the Design and Production Manager for the team's delivery of 10 ADOT on-call projects concurrently. He served as the Roadway Design Task Lead and managed the drainage, structural, geotechnical and materials, environmental, survey, and utilities disciplines. The projects were successful because he focused on fostering open communication and responsibility with his team members.

During Sean's experience as Project Engineer, he was responsible for the management of all discipline work products, schedule, and budget for local public agencies (LPAs). **Sean recognizes that the primary challenge with LPA projects is to meet their goals for the project with their preconceived ideas for the design and cost.** He has completed multiple ADA Compliance Reports integrating vulnerable user facilities into more than 40 urban/residential corridors and directly coordinating with hundreds of utility owners and stakeholders. The following projects represent a small sample of projects where innovation was critical for reshaping the project design to manage the construction cost while meeting the Owner's goals.

RELEVANT EXPERIENCE:

ADOT PDOC, Battaglia Road from Eleven Mile Corner Road to Sunshine Boulevard, Eloy, AZ | Project Manager. Sean is the PM leading the preliminary and final design services to add curb and gutter, five-foot sidewalk, ADA ramps, and scuppers with spillways along Battaglia Road. The intent of this project is to improve the pedestrian circulation within the surrounding residential area. The scope includes project management, survey, environmental studies; roadway, drainage, traffic and SWPPP design; geotechnical and pavement design; various clearances, specifications; bid item list and cost estimate. **His experience with innovating roadway projects is guiding three multi-tiered alternatives.** This project is on schedule in the Pre-Design phase.

ADOT, I-40 Broadband: Flagstaff to New Mexico State Line, Multiple Counties, AZ | Project Manager. Sean is the PM leading the design of the fiber optic broadband installation along I-40 from Flagstaff to New Mexico (159 miles). The project will install seven-way microduct bundle for the entire project length (significantly installed by plow), four regeneration huts/shelters, and accommodation of third-party broadband providers to access the conduit for middle-mile purposes. Other supplemental elements of the project include ROW investigation and verification, NEPA approval, utility coordination, Native American Tribal coordination, bridge attachments, power source coordination, and railroad coordination. This project is currently in the **Stage IV review period, on schedule, and under budget.**

Mohave County, Mountain View Road Low Water Crossing, Mohave County, AZ | Project Manager. Sean was the Project Manager/Engineer of Record for this project including the design of two new "French Drain" style subsurface storm drains located in the thru lanes of Mountain View Road to promote distribution of standing water. Two hundred feet of existing asphalt pavement was designed to be re-graded to drain and replaced with PCCP. The project was funded with American Rescue Plan Act (ARPA) funds and had a quick design turnaround deadline. **He fast tracked the plans, specifications, and estimate for the County to successfully secure their federal funding for construction.** This project is currently in construction.

ADOT, Mariposa Road (SR 189)/Grand Avenue Improvements, Nogales, AZ | Project Engineer. The goal of this project was to improve safety, capacity, operations, and business access from the Mariposa Port of Entry (POE) to Interstate 19 and Business Route 19. Design elements included two new flyover ramp bridges, one bridge widening, three bridge rehabilitations, reconstruction of 3.75 miles of SR-189, new roundabout design, roadway safety improvements, retaining wall installations, drainage and traffic improvements, utility coordination, MOT, environmental, and aesthetics. Sean was critical in the preliminary roadway design and completed the ADA Report. He was the Lead Traffic engineer for the project, overseeing the design for seven signalized intersections, new lighting, signing and pavement marking, and the **first ADOT ITS trunk line in the City of Nogales.**

City of Casa Grande, Thornton Road, Highway 84 to I-8, AZ | Project Engineer. Sean was the project engineer for this CMAR project to widen and reconstruct Thornton Road from an existing rural two-lane facility to a median divided urban four-lane typical section with multi-modal facilities. The City elected to include a 10-foot multi-use path in-lieu of bike lanes along the road and sidewalk. Our recommendation to use the path was based on safety due to the speed of traffic, truck, and agricultural use of the roadway. Sean and his team recommended a combination of new retention basins and draining into existing commercial basins to **avoid R/W acquisition, avoid existing power poles, and reduce the construction cost.**

***ADOT, I-10: Dysart Road to I-17, ADOT, Phoenix, AZ | Project Engineer.** For 13-miles of roadway improvements to the Interstate 10 (I-10) Papago Freeway, Dysart Road to Interstate 17, **Sean lead the ADA Compliance Report and design of more than 60 crosswalk ramps** through this urban and heavily constrained corridor. He also lead his team to develop the PA, plans, cost estimate, and specifications through the Stage V (100%) plans.

***ADOT, Main Street: Coolidge Avenue to Pinkley Avenue, Coolidge, AZ | Project Engineer.** This urban revitalization and pedestrian access project was located in downtown Coolidge on Main Street and Central Avenue. Sean was the Project Engineer for the PA and final design to reconstruct the existing pavement, curbs and gutters, and sidewalks to improve the quality of the roadway. **Reconditioning the existing street lighting, improving the landscaping, installing local artist's work, and design of custom pedestrian facilities** furthered the development of this complete street.

***ADOT, North Moon Mountain Avenue and Path Improvements, Quartzsite, AZ | Project Engineer.** Sean managed the consultant teams schedule and design for this project that added a custom curb and gutter (two-inch high with a 1.5-inch depression) and Safe Routes to School path separated by two feet of rock to **meet ADA requirements while minimizing impacts to on and off-site drainage.** The construction specifications directed the contractor to provide coordination with land owners for construction through their driveways.

***ADOT, Elm Street Pavement Rehabilitation, Lake Powell Blvd. To Grandview St., Page, AZ | Project Engineer.** Sean led the design for rehabilitation of 1,000 linear feet of existing pavement to maintain structural integrity and improve sidewalks and curb ramps to meet current ADA standards. **He managed the utility coordination for relocations through this residential corridor.** Sean lead his team to develop the geometric roadway design, construction plans, and cost estimate for the PA and final design.

***ADOT US 191; Smelter Hill - Horseshoe Curve, Clifton, AZ | Project Engineer.** The purpose of the project was to replace selected pedestrian facilities and ineffective drainage by replacing the curb and gutter and sidewalk to meet ADA requirements along US 191 (Coronado Blvd) and US 191T (MP 163.95 to 165.02). Tapered milling along the edge of pavement was used to adjust gutter grades. New catch basins and drainage pipes were installed where necessary. ADA improvements including new sidewalk, ramps, driveways, and curb and gutter on the west side of US 191 from 7th Street to Riverside Drive. Custom ramps were designed adjacent to restricted railroad R/W. Traffic calming improvements including new transverse rumble strips, dynamic feedback signs, curb bump-outs, and the **first speed table on an ADOT highway.** Sean was the Project Engineer and Engineer of Record who led a team that developed the PA, geometric roadway design, construction plans, specifications, and cost estimate.

***ADOT SR 90 Hatfield Street/E. Buffalo Soldier Trail, ADOT, Sierra Vista, AZ | Project Engineer.** Sean was the Project Engineer for this intersection widening and improvement project. It included pavement widening and rehabilitation, pavement marking, new signage, sidewalk reconstruction, new guardrail, traffic signal replacement, geotechnical studies, and utility relocation. The purpose of this project was to alleviate congestion and improve traffic safety through adding left-turn lanes and a free flow westbound to northbound turn lane. ADA improvements consisting of new sidewalk, pedestrian ramps, curb and gutter, and shared-use path improvements were included. Working with ADOT Sean proposed an alternative that reduced **nearly $1M of scope wile fulfilling the project need,** reducing the construction fee to within the allotted $3M and **allowed the project to completed without additional funding.**

***ADOT, Six Points Intersection Design, Mohave Country, AZ | Project Engineer.** This project included an alternatives study, scoping, and final design for portions of County Route 1, Golden Shores Parkway, Powell Lake Road, Oatman Highway/Route 66, and their intersections, in Mohave County, Arizona, (County) within the ADOT Northwest District. The purpose of this project was to upgrade the function of the hazardous six-leg intersection by improving flow and accessibility through all three-project intersections without defeating the service objectives of any one intersection. Key improvements included the construction of a roundabout at the Intersection. **The County Public Works Director recently noted there have been no significant accidents at the roundabout since construction.** Sean led a team that developed the geometric roadway design, construction plans, MOT and trailblazing plans, and cost estimate for the project. Construction was finished ahead of schedule.

***ADOT I-10, Dragoon Road to Johnson Rd (Phase II), ADOT, AZ | Project Engineer.** Sean served as the Project Engineer during the second phase of a critical Highway Safety Improvement Program (HSIP) project to protect motorists from collisions with vertical rock faces by removing large rock outcroppings and constructing guardrail and concrete barriers. Sean finalized the geometric roadway design, **located areas for potential rock blasting mitigation,** completed the construction plans, cost estimates, and specifications.

CORPORATE ROLE/TITLE
Phoenix Structures Group Manager

AVAILABLE/COMMITTED
50%

EDUCATION
BS & MS, Civil Engineering, Manhattan College

REGISTRATIONS
AZ PE No. 50744

YEARS OF EXPERIENCE

Total Years of Experience: 22
Years with Horrocks: 7

ADDED VALUE TO ADOT

- More than 22 years of experience including the design of more than 100 bridges.
- Extensive experience managing structural tasks, including the Structures Lead on ADOT's SR 189 project, which included two flyover ramp designs.
- Thorough understanding of AASHTO LRFD Bridge Design Specifications and ADOT Bridge Design Guidelines.

* *Project Experience prior to joining Horrocks*

JASON CAROTA, PE

TOPM-Structures/Bridge

Jason has 22 years of design and management experience. He has extensive experience developing contract drawings, construction cost estimates, and specifications for transportation projects. He has more than 10 years of experience managing structural tasks and five years of experience as a Project Manager. Jason has served as the Project Manager and Structural Lead for several bridge replacement projects. Jason has experience obtaining project clearances and maintaining design schedules. **He has successfully completed more than 25 on-call projects in Arizona for various entities, including ADOT.** For almost half of Jason's career, he was responsible for management of discipline submittals, maintaining schedule, and keeping tasks/projects within budget for ADOT and other local public agencies.

Jason has dedicated his career to client service and fully understands the responsiveness required to deliver a project on time. As the Structures Lead on ADOT's SR 189 project, **Jason managed a team of more than 10 individuals, was responsible for the interdisciplinary/contractor coordination, and conducted weekly structures task force meetings.** The flyover ramp structures design was on a very aggressive schedule and all submittals/QC packages were made on time.

Jason places a high value on open communication with the client and all project team members, which is key for risk mitigation. As part of ADOT's Design and Construction Review Program, Jason reviewed the submittals for more than 20 projects. **He interfaced with multiple disciplines from design teams to confirm that comments were addressed properly to make subsequent submittal reviews go smoothly.** As the Project Manger on the Chase Creek Bridge Replacement project, Jason was responsible for obtaining all project clearances, which required frequent coordination with multiple stakeholders.

RELEVANT EXPERIENCE:

ADOT Project Development On-Call, Chase Creek Bridge Replacement, Clifton, AZ | Project Manager. Horrocks was selected to design the replacement of the existing two-lane, single-span bridge at Frisco Avenue over Chase Creek. Horrocks developed an offset bridge alignment that allowed the new bridge to be constructed in one phase and would provide uninterrupted access to the traveling public. The bridge layout and structure type were selected to minimize the impacts to the existing, historic bridge and retaining walls. **As Project Manager, Jason was responsible for obtaining all clearances for the project (ROW, environmental, and utility), managing subconsultants, and coordinating with ADOT/Town of Clifton starting from the alternative selection process through final design.** He also reviewed the structural calculations and plans.

ADOT SR-189: International Border to Grand Avenue, Nogales, AZ | Structural Lead. The flyover ramps that cross over the Mariposa Wash were a part of Horrocks' design of the project. Ramp lengths were 1,820 feet and 947 feet, consisting of prestressed concrete bulb tee girders, hammerhead piers, and stub/full height abutments on drilled shaft foundations. Bridge pier design included scour effects where it spanned over the Mariposa Wash. There was approximately 1/2 mile of cast-in-place concrete retaining walls throughout the project. **As Lead Structural Engineer, Jason oversaw all layout and design, managed the structural team, provided QC services, coordinated closely with the contractor and other disciplines, conducted weekly task force meetings, and was integral in reducing 1,900 feet of bridge length.** He also performed superstructure and substructure calculation and plan checks for both flyover ramp bridges and retaining walls.

ADOT Design and Constructability Review Program, Statewide, AZ | Structural Lead. Horrocks reviewed half of all the submittals to ADOT during the contract duration. Jason was responsible for reviewing the submittals that had structural components, including new bridges or rehabilitation projects, and **coordinated with designers to develop solutions.**

City of Scottsdale, Structural On-Call, AZ | Project Manager. The Horrocks team provided engineering services for several structural tasks throughout the City. **Jason has successfully completed 16 tasks as part of this On-Call Contract.** These tasks have included:

- Six parking garage and six pedestrian bridge inspections and structural assessment reports.
- One emergency bridge repair project
- Two repair projects at Southbridge Garage
- Westworld tent inspection and structural assessment
- Two miscellaneous facilities inspections: one of the One Civic Center building and the other at the Giants Spring Training Facility
- Stadium retaining wall inspection and structural assessment
- Generator support design

***ADOT, SR 303L Glendale Ave to Peoria Ave, Glendale and Surprise, AZ | Structural Engineer. Jason was responsible for design and detailing of six new bridges and retaining walls associated with the new highway.** The bridges consisted of standard AASHTO Prestressed I-Girders. The abutments for the bridges included stub and full height abutments on drilled shafts. The piers included multiple columns supported on drilled shafts.

***ADOT On-Call, Apache Trail Concrete Ford Inspection and Rehabilitation, Maricopa County, AZ | Structural Lead.** Jason was responsible for determining extent of repair/ replacement necessary of the existing concrete ford. He provided a **hands on inspection and report** summarizing existing conditions and recommendations for remediation. He performed final design and detailing of the structural work required at the ford.

***ADOT SR 86 – Valencia Road to Kinney Road Improvement, Tucson, AZ | Structural Lead.** Jason developed the new **precast box culvert transition details** to the existing box culverts. He assisted with miscellaneous structural detailing required for the drainage items.

***ADOT SR 101L HOV DCR – I-10 to Tatum Blvd, Maricopa County, AZ | Structural Engineer.** Jason was responsible for structural report write up and associated cost estimates for the **Design Concept Report.** The structural work in the report included the widening of several existing bridges and multiple new intersection options.

***City of Flagstaff, Rio De Flag Flood Control Bridge Design, Flagstaff, AZ | Structural Lead.** Jason was responsible for performing the structural design and detailing of the box culverts. **He completed two bridge designs and one project assessment** required as a part of the flood control project. He also completed calculations, construction plans, and specifications for two double-barrel super box-culverts.

City of Casa Grande, Thornton Road DCR and Design, Casa Grande, AZ | Structural Lead. Jason checked the design and detailing for the drainage structures for this project.

NDOT, I-15 / US-93 Garnet Interchange Design-Build, North Las Vegas, NV | Structural Engineer. Jason created the finite element model for the seismic analysis of the US-93 over Grand Valley Parkway bridge. He performed substructure analysis and design. He was also responsible for checking all concrete cantilever retaining wall designs.

NDOT, Reno SBX Design-Build, Reno, NV | Structural Engineer. Jason investigated different span arrangements for several of the bridges. Multiple superstructure types were designed, including **steel girders, precast bulb tees, and post-tensioned box girders.** Jason performed the quantity calculations associated with each option to determine most economical solution.

UDOT, US-89 Farmington to I-84, Farmington, UT | Structural Engineer. Jason was responsible for design and detailing of the Weber River pedestrian trail underpass. The structure was a cast-in-place concrete box culvert. **He coordinated with other disciplines to ensure future trail conditions were accommodated.** Jason was also responsible for checking the design and details for the temporary bridge over the Weber River. This included spread footing abutment design for a prefabricated steel truss bridge.

NDOT, I-15 Tropicana, Harmon, Hacienda NEPA, Las Vegas, NV | Structural Engineer. Jason performed steel girder calculations for multiple span arrangements of the Hacienda bridge.

Pueblo of Isleta, Belen Highline Canal Bridge, Pueblo of Isleta, NM | Structural Lead. Horrocks was contracted by the Pueblo of Isleta to inspect and evaluate the existing Belen Highline Canal Bridge. The bridge is a single span, low-volume crossing. The existing bridge is a steel railroad flatcar with a span length of approximately 44 feet and 6 inches. The bridge was going to be used as an access route by contractors for an adjacent construction project. **The main purpose of the project was to inspect the bridge and determine a safe working live load** for it for the duration of the construction project.

***City of Mesa On-Call, Main and Lindsay Relief Sewer Design, Mesa, AZ | Structural Lead.** Jason was responsible for the design and detailing of multiple sewer diversion structures.

***Pima County On-Call, Pantano Interceptor Chemical Dosing Station, Pima County, AZ | Structural Lead.** Jason performed structural design and detailing for concrete slab on grade for 6,000 gallon chemical storage tank.

UDOT, I-15, 5600 South Progressive Design-Build, Weber County, Utah | Structural Engineer. Jason designed a 472-foot-long, **three-sided box supported on spread footings under I-15,** checked a two span steel plate girder design for a bridge over 5600 South, and prepared type selection reports for each.

***NTTA, S.M. Wright Freeway (U.S. 175/I-45 Interchange), Dallas, TX | Structural Engineer.** Responsible for developing the layout of the SB I-45 to SB CF Hawn bridge. The layout included widening of the existing bridge to accommodate the new construction. **The bridge was over 4,500 feet long consisting of prestressed concrete girders.** Performed and checked calculations for several of the bridges on the project.

***Perkins Specialized Transportation, Specialty Load Rating Analyses of Bridges for Super Load Transport, San Clemente, CA to Clive, UT | Structural Engineer. Responsible for structural load rating analysis calculations for more than 50 bridges using the generator transport vehicle (400 feet long, 700 tons).** Bridge types included steel girder, prestressed I-girder, concrete slab, post tensioned box girder, and reinforced concrete box girder. Pier cap ratings were performed when applicable.

***UDOT, Mountain View Corridor, 5400 South to 4100 South, Salt Lake County, UT | Structural Engineer.** Responsible for the design of **two bridges and two box culvert extensions.** The bridge superstructure consisted of a single-span prestressed concrete girders. The substructure consisted of integral abutments supported on driven H-piles.

CORPORATE ROLE/TITLE
Senior Drainage Engineer

AVAILABLE/COMMITTED
40%

EDUCATION
BS, Civil Engineering, University of Notre Dame

REGISTRATIONS
AZ PE No. 36847

YEARS OF EXPERIENCE

Total Years of Experience: 31
Years with Horrocks: 1

ADDED VALUE TO ADOT

- Supplemental ADOT PM experience brings inside knowledge to keep projects on-time and under budget.
- More than 30 years of extensive drainage engineering experience for the design and construction of transportation projects throughout the west and southwest.
- Experience working on department of transportation projects (ADOT, NDOT, CALTRANS).

* *Project Experience prior to joining Horrocks*

RICHARD LOZANO, PE

TOPM-Drainage

Richard is a licensed professional civil engineer with 31 years of experience in drainage/flood control engineering and project management for both the public and private development sectors. As a former **participant in the Supplemental Project Manager contract with ADOT, he understands the project setup process,** involvement of project stakeholders, and overall expectations for delivering a project. His experience in initial project planning, proposal/scope development, project scheduling, budget monitoring, personnel management, and risk/change management has aided him in delivering **more than 20 projects where he served in a Project Manager role.**

Richard is well-versed in drainage engineering with extensive experience in hydrologic and hydraulic modeling, as well as design of open channels, storm drain systems, sanitary sewer systems, pressure pipe systems, retention/detention basins, overflow spillways, culverts, bridges, and pumping stations. Richard is also very knowledgeable in the analysis and design of erosion control measures such as outfall energy dissipators, riprap aprons, stilling basins, drop structures, and riprap revetments.

Richard has high-level technical writing skills, **having completed more than 30 drainage studies** for large-scale drainage master plans (urban/rural), smaller scale reports for general site development, and technical drainage reports/memorandums to support transportation projects. His expertise with FEMA regulations and floodplain management is reflected through his experience in preparing and submittal of **nearly 10 LOMR/CLOMRs** for site development projects over the last 20 years of his career.

Richard leads his team through a collective effort of understanding the root cause of project issues. He engages stakeholders early for their input and then outlines a detailed plan of action to execute the project. Richard places significant emphasis on responsiveness to ADOT, and other key team members, and his all-in approach has a proven track record of success highlighted by the projects below.

RELEVANT EXPERIENCE:

***ADOT, Supplemental Project Manager/PMG, Phoenix, AZ | Project Manager.** Richard served as a **Supplemental Project Manager within the ADOT PMG.** The PMG provides project management services and support information in the implementation of ADOT's Construction and Local Governments Federal-Aid transportation programs. In this role Richard was tasked to assist in initiating federal, state and locally funded projects by coordinating funding allocation and contract agreements with internal ADOT departments, development of project design teams (internal and external) and providing high level management of project design and construction efforts.

Town of Marana, Sanders Road Drainage Improvements, Marana, AZ | Project Manager. Richard is overseeing the preparation of a technical drainage report, final design plans, specifications, and the engineer's opinion of probable costs for drainage improvements along the eastern side of Sanders Road, from Emigh Road to Twin Peaks Road. The goal of this project is to **mitigate erosion and undercutting** along the eastern edge of the one-mile paved roadway segment where runoff is conveyed northerly within an unlined roadside channel, and improve safety measures along the roadway shoulder where the location of the ditch and its depth create hazardous traffic conditions.

***Town of Queen Creek, Queen Creek Channel Improvements, Queen Creek, AZ | Project Manager - Drainage.** This flood control/erosion control project for a one-mile segment of an existing unimproved natural channel included hydraulic analysis of the existing channel segment, preparation of a **technical drainage design report and design of improvements** to address channel degradation due to upstream development. Richard served as the Project Manager responsible for internal budget control, schedule monitoring, resource allocation, and quality control of design documents. Richard was also the Lead Drainage Engineer tasked with the development of the **hydrology, hydraulic analysis/design,** and preparation of improvement plans. Hydrology was developed using the HEC-1 software program and the hydraulic analysis was performed using the HEC-RAS software program. The proposed drainage improvements included minor channel section grading and construction of several gabion-drop structures to reduce the longitudinal slope and mitigate channel degradation.

***City of Las Vegas, Romero Street Arroyo Crossing, Las Vegas, NM | Assistant Project Manager - Drainage.** This flood control project for an existing unimproved natural channel roadway crossing included the design of a steel plate arch-culvert along with hydrologic/hydraulic analysis, design of minor roadway improvements, and development of improvement plans. Richard served as the primary contact responsible for client relations with

City Manager, project schedule, and financials. Richard also served as the lead drainage engineer on the project and was responsible for all drainage analysis and final production of improvement plans. Hydrology was developed using the HEC-1 software program and the hydraulic analysis was performed using the HEC-RAS software program. Final design of the **major floodway crossing consisted of a Con-Arch steel plate culvert,** riprap lining of the channel side slopes, and riprap outlet protection. A technical design report was also prepared as part of the final construction document submittal package.

***City of Las Vegas, Pajarito Arroyo Channel Improvements, Las Vegas, NM | Lead Drainage Engineer.** This flood control project for an existing unimproved natural channel roadway crossing included the design of a multi-cell box culvert along with upstream and downstream channel improvements. Richard served as the lead drainage engineer on the project and was responsible for the hydrologic/hydraulic analysis, design of minor roadway improvements, and the development of improvement plans. Hydrology was developed using the HEC-1 software program and the hydraulic analysis was performed using the HEC-RAS software program. Final design of the crossing included a **multi-cell reinforced box culvert with a concrete-lined channel section** upstream, and a riprap-lined channel section downstream. Special design considerations included calculation of flow depth impacts due to high velocities and channel superelevation immediately upstream of the crossing as well as accounting for the skewed angle of the box culvert crossing. A technical design report was also prepared as part of the construction document submittal package.

***Clark County Public Works (CCPW), CC 215 Bruce Woodbury Beltway Widening (Craig Road to Grand Montecito Drive), Las Vegas, NV | Drainage Lead.** This transportation project provided engineering design services for a section of the 215 Beltway within northwest Las Vegas from Craig Road to Grand Montecito Drive. The widening project included full section improvements to provide additional travel lanes in each direction, lighting analysis and design, and safety enhancements along with other associated roadway and drainage improvements. Richard served as the Lead Drainage Engineer responsible for drainage analysis, design, and construction document deliverables. The drainage asks included development of hydrology for the project using the **HEC-1 software program and the SCS Curve Number Methodology.** The determined runoff amounts were then used to design flood control facilities, which included median drop inlets, storm drain laterals, and roadside drop inlets. Drop inlet analysis and spacing design were determined using applicable spread criteria parameters in accordance with County requirements and **FHWA HEC-22 methodology.** All runoff flows were conveyed into an existing County storm drain system and ultimately into a Clark County Regional Flood Control facility downstream of the project limits. Additional drainage tasks included the preparation of a drainage design technical memorandum and improvement plan sheets for proposed drainage facilities as part of the Design Plan Submittal Packages.

***CCPW, CC 215 Bruce Woodbury Beltway Widening (Windmill Lane to Pecos Road), Las Vegas, NV | Drainage Lead.** This transportation project provided engineering design services for a section of the 215 Beltway within southeast Las Vegas from Windmill Lane to Pecos Road. This included full section improvements to provide four through lanes in each direction with additional auxiliary lanes between Eastern Avenue and Pecos Road, bridge overpass widening, lighting analysis and design, and other associated roadway and drainage improvements. Richard served as Lead Drainage Engineer responsible for drainage analysis, design, and construction document deliverables. Drainage tasks included development of hydrology for the project using the HEC-1 software program and the SCS Curve Number Methodology. The determined runoff amounts were then used to design flood control facilities, which included median drop inlets, storm drain laterals and roadside drop inlets. **Drop inlet analysis and spacing design were determined using applicable spread criteria** parameters in accordance with County requirements and FHWA HEC-22 methodology. All runoff flows were conveyed into an existing County storm drain system and ultimately into a Clark County Regional Flood Control facility downstream of the project limits. Tasks included the preparation of a drainage design technical memorandum and improvement plan sheets for proposed drainage facilities as part of the Design Plan Submittal Packages.

***NDOT, I-515 Aux Lane and Viaduct Rehabilitation Project, Las Vegas, NV | Project Manager-Drainage.** This project included a three-mile section of Interstate 515/US 93/US 95 (I-515) in Clark County, Nevada, extending from the I-15 Interchange to the Eastern Avenue Interchange on-ramp. Richard served as the Project Manager responsible for all task items included in scope of services, which included project management, QA/QC, cost estimates, ROW mapping, final drainage report, final drainage plans, and administrative support during bid/award and construction. This final phase of the overall project expanded and refined the drainage analysis and **further developed the selected improvements** as outlined in the conceptual drainage study prepared in the preliminary engineering phase. The QA/QC tasks were completed in accordance with detailed procedures outlined in the project scope and the Design Quality Management Plan developed by the project team. Components of the Final Drainage Design Report included hydrologic/hydraulic analysis documentation, design recommendations, an estimation of construction costs, and grading/drainage improvement plan sheets.

***California Department of Transportation (CALTRANS), I-805 South Bike Trail Bridge – CLOMR, San Diego, CA | Drainage Engineer.** This transportation project proposed to rehabilitate distressed pavement within the I-805 South Corridor located within the City of San Diego and the City of Chula Vista, in southern California. The project also included a bike trail bridge along the east side of the I-805 roadway/bridge crossing at the Otay River. The proposed bike trail bridge improvements include additional piers that impacted flows within the Otay River which is a FEMA designated Floodplain/Floodway. Richard served as drainage engineer responsible for preparation of the Conditional Letter of Map Revision (CLOMR). Tasks included HEC-RAS analysis of a 1.5-mile segment of the Otay River floodway and the bridge crossing at I-805, as well as **preparation of required documents for submittal to FEMA.**

***NDOT, USA Parkway Design-Build (SR 439), Reno, NV | Technical Review Drainage Engineer.** This project consists of approximately 19 miles of a four-lane roadway connecting Interstate 80 with US 50 in Story and Lyon Counties, Nevada. This project used the DB delivery method and involved **complex hydrologic and hydraulic analysis for construction of several drainage improvements** required by the proposed roadway construction. As part of the Project Management Support Team involved with QA/QC, Richard served as the Technical Review Engineer tasked with detailed review of the submitted drainage calculations and improvement plans. This work consisted of the review of the Drainage Design Report and Design Plans for Stage 1, Stage 2, and Request for Construction (RFC) submittal packages.

CORPORATE ROLE/TITLE
Senior Utility Engineer

AVAILABLE/COMMITTED
35%

EDUCATION
BS, Civil Engineering, Arizona State University

REGISTRATIONS
AZ PE No. 48640

YEARS OF EXPERIENCE

Total Years of Experience: 23
Years with Horrocks: 7

ADDED VALUE TO ADOT

- More than 15 years of experience managing Utility Coordination and building relationships with utility owners for various projects statewide.
- Managed SUE investigation process with a thorough understanding of ADOT SUE requirements and process.
- Provides extensive utility relocation construction oversight experience with thorough understanding of utility construction methods.

** Project Experience prior to joining Horrocks*

MIKE WILKE, PE

TOPM-Utilities

With more than 23 years of transportation related final design experience, Mike has an extensive background managing utility coordination projects for various clients in Arizona, including ADOT, MCDOT, and many local governments. **Mike leads the ADOT SUE Services on-call for Horrocks, which has provided him with the knowledge of ADOT process and expectations for delivering a successful project.** He specializes in using a focused approach to utility conflict mediation and relocations. He will be at the heart of the utility coordination process by proactively managing communication and coordination with utility owners to align them with the project's needs including the construction schedule and any potential on-going construction activities. His experience has allowed him to build strong relationships with various utility owners throughout Arizona including power (distribution and transmission), communications, gas, water, and irrigation.

Mike's roadway design experience allows him to understand the full project scope while working with various outside parties including developing **scoping documents, roadway design, right-of-way coordination, utility agreements, structural elements, agricultural irrigation management, estimates, specification, and project constructibility review.**

Mike's utility experience extends to a thorough understanding of the processes required both in utility locating and construction oversight. **Mike works directly with our internal SUE team** and has a thorough understanding of the utility investigation process and how it applies to project design and construction. He understands how accurate utility locations are a valuable asset to the project design accuracy, budget and construction schedule. Mike's experience extends to providing utility relocation construction oversight and management as part of the utility relocation process. This includes coordinating utility construction activities, schedules and durations, traffic control and coordination of adjacent public property as well as coordinating on-going construction with proposed project designs.

RELEVANT EXPERIENCE:

ADOT, Mariposa Road/Grand Avenue Improvements, Nogales, AZ | SUE Manager/Utility Manager. Mike's duties as SUE Manager included coordination of the field investigation and data processing of the project wide SUE investigation as well as designate and potholes for a total of **95 potholes.** As Utility Manager, Mike was responsible for coordinating project design for 11 separate utility owners, confirming utility conflict reviews, approving of utility relocation design plans, and organizing utility coordination meetings. This job included the coordination of multiple utility relocations for the interchange expansion and roadway widening of SR-189 and I-19 through Nogales, AZ.

ADOT, Design and Construction Review Program, Statewide, AZ | Utility Manager. Provided design review for final design projects that ADOT advertised for bidding during the contract period. **Completed approximately 150 plan reviews on more than 100 projects.** Provided a comprehensive design through construction review program. Reviews focused on all disciplines associated with transportation engineering, including compliance with ADOT, AASHTO, MAG, County, local City, and other design criteria/guidelines. Provided constructability reviews of specifications and engineers estimates of construction cost and provided post-construction lessons learned reviews, offering opportunities for improvement. Horrocks also provided subject matter experts when needed/ requested by ADOT for unique structural and intersection designs. As the Utility Manager for this contract, Mike was responsible for plan reviews for any utility relocation or modification designs.

ADOT SUE On-Call, Statewide, AZ | Project Manager. Mike is currently serving as the project manager for this ADOT SUE On-Call covering various projects throughout ADOT's southern districts. Includes the management of the on-call **SUE investigation efforts with more than 25 tasks successfully completed delivered to date.**

ADOT, SR 90 Roadway Improvements, Sierra Vista, AZ | Project Engineer. Mike served as Roadway Lead and Project Engineer as part of the ADOT predesign on-call services. This project assessed proposed roadway improvements and his responsibilities included the preparation of preliminary designs and a Project Assessment Report for ADOT.

City of Tucson Water Department, SUE On-Call Services, AZ | Project Manager. Since 2019, Horrocks has been providing **QL-A and QL-B SUE** services to the City of Tucson's Water Department. Mike's team provides the necessary research and field investigations, including utility designation and underground existing utilities, and test holes are completed on an as-needed basis.

MCDOT On-Call Utility Coordination and Technical Support Services, Maricopa County, AZ | Utility Engineer. As part of MCDOT contract 2025-005 and previous contracts 2022-047 and 2020-011, Mike and the Horrocks utility coordination team has worked directly with the MCDOT Utility Project Management (UPM) team and Utility Coordination Branch Manager (UCBM) since 2020 to provide project design utility coordination, technical support, and construction management for multiple MCDOT projects.

MCDOT, Construction Administration, Inspection and Plan Review Services, Maricopa County, AZ | Project Manager/ Utility Manager. Provided full service utility coordination, construction administration, utility inspection and design review services for multiple MCDOT projects including construction management of two projects (TT0406 Riggs Road – Power Road to Hawes Road, Town of Queen Creek, AZ and TT0538 Riggs Road – Crismon Road to Meridian Road, Town of Queen Creek) for MCDOT Utilities Branch Division.

MCDOT, Northern Parkway Program Management, Maricopa County, AZ | Utility Manager. This project spanned over four years and multiple TOs, where Mike served as the Utility Manager. The project consisted of a planned 12-mile long, partially controlled-access parkway. Mike was responsible for management of all project utility relocations including railroad coordination efforts, design, and coordination of all **agricultural irrigation facilities,** ROW coordination, and post design services.

NDOT, Spaghetti Bowl Express I-80/I-580 System-to-System Interchange Design-Build, Reno, NV | Utilities Engineer. Partial pavement replacement was scoped for NB I-580. The SB mainline was realigned and the profile was raised to accommodate wider bridges over UPRR and arterial streets. SB I-580 ramps were reconfigured at 2nd Street and Mill Street. I-80 to I-580 on/off-ramps were realigned. Partial pavement replacement and spot road widening and pedestrian facilities were provided for the adjacent city street system. **Vehicular, bike, and pedestrian traffic control and detours were extensive.** Horrocks provided utility coordination, management, and support services for all utility work, utility conflict identification, and conflict relocation design. The project included all major utility relocations and extensive third-party coordination. Horrocks is providing supplemental QL-D through QL-A SUE services and additional test-hole information as requested. As the Utility Engineer for this project, Mike was responsible for oversight and management of the project-wide utility coordination.

City of Prescott, SUE On-Call Services, Prescott, AZ | Project Manager. Horrocks has provided QL-A and QL-B SUE services to the City of Prescott. Mike's team provided the necessary research and field investigations, including utility designation and underground existing utilities, and test holes were completed on an as-needed basis. As the Project Manager for this project, Mike was responsible for oversight and management of all tasks including all utility investigation and project plan production.

QuikTrip Corporation, QuikTrip SUE Services, Various Locations, AZ | Project Manager. Since 2022, Horrocks has been providing QL-A and QL-B SUE services to the QuikTrip Corporation for development of various AZ locations. Mike's team provides the necessary research and field investigations, including utility designation and underground existing utilities, and test holes are completed on an as-needed basis. As the Project Manager for this project, Mike is responsible for oversight and management of all tasks including all utility investigation and project plan production.

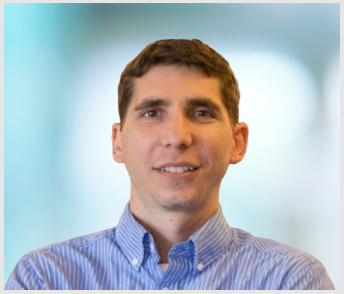
Dallas-Fort Worth Airport (DFW), Utility Design Project, Dallas, TX | Utility Manager. Horrocks worked as a subconsultant assisting with utility engineering for the DFW expansion project. Upon utility conflict identification, Horrocks performed multiple utility relocation designs. The water relocation design included a six-inch fire line relocation, 24-inch water line relocation, and 18-inch waterline relocation. The wastewater/sewer relocation design included relocation of the 12-inch gravity sewer line. Horrocks performed **several electrical duct bank and conduit relocation designs for the power company, as well as telecom duct bank relocations.** Mike was responsible for managing the utility designs for all dry utilities.

California High-Speed Rail Authority, California High-Speed Rail Design-Build, Fresno, CA | Utility Manager. This project included the construction of high-speed rail along a 35-mile segment between Fresno and Madera Counties in California. As the Utility Manager, Mike provided oversight and management of the utility design relocation packages for more than 13 different utility owners project-wide.

***ADOT Statewide Dynamic Message Sign (DMS) Phase 11 Statewide, AZ | Utility Manager.** As part of the ADOT PDOC, this task involved the review and analysis of nine proposed DMS locations statewide to verify project viability and priority for design and construction. Mike served as utility coordinator for this task overseeing the coordination of all utility involvement and relocations for each sign location. This included addressing all power needs for the project sites statewide.

***75th Ave Intersection Improvements – 75th Ave & Cactus Rd and 75th Ave and Peoria, Peoria, AZ | Utility Manager.** This City of Peoria local project was managed by ADOT and involved safety improvements to the intersections of 75th Avenue and Cactus Road and 75th Avenue & Peoria Avenue. Improvements include roadway widening and the addition of intersection turn lanes. Mike served as Utility Manager for this project including oversight of all utility coordination and all SUE services for both intersections.

***ADOT SR 89 at Road 4N and Perkinsville Roundabouts Chino Valley, AZ | Project Engineer.** This ADOT project involved reconstruction of the existing Road 4N and Perkinsville Rd intersection to a two-lane roundabout. The project was a result of an **HSIP safety study that evaluated different intersection types,** including signalization, and determined the roundabout at this location was more cost effective when accounting for projected crash modification factors as determined in the AASHTO Highway Safety Manual. As Project Engineer on these projects, Mike provided utility coordination and roadway design and review for both intersections.



CORPORATE ROLE/TITLE
Senior Traffic Engineer

AVAILABLE/COMMITTED
50%

EDUCATION
BS, Civil and Environmental Engineering, University of Cincinnati

REGISTRATIONS
AZ PE No. 72693
PTOE No. 7101

YEARS OF EXPERIENCE

Total Years of Experience: 25
Years with Horrocks: 4

ADDED VALUE TO ADOT

- 25 years of experience in traffic engineering and ITS design.
- Extensive experience leading traffic engineering efforts on complex projects, including the Summerlin Parkway/CC-215 Interchange project.
- His work in designing centralized traffic signal systems showcases his ability to develop and implement efficient traffic control measures.

* *Project Experience prior to joining Horrocks*

AARON LITTMAN, PE, PTOE

TOPM-Traffic

Aaron is an expert traffic engineer, bringing 25 years of experience in traffic engineering and ITS design, positioning him as a valuable asset to the Horrocks team. Throughout his career he has managed numerous projects, including more than 30 on-call contracts, while also contributing as a design team member on various projects nationwide. His extensive background encompasses a wide range of project types, including corridor and intersection safety studies, which have involved analyzing traffic patterns and accident data to implement safety improvements. **One notable project he led involved the development of innovative intersection concepts, such as Superstreets and Continuous Flow Intersections (CFIs), which have proven effective in enhancing traffic flow and reducing congestion.**

In addition to his work on intersection designs, Aaron has been integral in the design of centralized traffic signal systems, aiding in the modernizing of urban infrastructures to increase efficiency and safety. He has also contributed to traffic impact studies for significant developments, ensuring that new projects align with the area's existing traffic dynamics. He conducted a major freeway corridor renovation, which utilized software like VISSIM and Synchro to simulate traffic behaviors under various scenarios, providing key insights that informed design decisions. **This ability to analyze and visualize traffic flow through simulation underscores his skills as a Senior Transportation Traffic Engineer** and highlights his proficiency in using advanced tools such as AutoCAD and Civil 3D.

Aaron's expertise extends into the realm of GIS, where he integrates data management and analysis with transportation planning and design. He played a crucial role in integrating GIS into traffic studies, enhancing the effectiveness of data visualization and decision-making. A prominent project where this was evident involved the implementation of a GIS-based solution for a large-scale traffic impact study that required meticulous data management and spatial analysis. His adept use of GIS tools, combined with his experience in designing fiber optic networks and traffic signal systems, showcases his diverse skill set and innovative approach to addressing complex transportation challenges. Aaron's extensive experience in traffic engineering and safety analysis make him a valuable asset to any project team. **He believes that consistent and regular communication, while working as an extension of the Client's project team, is key to the success of every project.**

RELEVANT EXPERIENCE:

Quartzsite I-10 TI Study, Quartzsite, AZ: Senior Traffic Engineer – Horrocks completed an interchange alternative study and preliminary design for the Quartzsite Avenue interchange on I-10, including the adjacent frontage roads. The interchange serves as a connection to the annual Quartzsite Rock, Gem, and Mineral Show which hosts more than a million visitors in January and February. The interchange is also a hub for truckers along I-10 with multiple travel centers and more under construction. Alternatives included tight **diamond, diverging diamond, roundabouts, and bow tie, which needed to accommodate a variety of traffic conditions, volumes, and vehicle types.** Aaron was responsible for traffic modeling (Vissim, Synchro, Sidra, Rodel) and preparation of the traffic report.

***ORDC Statewide On-Call, OH | ORDC | Project Manager** – Aaron served as **project manager for the Ohio Rail Development Commission for multiple contracts.** TOs included traffic signal preemption design and associated geometric improvements, the design of a queue cutter traffic signal (only the second to be installed in the state), and safety and traffic studies for at-grade rail crossing in the cities of Portsmouth and Centerville. The studies evaluated alternatives for rail crossing upgrades and closures, with consideration for local stakeholders and businesses, economic and safety impacts, emergency vehicle and bus routes, emergency response times, and existing and proposed bikeways.

***ODOT Statewide Signal Timing On-Call, OH | ODOT | Project Manager**
Aaron **managed projects for multiple ODOT Signal System on-call contracts.** Projects included signal system timing and design projects throughout the State of Ohio for state, county, city, and jointly managed systems, with typical measured reductions in delay between 10% and 30%.

***ODOT Statewide Safety Study On-Call, OH | ODOT | Project Manager**
Aaron managed multiple projects for numerous ODOT Safety Study on-call contracts. Projects included intersection and corridor safety studies throughout the state. Aaron developed and utilized custom video-based technologies to address unique study goals, including a crash recording system, a stop sign violation system, and a mobile data collection equipment platform. **He executed a pilot project which formed the basis for the ODOT's Systematic Signal Timing and Phasing Program (SSTPP).**

***OKI Traffic Data Collection On-Call, Cincinnati, OH | OKI | Project Manager** – Aaron managed and planned traffic data collection and validation activities for the Ohio, Kentucky, Indiana (OKI) Regional Council of Governments (MPO) over four years. The project involving **data collection at more than 1400 freeway and non-freeway locations,** requiring the coordination of three field crews, working day and night, in all eight OKI counties. Responsibilities also included the development of maintenance of traffic procedures and the direction of all safety procedures executed by work crews. Count technology included pneumatic hose counters and microwave radar detection equipment mounted on a custom-designed mobile equipment platform.

SR-147 – Lake Mead Boulevard, North Las Vegas, NV | NDOT | Senior Traffic Engineer – This project includes sign and striping replacement, lighting, traffic signals, ADA, and safety improvements on Lake Mead Boulevard from Pecos Road to 2.36 miles east of the urban limit in Clark County, NV (approximately 7.17 miles in length). The project consists of 4.81 miles of four- to six-lane urban minor arterial pavement rehabilitation and reconstruction, pedestrian facility upgrades along both sides of the corridor, and reconstruction of hundreds of non-compliant curb ramps and driveways. The urban segment improvements will provide a continuous four-foot passable width for pedestrians around obstructions in the sidewalk in both directions to meet current PROWAG standards. Signals, signing and lighting will be upgraded or reconstructed. Rural segment improvements include pavement preservation and widening, intersection reconstruction, roadway realignment, and various other improvements that will significantly improve the safety. Aaron is responsible for design and preparation of plans for traffic signals, **rapid rectangular flashing beacon (RRFB) pedestrian crossings,** and signage.

Boulder City Parkway Complete Streets Phase 2, Boulder City, NV | City of Boulder City | Traffic Engineer – Horrocks was selected to prepare concept plans, landscape renderings, and engineering design plans for Boulder City Parkway from the Nevada Way and Buchanan Boulevard intersection to the eastern city limits. This project includes developing **complete street concept plans;** laying out opportunities for safety improvements for pedestrians and cyclists; developing transportation design, including turning movements, landscape plans, and utility and drainage design; conducting stakeholder meetings with the public and city council; and completing final design plans. Aaron is responsible for coordinating the development of travel demand volumes, traffic and alternative analysis using Synchro and HCS, predictive crash analysis, and preparation of a traffic and safety report.

Nevada State Drive, Henderson, NV | City of Henderson | Senior Traffic Engineer – Horrocks is completed design of Nevada State Drive between I-515 and Paradise Hills Drive. As part of the preliminary design, the use of roundabouts at the intersections of Conestoga Way, Compassion Street and Paradise Hills Drive were evaluated as potential design options. Survey and traffic information was used to analyze the potential roundabout layouts and determine the ultimate alignment of Nevada State Drive in order to define the finalized rights-of-way (ROW). Aaron was responsible for **roundabout design review** and he was involved in the **interchange traffic modeling and analysis.**

Summerlin Parkway/CC-215 Interchange, Clark County, NV | Clark County Public Works | Lead Traffic Engineer – Horrocks provided the final design for this project which **addresses undesirable traffic weaving** and will provide direct and semi-direct free flowing movements between CC-215 Western Beltway and Summerlin Parkway. This is accomplished by constructing braided ramps and eliminating all existing signalization, with the exception of the NB/WB movement which will be signalized in a High-T intersection configuration. Work includes the design of roadways, structures, retaining walls, drainage, utilities, SUE, traffic analysis, signing, and striping. Aaron was responsible for the signing, as well as advising and reviewing the ITS design for the project.

Las Vegas Pedestrian Improvements, Las Vegas, NV | City of Las Vegas | Traffic Engineer – Horrocks was retained by the City of Las Vegas to design pedestrian related safety improvements at five different locations throughout the City. The improvements consisted of active warning RRFB systems, pedestrian refuge median islands, improved school crosswalks, **curb extensions/bulb-outs,** and other options to control speeds and improve pedestrian safety. Other incidental work included ROW investigations and preparation of easements where needed, drainage checks, utility coordination, **ADA/PROWAG evaluations** and compliance, MUTCD-compliant signing and striping, and preparing an advertising package complete with design plans, specifications, quantities, bid items, and an engineer's estimate for the improvements. Aaron prepared signing, striping, and signal plans for two RRFB pedestrian crossings and two **high intensity activated crosswalk (HAWK) pedestrian crossings.**

I-15; SR-97 (5600 South), Widening 56thS, Davis County, UT | UDOT | Senior Traffic Engineer – Horrocks was selected by UDOT on the I-15, 5600 South Progressive Design-Build (PDB) project located on I-15 and SR-97 within Roy and Riverdale City. This is an interchange reconstruction and SR-97 (5600 South) widening project to reduce congestion and improve safety from I-15 west to SR-108. The major items of work include a new interchange with multiple structures, road widening (including widening an existing structure over railroad), intersection improvements, trail systems, utilities, drainage, ROW, and Hill Air Force Base coordination. Horrocks was the lead designer teamed with Granite Construction and WW Clyde, who formed the JV Sand Ridge Constructors, to win this alternative delivery project. Aaron is responsible for **microsimulation modeling of various alternatives (using Vissim) and preparation of the final Interchange Access Change Request (IACR).**

I-15 Davis County; 600 N to Farmington, Davis County, UT | UDOT | Senior Traffic Engineer – Horrocks is conducting an EIS to environmentally clear the project area for future construction for a project that involves **repairing aging infrastructure,** redesigning interchanges to accommodate traffic, and providing comfortable and connected facilities for active transportation users particularly around east-west connectivity. Horrocks is the prime consultant on the EIS and also a subconsultant for the PI contract for the EIS. The study includes data collection, travel time runs, travel demand modeling, traffic safety, corridor planning, alternatives analysis for multi-modal facilities, and public outreach. Aaron is responsible for microsimulation modeling of various alternatives (using Vissim).

From: ADOT Business Engagement and Compliance Office
To: HCKS-AZ_Bus_Dev
Cc: ContractorCompliance@azdot.gov
Subject: Bidders List for Horrocks LLC
Date: Monday, March 31, 2025 4:58:11 PM

Horrocks LLC, AZUTRACS Number: 19200 has submitted a Bidder/Proposer list for **2025-011** on 03/27/2025 at 3:03 PM MST (UTC - 07:00).

Bidders/Proposers for this firm include:

Firm Name	Address	Ethnicity	Gender	Age of Firm	Annual Gross Receipts	DBE Status	NAICS Codes
ACS Services LLC	2235 West Broadway Rd Mesa, AZ 85202	Caucasian	F	10+ years	$2 million to $5 million	Non-DBE	541380
AeroTech Mapping Inc	3285 North Fort Apache LAS VEGAS, NV 89129	Hispanic American	F	4-7 years	Unknown	DBE	541370
Alta Planning + Design	2600 N. Central Avenue, Suite 550 Phoenix, AZ 85004	Caucasian	M	10+ years	$10 million to $50 million	Non-DBE	541330
Cooper Aerial	11402 N Cave Creek Road Phoenix, AZ 85020	Caucasian	M	10+ years	$2 million to $5 million	Non-DBE	541370
Corral Design Group, Inc.	4632 S. 36th St Phoenix, AZ 85040	Hispanic American	M	10+ years	$500,000 to $1 million	DBE	541320
Ethos Engineering, LLC	9180 South Kyrene Rd Tempe, AZ 85284	Hispanic American	M	10+ years	$1 million to $2 million	DBE	541330
Greenlight Traffic Engineering, LLC	14050 N 83rd Ave Peoria, AZ 85381	Caucasian	M	8-10 years	$2 million to $5 million	Non-DBE	541330
J2 Engineering & Environmental Design, LLC	4649 E Cotton Gin Loop Phoenix, AZ 85040	Native American	M	10+ years	$5 million to $10 million	DBE	541320
Pinyon Environmental, Inc.	1783 W. University Drive Tempe, AZ 85281	Caucasian	F	10+ years	$5 million to $10 million	Non-DBE	541620
Riley Engineering, LLC	3430 E. Sunrise Dr. Suite 150 Tucson, AZ 85718	Native American	M	8-10 years	$500,000 to $1 million	DBE	541330
Tierra Right of Way Services, Ltd.	1575 E. River Road, Suite 201 Tucson, AZ 85718	Caucasian	M	10+ years	$5 million to $10 million	Non-DBE	541620
TRACE Consulting, LLC	1201 E. Jefferson Street,, Suite 3 Phoenix, AZ 85034	Asian-Pacific American	M	10+ years	$5 million to $10 million	DBE	541370
Wright Engineering Corporation	165 E. Chilton Dr. Chandler, AZ 85225	Caucasian	M	10+ years	$2 million to $5 million	Non-DBE	541330
Y2K Engineering, LLC.	1921 S Alma School Rd Ste 204 Mesa, AZ 85210	Asian-Pacific American	F	8-10 years	$2 million to $5 million	DBE	541330

Unregistered Bidders:

Firm Name	Email Address	Phone Number	Address	Ethnicity	Gender	Age of Firm	Annual Gross Receipts	DBE Status	NAICS Codes
Pearson Engineering Associates	jruthstrom@peaeng.com	602.264.0807	8825 N. 23rd Ave. Suite 11 Phoenix , AZ 85021	Caucasian	Male	Unknown	Unknown	Non-DBE	541330

ARIZONA DEPARTMENT OF TRANSPORTATION

MD 616E
205 S 17th Ave.
Phoenix, AZ 85007

KATIE HOBBS
GOVERNOR

JENNIFER TOTH
DIRECTOR

Date: March 18, 2025

TO: ALL INTERESTED PARTIES

SUBJECT: AMENDMENT NUMBER 01

REFERENCE: REQUEST FOR QUALIFICATIONS
CONTRACT NUMBER: 2025-011
CONTRACT DESCRIPTION: Project Delivery On-Call

The following revision is made to the referenced Request for Qualifications (RFQ) package:

Page 20, Section V, Part C, SOQ Non-Technical Evaluation Criteria, 1.c., is revised as follows:

c) Demonstrate that the firm has experienced project managers to manage the tasks expected to be conducted under the contract. Demonstrate that the Task Order Project Managers have the experience and a record of past performance on projects of similar type and size, and that they have been responsive to clients in the past.
(Maximum 25 pts.)

The following questions have been asked in reference to the above RFQ package:

Question No. 1: The RFP specifies that the consultant must provide resumes for up to five Task Order Project Managers. Can you confirm whether these five Task Order Project Managers are the only task managers that can be utilized for the duration of the contract, or if additional task managers may be assigned as needed based on project requirements?

Answer No. 1: After the selection of firms in Tier 1, Task Order Project Managers may be added at the time of the task order request(s) at the discretion of ADOT, as applicable.

Question No. 2: Please confirm we can name multiple individuals in the SOQ without identifying them as key personnel (for example, in a team member qualifications table to respond to Section 3(a), Team Capability.

Answer No. 2: Yes, the SOQ may also identify other key members of the team, including other personnel (classifications identified in Attachment A of the Scope of Work) determined by the Consultant. These are personnel from both the prime Consultant and Subconsultants who the Consultant wishes to highlight in the submittal that may provide special expertise or perform critical task(s) on the project.

Question No. 3: Are we limited on the number of Key Personnel (with 2-page Resumes) that we can present within our SOQ?

Answer No. 3: Yes, there is a limit: one Project Principal, one Project (Contract) Manager, and up to five Task Order Project Managers, totaling no more than seven Key Personnel resumes. Please refer to page 5 paragraph 1 of the RFQ for the requirements.

Question No. 4: On the Consultant Services Matrix form, should we identify prime and subconsultants for the Key Technical Discipline category rows on the matrix, for example, the Roadway Design row, Survey & Mapping row, and Bridge Design row?

Answer No. 4: Yes

Question No. 5: Can you clarify the due date for the prequalification application (as specified on page 12 of the RFQ)? It currently says March 10th.

Answer No. 5: March 18, 2025

Question No. 6: Page 18 of the RFQ states "the SOQ must include for each discipline a matrix documenting…" is the intent to have one table documenting experience for all disciplines, or 10 separate tables (1 per discipline)? Page 19 (section 2a) requests one table.

Answer No. 6: Yes, SOQ must include one table that includes all disciplines.

Question No. 7: Do we need to include a resume for every team member named in the proposal?

Answer No. 7: No, refer to page 5 paragraph 1 of the RFQ for the requirements. Only resumes requested are for Key Personnel.

Question No. 8: Can we list a team member by name without them being a key personnel? (page 5, paragraph 2)

Answer No. 8: Yes, do not include resumes for other members of the team. Resumes included for other members of the team will count towards the overall page limit, regardless of the location these documents are placed in the SOQ.

Question No. 9: On Page 3, the Compensation Type is listed as Lump Sum per Task Order, with a non-negotiable fixed fee of 10. On Pages 5 and 6, there are several references to the ADOT Audit Requirements related to Unit Rate Reviews and Indirect Cost Rate Reviews (audit, analysis, submittals, etc.) and Labor Classification Lists. Our question is if the Task Orders to be issued under this contract are Lump Sum, why are Indirect cost rates and Labor Classifications needing to be reviewed?

Answer No. 9: This is to establish contract rates that will be used at the time of the request for services.

Question No. 10: We are submitting the following questions, regarding the Project Development On-Call RFQ:
Please clarify that the only resume attachments allowed are for the Project Principal, Project (Contract) Manager, and up to five Task Order Project Managers.

Answer No. 10: Yes, that is correct.

Question No. 11: Are we able to recreate the Consultant Services Matrix, since some of the Technical Sub Areas may require the use of more than one subconsultant, and we may need to list multiple firm names within a single cell of the matrix?

Answer No. 11: No, use the Project Development On-Call Consultant Services Matrix.

Question No. 12: If we are allowed to recreate the Consultant Services Matrix, are we required to include the text explanation at the end of the matrix, on page 17?

Answer No. 12: Use the Project Development On-Call Consultant Services Matrix as supplied in the RFQ. Yes, you are required to include the text explanation at the end of the matrix.

Question No. 13: On page 12, under Item 11, Format Content, the total number of pages for the ADOT Project Development Consultant Services Matrix is "4". If we list multiple subconsultants within several cells of the matrix, and the table extends beyond 4 pages, is that allowable?

Answer No. 13: No, as this will put you over your page limit.

Question No. 14: On page 20, Item 4, Past Performance, indicates that a maximum of 5 points may be deducted from the total score, based on consultants' past performance on ADOT contracts. If a firm has not worked on ADOT contracts in the past, will this not apply?

Answer No. 14: This will not apply.

Question No. 15: On page 18, Item 1 a), is a table format necessary to show technical and institutional elements and associated tasks or can a different format be used?

Answer No. 15: Yes, present a table showing technical elements (e.g. memos, reports, plans), institutional elements (e.g. clearances, processes), and tasks associated with all key technical disciplines involved in project delivery that must be considered, completed, or addressed.

Question No. 16: Will questions be answered as they come in, prior to the March 24th deadline, or does ADOT plan on gathering all questions and then answering them all at once, after the 24th?

Answer No. 16: ADOT will address all questions as they come in and post the amendments accordingly.

Question No. 17: Could you please confirm whether the five additional key personnel to be listed by name and with resumes should be Task Order Project Managers, Key Discipline Leaders, or other specific roles? According to Section II (General Instructions) [6] and Section IV (SOQ Format Instructions) [7], we are required to include resumes for up to five Task Order Project Managers.

Answer No. 17: Please refer to Answer No. 3 above.

Question No. 18: Section V (SOQ Format and Evaluation Criteria) mentions Key Discipline Leaders as part of the evaluation criteria [20]. Can you confirm if these are the only additional key personnel we need to provide resumes for, or if there are other roles we should consider?

Answer No. 18: Key Discipline Leaders do not required resumes. The only resumes required are for Key Personnel which are listed in the above Answer No. 3.

Question No. 19: Do we need to pick only five of the key disciplines to have leads if the five key personnel are Key Discipline Leaders and not solely Task Order Managers?

Answer No. 19: There are no limit of key disciplines, however there are only up to five Key Personnel as Task Order Project Managers. Please refer to page 18, under SOQ Technical Evaluation.

Question No. 20: What is the definition of "Right of Way Cost Determination"? Does this include appraisal services or not?

Answer No. 20: Right of Way Cost determination includes the estimated cost to acquire a new right of way or the estimated cost of temporary construction easement needed for a project. This is intended to get a right of way estimate for determining total project cost. Reference Right of Way information in sections 471 and 472 of the Dictionary of Standardized Work Tasks or as noted in the task order scope of work. Yes, this includes appraisal services.

Question No. 21: We are having issues with the functionality of the CIP form. When we enter a subconsultant's name in the second half of the form, and select the appropriate "Type of Work", the form automatically fills in every cell below it with the same "Type of Work". The form will not allow us to enter a different "Type of Work" for each subconsultant. The same issue happens with the DBE drop-down. If we choose "Yes", all cells are filled in with "Yes". If we try changing it to "No", all cells are changed to "No". Is ADOT able to correct this form and issue a new one so that we are able to complete it accurately for our submittal?

Answer No. 21: ADOT ITG is currently working on these issues.

April R Conti-Farris
April R Conti-Farris
Contract Specialist
Engineering Consultants Section

AN OFFEROR MUST ACKNOWLEDGE RECEIPT OF THIS AMENDMENT BY SIGNING BELOW AND INCLUDING ALL PAGES OF THIS AMENDMENT IN THE SOQ SUBMITTAL. FAILURE TO DO SO SHALL RESULT IN REJECTION OF THE PROPOSAL.

Horrocks LLC	
CONSULTANT NAME	SIGNATURE

* This amendment is not included in the total page count in the Statement of Qualification submittal.

ARIZONA DEPARTMENT OF TRANSPORTATION

MD 616E
205 S 17th Ave.
Phoenix, AZ 85007

KATIE HOBBS
GOVERNOR

JENNIFER TOTH
DIRECTOR

Date: March 26, 2025

TO: ALL INTERESTED PARTIES

SUBJECT: AMENDMENT NUMBER 02

REFERENCE: REQUEST FOR QUALIFICATIONS
CONTRACT NUMBER: 2025-011
CONTRACT DESCRIPTION: Project Development On-Call

The following revision is made to the referenced Request for Qualifications (RFQ) package:

Page 18 (20/58) Section V, Part C., SOQ Technical Evaluations, Paragraph 3, is revised as follows:

The SOQ must clearly document the team's project understanding and approach, relevant experience and qualifications, and firm capability applicable to each key discipline noted above and consistent with the Project Development On-Call-Consultant Services Matrix and contract objectives. SOQs must include for each discipline a table documenting (at a minimum) recent relevant experience, including project name, client name, consultant Project Manager and Key Discipline Leader name, prime Consultant, Subconsultant, construction cost estimate, brief description, and project location. The SOQ must identify the Team Members who will be in direct charge of each technical discipline of work performed as part of this contract.

The following questions have been asked in reference to the above Request for Qualifications package:

Question No. 1: On page 20/58 of the RFQ package, the SOQ Technical Evaluation states, "SOQs must include for each discipline a matrix documenting (at a minimum) recent relevant experience, including project name, client name, consultant Project Manager and Key Discipline Leader name, prime Consultant, Subconsultant, construction cost estimate, brief description, and project location. The SOQ must identify the Team Members who will be in direct charge of each technical discipline of work performed as part of this contract."

However, on page 21/58 the requirement changes per 2. a)stating, "The table should include a brief scope, the role the prime Consultant or Subconsultant performed, and indicate whether the delivery schedule was met for each project presented." Can you please clarify what is required to be included in the table?

Answer No. 1: On page 20/58 of the RFQ package under PART C. EVALUATION CRITERIA, SOQ Technical Evaluation, this part provides an overall/general description of the Technical Evaluation Criteria which should be presented in a table.
On page 20/58, 1a, page 21/58 1b, 2a and 3a, details and separate the distribution of the weighted score for each of the SOQ Technical Evaluation Criteria: Understanding and Approach, Team Experience and Qualifications and Team Capability. Required items to include in this table, prime Consultant's and Subconsultant's previous project experience. Identify relevant project experience associated with all the Key Technical Disciplines that are indicated as prime Consultant and/or Subconsultant in-house

resources in the "Consultant Services Matrix". The table should include a brief scope, the role the prime Consultant or Subconsultant performed, and indicate whether the delivery schedule was met for each project presented.

Question No. 2: Would ADOT be willing to extend the current due date of April 1, 2025, by an additional 7-10 business days?

Answer No. 2: No.

Question No. 3: Amendment No. 1 indicated that ADOT ITG was working to fix the issues on the CIP form. Is there an anticipated timeframe for this to be completed so that we have sufficient time to complete the form for our submittal?

Answer No. 3: CIP Race Neutral Contract Form has been corrected on the website. Please use this link https://azdot.gov/sites/default/files/2025-03/Consultant-Information-Pages-Race-Conscious-contract.pdf. In the event anyone is still experiencing issues, please reach out to ECSSOQ@azdot.gov

Question No. 4: If our Contract Manager will also be proposed as a Task Manager, would their resume count towards one of our five task manager resumes or are we permitted to list and provide resumes for five additional Task Managers?

Answer No. 4: 2 resumes, plus up to 5 resumes, total not to exceed 7 resumes. The prime Consultant shall provide the resume for the Project Principal, Project (Contract) Manager, and up to five Task Order Project Managers as identified in their SOQ. Each resume shall be limited to two pages each, and shall demonstrate the individual's experience related to services outlined in this RFQ.

Question No. 5: Since we are not permitted to recreate the Project Development On-Call Consultant Services Matrix, and will need to abbreviate our subconsultants' names in order to fit them all into a single cell on the matrix, are we able to include a legend on one of the matrix pages or within the submittal, listing these abbreviations?

Answer No. 5: Yes and all submittals shall follow SECTION IV – SOQ FORMAT INSTRUCTIONS.

April R Conti-Farris
April R Conti-Farris
Contract Specialist
Engineering Consultants Section

AN OFFEROR MUST ACKNOWLEDGE RECEIPT OF THIS AMENDMENT BY SIGNING BELOW AND INCLUDING ALL PAGES OF THIS AMENDMENT IN THE SOQ SUBMITTAL. FAILURE TO DO SO SHALL RESULT IN REJECTION OF THE PROPOSAL.

Horrocks LLC	
CONSULTANT NAME	SIGNATURE

* This amendment is not included in the total page count in the Statement of Qualification submittal.

CONSULTANT INFORMATION PAGES (CIP)

CONTRACT NO.: 2025-011

CONTACT PERSON: Erin Kline, PE

E-MAIL ADDRESS: ErinK@Horrocks.com

TITLE: Principal

CONSULTANT FIRM: Horrocks

ADDRESS: 2600 North Central Avenue, Suite 550

CITY, STATE, ZIP: Phoenix, AZ 85004

TELEPHONE: 602.454.1800

FAX NUMBER: 801.763.5101

UNIQUE ENTITY ID# (FROM SAM WEBSITE): YCHANXNZG766

ADOT CERTIFIED DBE FIRM? (YES/NO) No

SUBCONSULTANT(S):	TYPE OF WORK	ADOT CERTIFIED DBE FIRM (YES/NO)
AeroTech Mapping, Inc.	Survey & MAPPING	Yes
Corral Design Group, Inc.	Landscape Architecture	Yes
Ethos Engineering, LLC	Geotechnical and Materials	Yes
J2 Engineering & Environmental Design, LLC (J2 Design)	Landscape Architecture/Drainage	Yes
Pinyon Environmental, Inc.	Environmental Services	No
Pearson Engineering Associates	Mechanical and Electrical Engineering	No
Riley Engineering, Inc.	Drainage Engineering	Yes
Tierra Right of Way Services, Ltd.	Environmental Services and Right of Way	No
TRACE Consulting, LLC	Survey & Mapping	Yes
Y2K Engineering, LLC	Traffic Engineering	Yes

NOTE: This page is not evaluated by the Selection Panel but is used by Engineering Consultants Section for administrative purposes.

SUBCONSULTANT(S) TABLE:

SUBCONSULTANT FIRM NAME:	AeroTech Mapping, Inc.
CONTACT PERSON:	Alicia Mendoza
E-MAIL ADDRESS:	aliciamendoza@atmlv.com
TITLE:	Business Development Manager
ADDRESS:	8433 N. Black Canyon Hwy, Suite 120
CITY, STATE ZIP:	Phoenix, AZ 85021
TELEPHONE:	602.245.5088
FAX NUMBER:	N/A
UNIQUE ENTITY ID #:	J34PH4CCSMJ4

SUBCONSULTANT FIRM NAME:	Corral Design Group, Inc.
CONTACT PERSON:	Edward C. Corral
E-MAIL ADDRESS:	ecorral@corraldesigngroup.com
TITLE:	President
ADDRESS:	4632 S. 36th Street
CITY, STATE ZIP:	Phoenix, AZ 85040
TELEPHONE:	602.222.9822
FAX NUMBER:	602.222.9079
UNIQUE ENTITY ID #:	D2PBVZ6LJMJ9

NOTE: Each Subconsultant listed in the SOQ must be included in the Subconsultant Table of the CIP. Add additional Subconsultant Table pages as necessary. The CIP is not evaluated by the Selection Panel but is used by Engineering Consultants Section for administrative purposes.

*Please confirm that each Subconsultant listed is in the eCMS database. If a Subconsultant's name is not in the eCMS database, contact ECS at E2@azdot.gov and allow two (2) business days to have the Subconsultant added to eCMS. Click Here check the eCMS database or go to ECS Website.

SUBCONSULTANT(S) TABLE:

SUBCONSULTANT FIRM NAME:	Ethos Engineering, LLC
CONTACT PERSON:	Keith Dahlen
E-MAIL ADDRESS:	kdahlen@ethosengineers.com
TITLE:	Principal
ADDRESS:	9180 South Kyrene Road, #104
CITY, STATE ZIP:	Tempe, AZ 85283
TELEPHONE:	602.573.0000
FAX NUMBER:	N/A
UNIQUE ENTITY ID #:	QQGVC86EHVA5

SUBCONSULTANT FIRM NAME:	J2 Engineering & Environmental Design, LLC (J2 Design)
CONTACT PERSON:	Jeffrey Velasquez
E-MAIL ADDRESS:	jvelasquez@j2design.us
TITLE:	Principal
ADDRESS:	4649 E. Cotton Gin Loop, Suite B2
CITY, STATE ZIP:	Phoenix, AZ 85040
TELEPHONE:	602.438.2221
FAX NUMBER:	602.438.2225
UNIQUE ENTITY ID #:	FPF9FEV1HKC5

NOTE: Each Subconsultant listed in the SOQ must be included in the Subconsultant Table of the CIP. Add additional Subconsultant Table pages as necessary. The CIP is not evaluated by the Selection Panel but is used by Engineering Consultants Section for administrative purposes.

*Please confirm that each Subconsultant listed is in the eCMS database. If a Subconsultant's name is not in the eCMS database, contact ECS at E2@azdot.gov and allow two (2) business days to have the Subconsultant added to eCMS. Click Here check the eCMS database or go to ECS Website.

SUBCONSULTANT(S) TABLE:

SUBCONSULTANT FIRM NAME:	Pearson Engineering Associates
CONTACT PERSON:	Jeff Ruthstrom, PE
E-MAIL ADDRESS:	jruthstrom@peaeng.com
TITLE:	Executive Vice President
ADDRESS:	8825 N. 23rd Ave. Suite 11
CITY, STATE ZIP:	Phoenix, AZ 85021
TELEPHONE:	602.264.0807
FAX NUMBER:	602.274.7542
UNIQUE ENTITY ID #:	GDUWBH9UHZ46

SUBCONSULTANT FIRM NAME:	Pinyon Environmental, Inc.
CONTACT PERSON:	Ashton Koons
E-MAIL ADDRESS:	koons@pinyon-env.com
TITLE:	Arizona Strategic Lead
ADDRESS:	1783 W. University Drive, Suite 137
CITY, STATE ZIP:	Tempe, Arizona 85281
TELEPHONE:	602.274.0533
FAX NUMBER:	303.980.0089
UNIQUE ENTITY ID #:	TSYVJJBLEML8

NOTE: Each Subconsultant listed in the SOQ must be included in the Subconsultant Table of the CIP. Add additional Subconsultant Table pages as necessary. The CIP is not evaluated by the Selection Panel but is used by Engineering Consultants Section for administrative purposes.

*Please confirm that each Subconsultant listed is in the eCMS database. If a Subconsultant's name is not in the eCMS database, contact ECS at E2@azdot.gov and allow two (2) business days to have the Subconsultant added to eCMS. Click Here check the eCMS database or go to ECS Website.

SUBCONSULTANT(S) TABLE:

SUBCONSULTANT FIRM NAME:	Riley Engineering, LLC
CONTACT PERSON:	Ronson Chee
E-MAIL ADDRESS:	ronson@riley-eng.com
TITLE:	Founder & Principal Engineer
ADDRESS:	44 E Broadway Blvd, STE 250
CITY, STATE ZIP:	Tucson, AZ 85701
TELEPHONE:	520.505.4651
FAX NUMBER:	N/A
UNIQUE ENTITY ID #:	G35SJ1JMQFX5

SUBCONSULTANT FIRM NAME:	Tierra Right of Way Services, Ltd.
CONTACT PERSON:	Leslie Findlay
E-MAIL ADDRESS:	lfindlay@tierra-row.com
TITLE:	Vice President
ADDRESS:	1575 East River Road, Suite 201
CITY, STATE ZIP:	Tucson, Arizona 85718
TELEPHONE:	800-887-0847
FAX NUMBER:	520-323-3326
UNIQUE ENTITY ID #:	HXM9CGRXH958

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SUBCONSULTANT(S) TABLE:

SUBCONSULTANT FIRM NAME:	TRACE Consulting, LLC
CONTACT PERSON:	Chintan Jhaveri
E-MAIL ADDRESS:	cjhaveri@traceconsulting.us
TITLE:	Principal
ADDRESS:	1201 E Jefferson St, Suite 3
CITY, STATE ZIP:	Phoenix AZ 85034
TELEPHONE:	602.680.8264
FAX NUMBER:	N/A
UNIQUE ENTITY ID #:	XM69KK5N31X5

SUBCONSULTANT FIRM NAME:	Y2K Engineering, LLC
CONTACT PERSON:	Yung Koprowski
E-MAIL ADDRESS:	ykoprowski@y2keng.com
TITLE:	Principal
ADDRESS:	1921 S Alma School Rd, Suite 204
CITY, STATE ZIP:	Mesa, AZ 85210
TELEPHONE:	480.696.1701
FAX NUMBER:	N/A
UNIQUE ENTITY ID #:	KGJLCWX9JU56

NOTE: Each Subconsultant listed in the SOQ must be included in the Subconsultant Table of the CIP. Add additional Subconsultant Table pages as necessary. The CIP is not evaluated by the Selection Panel but is used by Engineering Consultants Section for administrative purposes.

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DBE GOAL ASSURANCE/DECLARATION

This Contract is Race Conscious. The DBE goal percentage is set at 11.96 %

By signing below, and in order to submit an SOQ proposal and be considered to be awarded for this contract, in addition to all other pre-award requirement, the consultant/Proposer certifies that they will meet the established DBE goal or will make good faith efforts to meet the goal for the contract and that arrangements with certified DBEs have been made prior to SOQ and/or Cost Proposal submission. The proposer will meet the established DBE goal or will make good faith efforts to meet the goal on each Task Order assignment associated with the contract and that arrangements with certified DBEs have been made prior to SOQ and/or Task Order proposal submission.

Signature	April 1, 2025 Date
Erin Kline, PE Printed Name	Principal Title

SOQ SUBMITTAL CHECKLIST

Place a check mark on the left side of the table indicating compliance with the following items. Only include the Supplemental Services Disclosure Form listed below if the form is requested in the Request for Qualifications:

☑	SOQ is within the page limit indicated in the RFQ
☑	SOQ is combined into one PDF Document no larger than 15 MB
☑	All Amendments are Included and Signed
☑	Introduction Letter (Including all required elements/statements)
☑	SOQ Proposal Formatted According to Requirements Listed in RFQ Section IV, #11.
☑	Correct SOQ Certification List (15 pt **OR** 9 pt) Signed and Dated by a Principal or Officer of the Firm
☑	Completed Consultant Information Pages (CIP)(Including listing DBE firms, if applicable)
☑	DBE Goal Assurance/Goal Declaration completed (located at the top of this page)
☑	All Subconsultants & Proposed Work Type listed on CIP (Including indicating DBE firms)
☑	Any Additional Required Documents (Specific to RFQ such as Resumes for all Key Personnel named)
☑	Commenting or User Rights Feature Enabled in SOQ PDF Document
☐	Supplemental Services Disclosure Form (Required for Supplemental Services Type Contracts ONLY)

NOTE: This page is not evaluated by the Selection Panel but is used by Engineering Consultants Section for administrative purposes.