

Interstate 10, SR 85 to Citrus Road Widening

Final Design Services | Contract Number: 2024-005

Arizona Department of Transportation | Engineering Consultants Section
205 South 17th Avenue, Mail Drop 616E
Phoenix, Arizona 85007

Dear Selection Panel Members:

Widening I-10 from SR 85 to Citrus Road will not only increase operations and safety on a congested interstate, but also provide Buckeye with the capacity to accommodate growth in one of the Valley's fastest developing communities and logistical hubs. This project is a result of a successful partnership between ADOT, MAG, and the City of Buckeye to invest in the West Valley's future and WSP USA Inc. (WSP) is very interested in supporting its delivery with exceptional design services. Our team has already developed PBPD options, vetted ideas with key stakeholders, and **identified over \$25 million in potential project savings**.

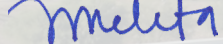
No project is easy, but with adequate right-of-way (ROW) along the corridor, an executed intergovernmental agreement (IGA) between ADOT and Buckeye, and prior planning documents, designing this project should be straightforward. An experienced project manager (PM) will be able to balance the needs and interests of the agencies, complete the widening design (including the Citrus Road bridge), optimize maintenance of traffic (MOT) during construction, and complete the required federal air quality process to prevent this project from taking longer, costing more, and becoming more challenging than it should be. **This is why Greg Fly will lead our team.** With 20 years of experience designing freeways throughout Arizona, he recently completed a very similar project for ADOT, the widening of SR 101L from Princess Drive to Shea Boulevard (F0123). As part of that project, Greg worked with ADOT on the state's first fully approved air quality study under the new EPA practices, which provides EPA-preferred models, as well as guidance for their use in predicting ambient concentrations of air pollutants. His experience over the last two decades and recently on SR 101L will keep this project running smoothly and without surprises.

Rounding out our team, we've invited **Stanley Consultants (SCI)**, led by **Gary Melita**, to join us on this project. WSP has successfully teamed with Stanley on multiple similar freeway widening projects, including SR 101L, Princess Drive to Shea Boulevard; SR 101L, 75th Avenue to I-17; and SR 202L, SR 101L to Broadway Road, as well as the design for the SR 202L South Mountain Freeway. In addition to our established working relationship and successful partnership on ADOT projects, Gary provides supplemental knowledge of the air quality process, having just completed this work on SR 101L, 75th Avenue to I-17. Gary will lead the design for the inside widening (west segment) while **Jessica Fly** leads the design for outside widening (east segment).

WSP is interested in being selected for the I-10, SR 85 to Citrus Road Widening project. We confirm that our key personnel are committed to meeting or exceeding all quality and schedule expectations. While WSP is not a certified DBE and this project is designated Race Neutral, we are dedicated to assisting ADOT in reaching its overall goal through significant and meaningful inclusion of DBE subconsultant partners. If you have any questions or require additional information related to our proposal, please contact me at 480-921-6875 or joy.melita@wsp.com.

Sincerely,

WSP USA Inc.



Joy Melita, AZ PE #31131

Senior Vice President, Project Principal
Authorized Representative

Interstate 10, SR 85 to Citrus Road Widening • ADOT Contract #2024-005



Greg Fly, AZ PE #49430

Senior Vice President, Project (Contract) Manager

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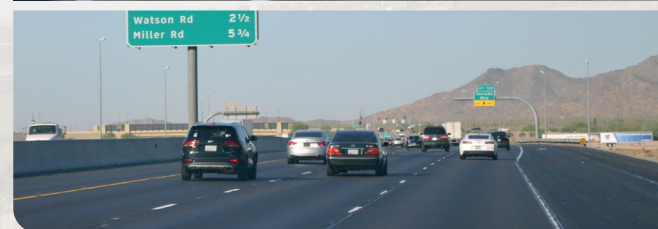
The Right Team. Experienced experts that have done this before.

An Experienced Project Manager. **Greg Fly** has extensive experience with complex urban freeway widenings in the Central District and brings **lessons learned** from each of those projects. He is a partner that ADOT, MAG, and Buckeye can count on to meet project goals while ensuring that design, MOT, and integration with adjacent projects are all successfully coordinated.

Resources Ready to Begin. WSP's only MAG freeway prime contract, SR 101L, Princess Drive to Shea Boulevard, is complete. Stanley's only MAG freeway prime contract, SR 101L, 75th Avenue to I-17, is in Stage V. Our team is **available**, focused, and committed to this project. We will dedicate our best and most experienced design team to widening I-10.

A History of Working Together. WSP and Stanley have partnered on multiple MAG freeway projects in the last two decades, including five freeway widening projects. We work well together in a design environment generating value engineering (VE) and performance-based practical design (PBPD) concepts. Our ability to effectively collaborate will provide ADOT with innovation, efficiency, and **cost savings**.

Freeway Widening Experts. WSP and Stanley have completed more than 350 miles of GP/HOV lane additions to the MAG system. Our expertise results in quality construction documents, on-time project clearances, and cost-competitive bid advertisements by incorporating lessons learned and **innovative design**. This project delivery experience will save ADOT time and money, as well as avoiding frustration and reputation risk with stakeholders and the public.



Engineering Consultants Section SOQ Proposal Certifications Form

Contract #: 2024-005

Consultant Name: WSP USA Inc.

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: Joy Melita, PE

Title: Senior Vice President, Project Principal

Signature: 

Date: November 8, 2023

Revised 2/11/2022

**ARIZONA DEPARTMENT OF TRANSPORTATION
ENGINEERING CONSULTANTS SECTION
PARTICIPATION IN BOYCOTT OF ISRAEL - CONSULTANT CERTIFICATION FORM
ADOT ECS Contract No.: 2024-005**

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.

WSP USA Inc.				
Company Name			Signature of Person Authorized to Sign	
1230 W. Washington Street, Suite 405			Joy Melita, PE	
Address			Printed Name	
Tempe	Arizona	85288	Senior Vice President, Project Principal	November 8, 2023
City	State	Zip	Title	Date

Participation in Boycott of Israel – Consultant Certification
Form Revised - 4/28/2020

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:

<input checked="" type="checkbox"/>	The Company submitting this Offer does not use, and agrees not to use during the term of the contract, any of the following: <ul style="list-style-type: none"> • 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.
<input type="checkbox"/>	The Company submitting this Offer does participate in use of Forced Uyghurs Labor as described in A.R.S. § 35-394.
<input type="checkbox"/>	<p>Exempt Consultant.</p> Indicate which of the following statements applies to this Consultant (may be more than one): <ul style="list-style-type: none"> <input type="checkbox"/> Consultant is a sole proprietorship; <input type="checkbox"/> Consultant has fewer than ten (10) employees; and/or <input type="checkbox"/> Consultant is a non-profit organization.

WSP USA Inc.
Company Name

1230 W. Washington Street, Suite 405
Address

Tempe	Arizona	85288
City	State	Zip


Signature of Person Authorized to Sign

Joy Melita, PE
Printed Name

Senior Vice President, Project Principal
Title

West Valley growth continues to explode and ADOT continues I-10 upgrades to meet the heavy demands on this essential transportation corridor. The next mainline improvement is this project, adding a fourth lane between SR 85 and Citrus Road to increase capacity, operations, and public safety. Arizona legislators appropriated \$113M in funding (HB 2858 and SB 1722), plus required contributions from MAG (\$10M) and Buckeye (\$3M), bringing the total project funding to \$126M. To better define the work associated with the fourth lane widening, ADOT prepared a scoping letter (SL) in June 2023 and estimated the project cost at \$139.9M.

The WSP team has extensive experience designing MAG freeway widenings, recently completing a similar project on SR 101L. That same team is available to focus on this project and support ADOT with a fast-tracked delivery. An overview of our project and issue understanding—identified through ADOT and stakeholder discussions, project research, corridor experience, and similar project lessons learned—is shown in Figure 1. Project details include:

West Segment. Inside widening between SR 85 and Verrado Way. Construction of the third lane within the same limits completed earlier this year.

East Segment. Outside widening between Verrado Way and Citrus Road.

Jackrabbit Trail. A study is underway for a newly configured traffic interchange (TI) and crossroad. Final design of these improvements will proceed under a separate project. WSP will perform the VE Study for this project in Spring 2024.

Tasks & Technical/Institutional Elements

Widening I-10 is straightforward in design complexity and our team will execute the ADOT development process we have successfully completed on our past freeway projects. For ADOT, MAG, and Buckeye, this means a reliable partner who meets all schedule milestones, proactively resolves issues, **brings solutions not questions**, and collaborates responsibly with stakeholders. A snapshot of the tasks and technical/institutional elements necessary for this project is provided in Table 1. Key aspects that will play into this project's on-time delivery relate to:

Project Funding. The delta between legislative funding and SL project cost is \$13.9M. **Our team has identified \$5.7M in VE savings and \$19.6M in PBPD options** (described in this proposal). We will optimize design, vet PBPD options, and confirm project cost with Stage II to close the funding gap.

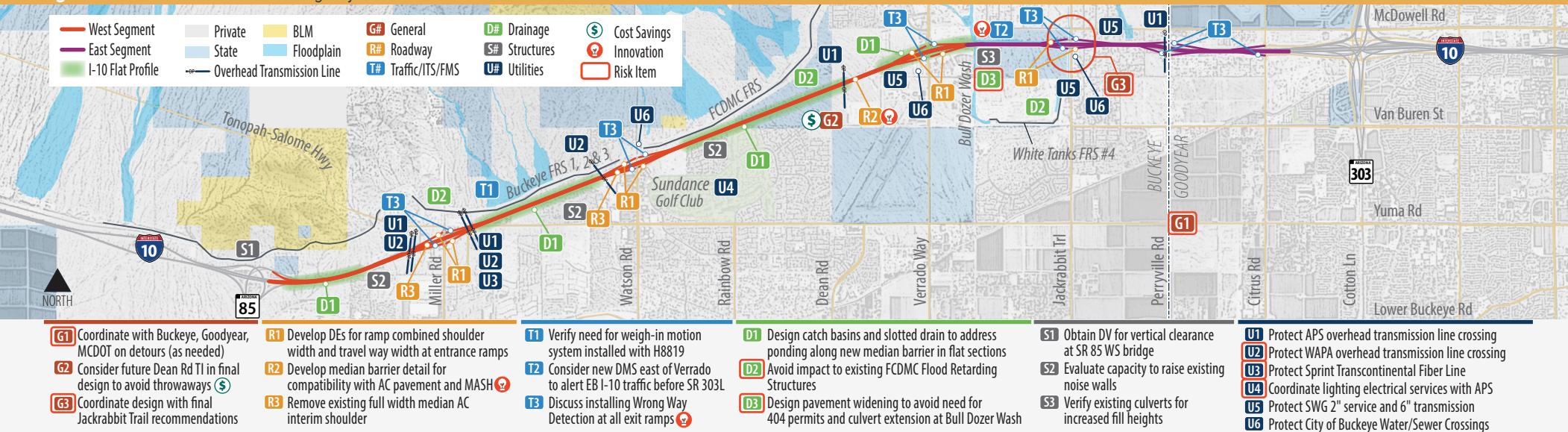
Limited Scoping. Due to the expedited SL schedule to advance this project, several ADOT Groups and approving agencies were not involved in its development. Our PM, **Greg Fly, is a skilled communicator and consensus builder, providing decision-makers with timely information.** At NTP, he will work with ADOT PM Patrick O'Leske to bring forward all considerations and finalize the scope.

City of Buckeye. Conversations with the City of Buckeye indicate concern at the project cost, potential desire for GP vs. HOV lanes due to traffic volumes, and consideration for a striping concept east of Verrado Way. As a funding partner, it is important to address Buckeye's input with scope finalization.

Table 1. Tasks and Technical/Institutional Elements

Agency/Public Involvement	<ul style="list-style-type: none"> ➤ Agency Coordination ➤ Scope Confirmation with ADOT/MAG/Buckeye/Goodyear ➤ Buckeye IGAs (<i>complete unless scope changes</i>) ➤ Confirmation of Required Permits ➤ Public Meeting and Visualizations ➤ Council Updates (<i>we recommend planning for these based on SR 101L GPL widening projects experience of public/council interest and MOT importance</i>)
Design Development	<ul style="list-style-type: none"> ➤ VE Study ➤ Stage II, III, IV, V Submittals ➤ Performance-Based Practical Design (PBPD) ➤ Design Exceptions (DE)/Design Variances (DV) ➤ Workfront Uploads and Schedule Updates
Cost Estimating	<ul style="list-style-type: none"> ➤ Scope Strategies to Address Funding Shortfall ➤ Quantity Takeoffs and Unit Price Tracking ➤ Milestone Constructability Reviews <p><i>WSP team landed SR 101L Engineers Estimate 8.5% above low bid at 10/13/23 opening (and in middle of bid range)</i></p>
Clearances	<ul style="list-style-type: none"> ➤ Environmental CE and Technical Reports ➤ Utility Coordination with Conflict ID and Relocations ➤ ROW/TCE Delineation (<i>none anticipated</i>) ➤ Clearance Documents

Figure 1. WSP Solutions to I-10 Widening Project Issues



Special Issues & Tasks

Approach to MOT

ISSUE *Constructing this project while maintaining a reliable roadway surface and adequate traffic capacity is of utmost importance on this heavily traveled interstate.*

We will implement lessons learned from our previous ADOT freeway widening projects and strategies supported by ADOT Central District, including:

- Lump Sum Traffic Control
- Non-Consecutive Ramp Full Closures
- Ramp Full Closures Limited to 60 days
- Liquidated Damages
- Smart Work Zones
- Modified Closure Times to Address Peak Traffic (Palo Verde and Correctional Facility Shift Changes)

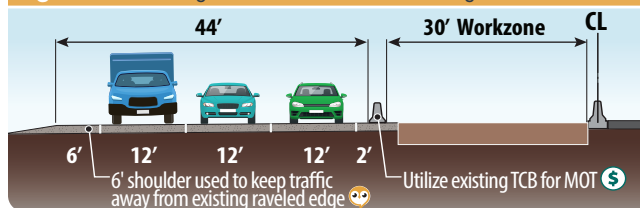
West Segment

Our approach maintains three traffic lanes in each direction.

To avoid a large change order during construction (like the previous project), we will overlay the existing I-10 outside shoulder pavement to withstand heavy truck traffic. Traffic will then be shifted onto the outside shoulder to develop a median work zone (Figure 2). Once traffic is shifted and separated by temporary concrete barrier (TCB), the only interface between I-10 traffic and construction traffic will be for ingress/egress into the TCB-protected work zone. This concept aligns with Central District preferences. We also discussed a traffic split concept with ADOT, that would avoid placing traffic on the I-10 shoulders; however, ADOT concerns with driver unfamiliarity, additional crash potential, and incident response challenges dismissed that concept.

Another concept we discussed with Central District and Buckeye that received positive feedback was closing the EB I-10 Lane #1 (inside) during median widening activities (since only two EB lanes approach SR 85). This concept would avoid the need to improve the existing outside shoulder, restripe, shift EB mainline traffic, and temporarily modify ramp gore striping. It would also provide a 12-foot outside shoulder for emergency access and distressed vehicles. Because this approach deviates from the desired three lanes, we will conduct a work session with ADOT and stakeholders to further explore its applicability.

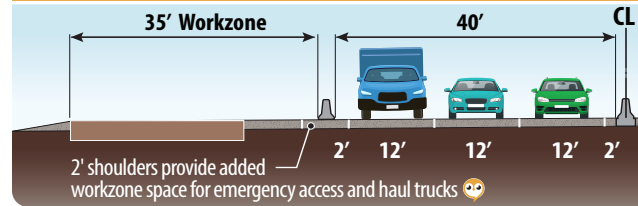
Figure 2. West Segment MOT for Inside Widening G1



East Segment

Our approach shifts mainline traffic onto the existing 16-foot-wide median PCCP shoulder (Figure 3). Entrance and exit ramps at Verrado Way (east leg only) and Jackrabbit Trail will likely be closed for 60 days, non-concurrently, to reconstruct gore and ramp pavement. The Citrus Road bridge widening will not require long-term crossroad lane restrictions. Night and weekend closures are expected to remove barriers, erect girders, and place concrete decks.

Figure 3. East Segment MOT for Outside Widening G1



LESSONS LEARNED

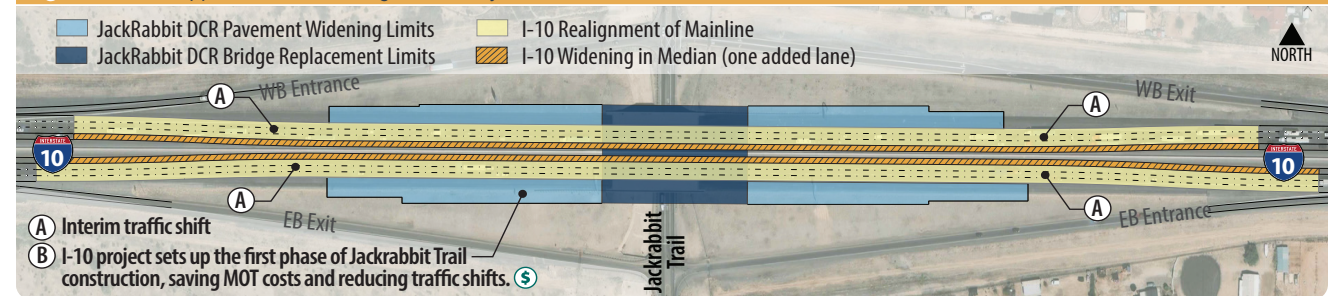
Based on our experience from I-10 Broadway Curve and I-10 improvements related to South Mountain Freeway, providing pullouts at close intervals is important. Disabled vehicles can be towed a short distance by DPS to clear the roadway and reduce the likelihood of secondary crashes. We will locate pullouts in the plans and specifications to reduce traffic delays and provide refuge for disabled vehicles.

Jackrabbit Trail TI Project Interface

ISSUE *With the Final Jackrabbit Trail TI DCR not completing until spring 2024 and construction funding not currently programmed, the timing with this I-10 widening project could present challenges and result in throwaway improvements.*

To address the unfinalized DCR recommendations at Jackrabbit Trail, our team proposes reducing the existing inside median shoulder from 16 to 4 feet and stripe the additional HOV lane to the inside (Figure 4). A DE would be required for the 4-foot median shoulder width, but this DE would only be needed temporarily until the Jackrabbit Trail TI improvements are constructed.

Figure 4. WSP Approach to Eliminating Throwaway Potential at Jackrabbit Trail G3



This approach will eliminate removal of newly constructed features, allow construction to take place independently, minimize design changes, and provide schedule flexibility. Considerations include:

- ▲ Reduced costs to I-10, SR 85 to Citrus Road project
- ▲ Design is independent of (but compatible with) Jackrabbit Trail Final DCR
- ▲ Inside shoulder reduction is needed regardless for Jackrabbit Trail TI Phase 1 construction
- ▲ Jackrabbit Trail construction can occur before, after, or during construction of this project with coordination for traffic control
- ▼ Interim median shoulder width DE until completion of Jackrabbit Trail TI
- ▼ HOV traffic is placed on existing PCCP shoulder that wasn't constructed with dowel baskets (care will be taken to avoid placing joints in wheel paths)

VALUE ADD

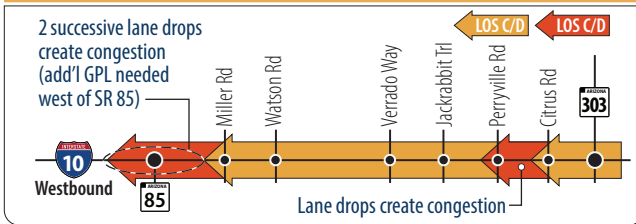
With WSP selected to perform the upcoming VE, we have already developed a thorough understanding of the Jackrabbit Trail TI improvements and will be able to seamlessly tie the project improvements together with value and public image in mind.

I-10 Capacity and Merging

ISSUE *As scoped, these project improvements do not meet demand for the volume projections from MAG's 2050 Travel Demand Model, where AADTs range from 145,000 to 245,000. WB I-10 will fail prior to design year due to the lane drops from the SR 303L TI and approaching the SR 85 TI.*

We modeled the SL configuration for WB I-10 using VISSIM and performed a sensitivity analysis using projected volumes in 5-year increments assuming linear growth from 2030 to 2050 to identify when breakdowns would occur. This project could reasonably be expected to handle the volume demand at LOS D or better through 2040. By 2045, proposed lane drops at SR 85, Perryville Road, and Citrus Road create congestion (LOS F) (Figure 5, Page 7). By 2050, this failure would spread and result in failing operations for most of the corridor. **We will optimize the lane drop locations to extend this project's service life.**

Figure 5. 2045 WB Operations with Lane Drops causing LOS F



To advance SL recommendations, we evaluated dual-lane exits and recommend their use at the following locations to help manage high volumes and/or short weave distances to adjacent TIs. These locations can accommodate dual-lane exits with minimal additional improvements and cost. We will confirm this approach with ADOT and stakeholders.

- WB to Perryville
- EB to Verrado
- EB to Citrus
- WB to Verrado
- EB to Jackrabbit

The SL included an additional (fifth) lane from SR 303L to Perryville Road that is not required until 2045 but is needed in the ultimate configuration. This fifth lane was likely added to the scope because the RDG recommends that an added lane from a system interchange needs to extend a mile before dropping. Today's configuration does not meet this criteria, but the SL doesn't quite meet it either. To meet RDG, the fifth lane should extend west of the Perryville Road bridge, requiring another bridge widening. **We see two practical options:**

- Extend the fifth lane west of Perryville Road, requiring the additional bridge widening (12 feet). The Citrus Road bridge would be widened by 24 feet (as shown in the SL).
- Defer the fifth lane to a future I-10 widening. Our sensitivity analysis concluded that I-10 operates acceptably without the fifth lane until 2040. By 2045 both I-10 and SR 303L ramps would need to be addressed. With this option, Citrus Road bridge widening would remain at 24 feet (overbuilding for the fifth lane) but 2,330 SY of approaching pavement could be eliminated (Perryville Road bridge widening not needed). **\$360k**

Air Quality Conformity

ISSUE EPA/FHWA have recently changed interpretation of federal air quality (AQ) conformity requirements, resulting in multiple reviews on ADOT freeway widening projects and delays to environmental clearance.

Bringing the experience of team members who have collaborated on several widening projects and the prime firm that prepared the detailed AQ model for the SR 101L Princess to Shea project, we have a deep understanding of how to address EPA/FHWA changes without schedule impact. Background PM10 in the Buckeye area already exceeds federal standards. The AQ analysis must demonstrate that

PM10 concentrations with the project are less than or equal to PM10 concentrations without the project. WSP's approach to obtaining approval on the AQ conformity model for this project is:

- Obtain consensus from all reviewing agencies and agree upon the basis of the analysis within 30 days of project kickoff, including:
 - Traffic data design year
 - Locations that need detailed modeling
 - Ambient PM10 clarification and agreement on the days to be excluded from the analysis
 - Review durations and model input parameters
- Meet with FHWA/EPA prior to completing AQ questionnaires. Discuss project scope, AQ analysis requirements and expectations, and schedule (submittal dates, review durations and EPA approval, and final conformity determination).
- Complete AQ questionnaires (coincident with the Initial Traffic Report) and hold a meeting with FHWA/EPA to discuss prior to distributing for interagency review. Confirm and discuss if CO Hot Spot and PM 10 modeling analysis is required.
- After AQ questionnaire submittal and review, discuss CO Hot Spot and PM 10 modeling locations and process/procedure details and submittal documentation requirements and expectations with FHWA/EPA.
- Submit Draft AQ Report with analysis and backup with Stage III.
- Provide six months in schedule for the overall AQ process.

Roadway

We will prepare the Final AASHTO Report, building from preliminary efforts started with the SL. DEs needed for this project that were not included in the preliminary AASHTO report are shown in **Table 2**.

Table 2. DEs Not Addressed in the SL **R1 S1**

DE/DV	Location
Entrance Ramp Combined Shoulder Width – Combined Shoulder Width < 10 ft	<ul style="list-style-type: none"> ➤ Verrado WB & EB Entrance Ramp ➤ Watson EB & WB Entrance Ramp ➤ Miller EB & WB Entrance Ramp
Travel Lane Width at Turning Roadway – Combined Travel Way Width < 26 ft	<ul style="list-style-type: none"> ➤ Verrado EB & WB Entrance Ramp ➤ Watson EB & WB Entrance Ramp ➤ Miller EB & WB Entrance Ramp
Vertical Clearance < 16.5 ft	➤ SR 85 W-S Ramp

LESSONS LEARNED

We work extensively with ADOT Roadway on developing DE/DV approvals for freeway projects and will:

- Document DEs/DVs at Stage II
- Plan for review time with ADOT Roadway/FHWA for approval
- Provide detailed crash analysis for all DEs/DVs
- Avoid scope requests late in design that trigger DEs/DVs

VE & PBPD Options

Shortly after project kickoff, we will hold a PBPD workshop to explore the following items with ADOT and stakeholders:

East Segment

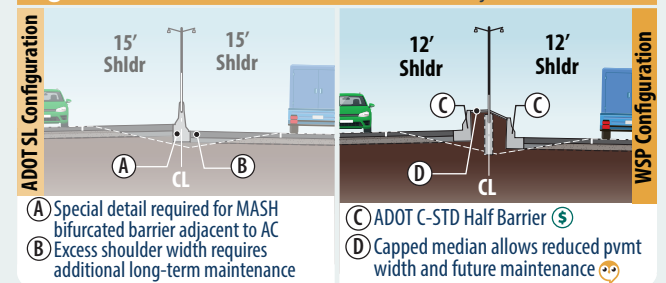
- Eliminate AR-ACFC.** Recent direction on SR 101L widening projects is to Diamond Grind or simply remove AR-ACFC from existing PCCP. **\$900k**
- Obtain a DE to restripe with 4-foot inside shoulders to avoid PCCP widening.** Reduces pavement quantity by 92,000 SY and Citrus Road bridge widening by 3,000 SF. We will explore safety and operational tradeoffs (CMF analysis shows only a slight crash increase). **\$14.8M**

West Segment

- Reduce outside widening by 4 feet.** The existing 16-foot inside shoulder can be reduced to 12 feet and the travel lanes shifted towards the median to reduce the amount of outside widening. The expected change in crash rates is negligible, so safety performance would not be impacted. **\$1.9M**
- Place TCB along inside shoulder and reduce shoulder width.** Consider using the seven miles of new TCB on site as part of the median barrier solution for this project. The inside widening could be reduced by providing 10-foot inside shoulders (AASHTO minimum) with the existing TCB used for the WB shoulder and new half barrier constructed for the EB shoulder. This would save costs by using available materials while still meeting stakeholders' goals for a fourth lane and full freeway lighting. **\$2.9M**
- Use C-Std half barrier.** WB I-10 profile is 1 foot higher than the EB profile in the West Segment, requiring nearly 7.5 miles of bifurcated median barrier with 15-foot-wide AC shoulders (per SL configuration). We propose using two ADOT C-Std half barriers with a concrete cap and conventional light pole foundations (Figure 6). Benefits include the items below. **\$2.5M**

- Increased barrier production with continuous slip forming
- Over 90 structural light pole barrier transitions not required
- Reduced AC area (by 26,000 SY)
- Reduced earthwork haul off
- No project specific MASH bifurcated barrier detail for AC pavement

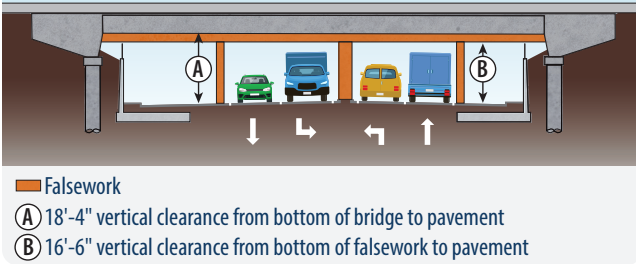
Figure 6. WSP Solution for Median Barrier Adjacent to AC **R2**



Structures

The existing Citrus Road 129-foot single span Cast-In-Place Post-Tensioned (CIP PT) box girder bridge will be widened by approximately 24 feet to the north. We recommend using precast prestressed UBT I-girders for simplified construction and cost efficiency. The existing vertical clearance is 18'-4", which will provide sufficient clearance for a widening superstructure depth up to 7'-4". While developing the structural selection report, we will also evaluate the use of a CIP PT box girder widening option to provide a cost alternative to the current high prices for precast elements. With only needing to maintain two lanes in each direction on Citrus Road, temporary falsework (**Figure 7**) can be easily constructed to maintain 16'-6" of clearance without needing to construct the CIP widening alternative high and then lowering onto the abutments.

Figure 7. Citrus Bridge North Side Widening (CIP PT Box Girder Option)



The original Citrus Road bridge retaining walls were constructed as L-shaped to accommodate future bridge widening. The new drilled shafts can be constructed behind the L-shaped walls without conflict to the existing wall footings or adjacent features along Citrus Road.

Twelve other bridge structures are located within the project limits, all of which accommodate the proposed widening to add a fourth lane. The SR 85 W-S Ramp bridge will require a DV for an insufficient clearance of 16'-4". For the culvert structures, past experience has shown that it is possible to increase the fill depth and increase the load rating of the RCBC. A change in the culvert fill conditions may require a load rating reevaluation and structural verification. **S3**

The existing noise barriers along the project have been designed to accommodate additional height and will be updated as determined by the noise analysis. ADOT Standard Detail (SD) Drawings for noise barrier walls and retaining walls will be utilized for any potential retaining or new noise barriers that may be required. **S2**

The existing overpass bridges along this portion of I-10 have a welded bar on top of the expansion joint assemblies; should AR-ACFC be deleted from the project the welded bar will need to be removed.

Drainage

Our team has identified two locations where the existing I-10 mainline profile is flatter than 0.18% and pavement drainage runs toward the new median barrier due to the existing 2.4% superelevation. We will design a small storm drain system adjacent to the inside barrier with catch basins and slotted drains or variable height grate slotted drains to capture and convey drainage and prevent ponding in the inside lane. We will also coordinate with ADOT Roadway to determine if this condition triggers a DV.

LESSONS LEARNED

Variable height grate slotted drains improve the internal conveyance over standard slotted drains by increasing the longitudinal slope.

Two other locations in tangent sections will need to be evaluated to ensure adequate cross slope to drain 76-feet of pavement to the outside edge, with a virtually flat longitudinal profile. Specific locations we will address are provided in **Table 3**.

Table 3. Flat I-10 Sections Requiring Special Attention **D1**

Location	I-10 Profile Grade	Cross Slope
East of SR 85 (2,600 LF)	0.1781%	2.4%
East of Miller (3,050 LF)	0.0959%	Normal Crown
East of Watson Rd (9,100 LF)	0.1422%	Normal Crown
Verrado Way (4,200 LF)	0.0400%	2.4%

Bulldozer Wash crosses I-10 through two separate structures, one constructed by ADOT with I-10 and the other by the Flood Control District of Maricopa County (FCDMC). **No culvert extensions are anticipated, but the structural condition and loading will be evaluated given that the culverts are approaching 50 years old** (built in 1975 and 1978, respectively).

Existing regulatory floodplains are present along the north edge of I-10 from Bulldozer Wash to Citrus Road. We anticipate negligible or no impact to the floodplains; however, we will perform detailed analyses to show level of impact and coordinate with FCDMC to confirm no CLOMR/LOMR is needed. **We will provide design and hydraulic results to FCDMC showing a no-rise or negligible impact.** Similar to the Perryville TI project constructed in 2014, we anticipate a floodplain use permit will be needed from FCDMC. **D2**

Traffic

Our traffic engineers have designed sections of all freeway corridors in the MAG system, bringing critical understanding of safety and operations. FMS considerations for this widening project are summarized in **Table 4**.

Table 4. FMS Design Considerations

Features	Design Considerations
Trunkline	Existing trunkline fiber exists throughout project limits.
Other Agency Fiber	ADOT trunk fiber provides fibers to City of Buckeye for traffic signals.
WWD	WWD needed at Citrus Road, Perryville Road, and Jackrabbit Trail. Install tapered tube sign structure on exit ramp. Add thermal cameras to mainline DMS for WWD. T3
DMS	Consider a new EB DMS east of Verrado Way to notify Buckeye drivers of I-10 conditions prior to SR 303L. T2
CCTV	Coordinate CCTV at Jackrabbit Trail with IT project.
Ramp Meters/Detection	Perform a ramp meter warrant analysis. No ramp loops or metering equipment is currently in place. Miller Road, Watson Road, and Verrado Way have mainline loops installed. Additional mainline loops at 1 mile spacing may be needed.

Lighting

Where median barrier already exists from Verrado Way to Citrus Road, the foundations, anchor bolts, pull boxes, and conduit for the proposed poles and luminaires are already in place. New median barrier in the West Segment will include barrier transitions, foundations, and conduit to accommodate the new lighting. The Citrus Road bridge widening will also require additional underdeck lighting.

The SL assumed that mainline lighting would be 100-foot high-mast poles requiring a lowering device, an approach not used for continuous lighting anywhere in the Valley for many years. High mast poles are typically only used at system interchanges and are rarely installed in a median barrier. **We recommend installing the typical 69-foot poles that can be serviced using a bucket truck.** This will reduce the project cost, result in light levels consistent with ADOT freeways, reduce light spill into residential properties, and be easier to maintain. **\$1.9M**

Attention will be needed between Watson Road and Verrado Way to run power to lights that accommodate the voltage drop calculations and adhere to ADOT's maximum conductor size limitations. Our team has designed extended lighting runs, but it may become cost prohibitive to do so on this project. We will coordinate with APS and provide recommendations to ADOT for electrical service locations in this I-10 section. **U4**

Project Clearances

Utilities. Several existing utilities exist within the project limits, but no conflicts are anticipated. We will perform utility coordination, clearance documentation, load calculations, relocation plan reviews, and service requests as needed to obtain clearance approvals prior to Stage IV. Specific coordination will be conducted with transmission owners (APS and WAPA) to ensure access needs are met during and after construction. **U1 U2**

Right-of-Way. We will delineate all ROW/TCE requirements with the Stage II submittal. No new ROW or TCEs are anticipated with this project.

Environmental. We will provide technical documentation in support of a Categorical Exclusion (CE) prepared by ADOT Environmental Planning (EP). A similar document was approved in 2019 for I-10, SR 85 to Verrado Way widening (F0119). It has been more than 10 years since cultural resources were researched for the project limits, which may trigger a Class III cultural resource survey. Based upon the Project Environmental Data Sheet (PEDS) already completed by ADOT and our project knowledge, below shows specific technical considerations:

Cultural

- Previous CE shows few sites, none eligible, no effect
- Site locations are outdated and will need to be **updated through cultural pedestrian survey**
- Coordinate with ADOT EP to determine what is needed

Biological Resources

- Potential Cactus Ferruginous Pygmy Owl habitat per US Fish & Wildlife Service (newly listed species)
- Coordinate with ADOT EP and AGFD regarding habitat and potential survey

Section 404 Waters

- F0119 CE noted that fill may be placed in Waters at Bulldozer Wash and a Clean Water Act Section 404 RGP #96 non-notifying permit would be required. We do not anticipate extending this culvert but will review the previous Section 404 assessment and update it to include the full project area.

Air Quality

- See **Page 7** for Approach
- Noise**
- Utilize Newton Environmental Consulting to perform analysis, **building from their work on SR 85 to Verrado Way** and their continued support to Buckeye by coordinating requirements with developers
- Check with local jurisdictions regarding pending building/subdivision permit applications adjacent to roadway

- **Monitor existing noise even on undeveloped land** in case this area becomes an approved plat (i.e., sensitive receptors) during the NEPA process
- Be mindful of drainage ditches conflicting with future noise mitigation wall locations

Hazardous Materials

- Refresh F0119 PISA
- Conduct **new PISA for Verrado Way to Citrus Road**

Schedule

The duration and functional relationship of major tasks and key events are shown in **Figure 8**. Greg will provide ADOT with a critical path schedule for Workfront entry and schedule updates immediately upon any change. We have developed a realistic 13-month design schedule that allows third quarter bid advertisement and provides float within the 16-month contract time. We will execute these **strategies to avoid and/or make up potential schedule slippage**:

PM 10 AQ Requirements. Our AQ approach (**Page 7**) will streamline the FHWA/EPA approval process. We include five months float for resolving parameter interpretations.

Scope Creep. Greg and Patrick will meet individually with ADOT Technical Groups/Stakeholders (immediately after kickoff) to finalize the project improvements. Greg will document decisions.

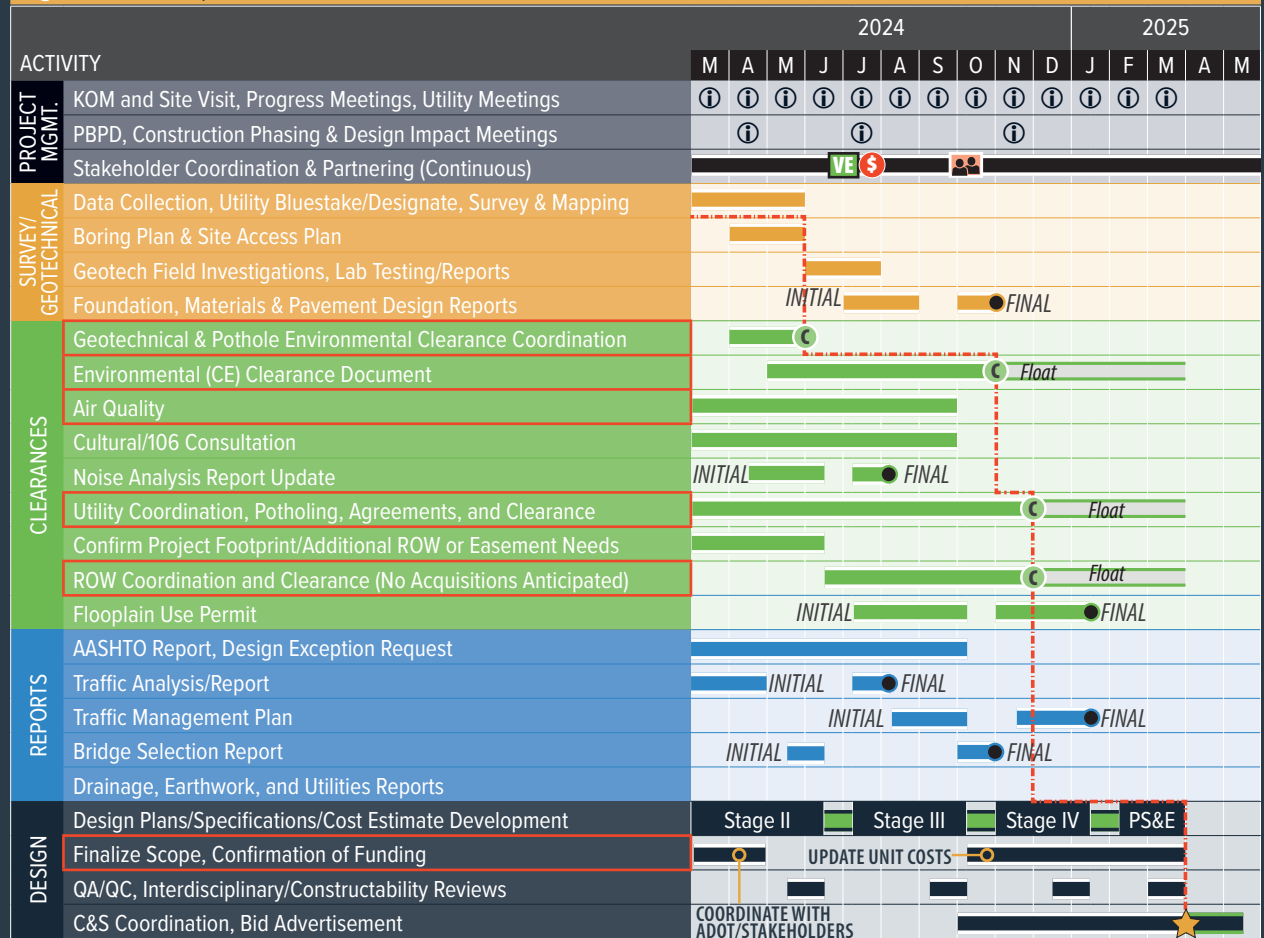
Funding. Once the scope is set, we will update unit prices and cost estimate monthly to inform programming needs and develop contingencies for deferring work if costs trend unfavorably.

Project Risks. We will update the risk register with the team at monthly progress meetings. Any schedule related risk will be flagged for tracking at weekly PM check ins.

Project Clearances. We have planned float in our schedule for all clearances to mitigate unforeseen items.

Resources. Our team has local availability to fast-track this project and can mobilize additional resources if needed to meet schedule.

Figure 8. WSP Proposed 13-Month Schedule Delivered in the Third Quarter



ⓘ Clearance Document
 --- Critical Path
 ■ ADOT/Stakeholder Review (3 Weeks)
 ⊠ Public Info Mtg
ⓘ Meeting/Workshop
 VE VE Study
 \$ Cost Risk Assessment
 ■ Potential Slippage Item

Risk

Experience to **anticipate risks and develop mitigation strategies** will be essential to deliver I-10 widening on time and within budget. Our preliminary risk register (**Table 5**) includes potential risks that may occur during project development and construction. **Foreseeing construction risks during design** will allow proper mitigation to be implemented with our deliverables. Greg will lead the team in identifying, resolving, and managing risks by implementing the following:

- Advance register at kickoff to further identify potential risks and mitigations.
- Assign a team member as the risk owner to follow through on action items.
- Monitor risks with ADOT PM at weekly check-ins.
- Update register with monthly progress meetings.
- Conduct risk assessments with ADOT PMG, project partners, Central District, and C&S at milestones.

Table 5. Preliminary Risk Register

Original	Risk	Scope	Schedule	Budget	Political	Mitigated	Risk Severity and Impact: ■ High ■ Medium ■ Low	
							Mitigation	
	Traffic incidents during construction cause damage, injuries, and delays			✓	✓			Use consistent approach as we did on I-10 Broadway Curve with reduced speed limits, temporary pullouts (where narrow shoulders), locations for DPS to patrol, incident management plan using lessons learned from previous project, smart workzones to actively alert drivers.
	Additional scope items by ADOT Technical Groups and stakeholders	✓	✓	✓	✓			Set expectations at kickoff to establish wants/needs. Coordinate with ADOT PM/Management quickly to decide on any scope revisions when they are requested. Consider limiting progress meeting attendees to decision-makers.
	Shortfall in needed funding (\$13.9M) causes project to be delayed or canceled		✓	✓	✓			With Stage III, develop benefits and costs for PBPD options described on Page 7 .
	AQ approval process from FHWA and EPA causes schedule delays	✓	✓	✓	✓			Engage ADOT EP/FHWA/EPA at NTP to develop review schedule and establish expectations. Escalate to management when milestones are not met. Use available Traffic and AQ data as basis of analysis, avoid delays associated with soon-to-be-released data by outside entities. Include monthly AQ conformity meetings .
	Permanent I-10 improvements approaching Jackrabbit Trail become future throwaway	✓		✓	✓			For I-10 Widening project, eliminate outside widening within existing Jackrabbit Trail TI by obtaining a DE to reduce the existing 16-foot-wide EB and WB inside shoulders to 4 feet and restripe to add a new 12-foot lane in the interim condition . This allows permanent improvements of both projects to be designed independently and reduces cost of I-10 Widening. G3
	I-10 congestion during construction causes local street detouring, damaged pavement, and delays		✓	✓	✓			Develop MOT concepts that maintain at least two lanes of mainline traffic during night and weekend work. Coordinate with MCDOT, Goodyear, and Buckeye on signing detour routes on local streets to aid non-local traffic wayfinding. G1
	FCDMC requires CLOMR/LOMR for encroachment into floodplain adjacent to I-10 (Verrado to Citrus)	✓	✓	✓				Steepen WB I-10 slopes to avoid impacts to floodplain . Obtain floodplain use permit from FCDMC while showing no adverse impact to floodplain (similar to Perryville TI project) or start CLOMR process (9-12 Mo duration) at Stage II. D2
	WAPA is slow to respond or non-responsive during design submittal reviews and clearances		✓	✓				Coordinate individually early and often with WAPA throughout design. Prepare breakout review packages for WAPA to simplify their reviews . Establish review schedule and document review times. U2
	Current project scope will not support traffic demand in 2050	✓	✓	✓				Develop an implementation plan for the improvements needed to meet 2050 demand that are not included in the SL . Support ADOT PMG with additional sensitivity analyzes and cost estimates as needed.
	Existing I-10 shoulder pavement can't handle truck traffic for long durations	✓		✓	✓			To avoid change orders like on SR 85-Verrado project , overlay WB I-10 outside shoulder to support three WB lanes, reduce EB traffic to two lanes to keep traffic off existing shoulder, reducing complaints and eliminating EB shoulder improvements.
	Construction activities that require ingress/egress from the inside lane may reduce production rates			✓	✓			Consider closing the inside EB I-10 lane from SR 85-Verrado to provide additional workspace and room for the construction traffic to decelerate/accelerate.
	Public requests for "screen" walls not recommended by noise study	✓	✓	✓	✓			Review development permits/agreements with Buckeye to identify receptors that should be considered. Educate public of ADOT Noise Policy during early outreach activities.
	Unanticipated APS power service costs (Watson to Verrado)			✓				Early coordination with APS to locate service connection points, with documentation of costs to include in cost estimates. U4
	Existing pipes and culverts are discovered to be damaged or plugged during construction	✓	✓	✓				Conduct field inspections during design phase to assess the condition of the existing pipes.
	Previous cultural surveys greater than 10 years old require resurvey and additional time	✓	✓	✓				Locate geotech field sampling outside of known cultural sites to avoid design schedule delays. Coordinate with ADOT HPT early to determine sites within ROW but not impacted by project improvements. Isolate median work zones. Identify non-disturbance areas within construction documents.
	Recent relisting of Pygmy Owl on Endangered Species List causes delays in biology clearance	✓	✓					Coordinate with ADOT EP, AGFD, and FHWA early in design phase to determine the likelihood of owl presence and the need to conduct field surveys and develop mitigation measures.
	Additional IGAs may be requested with Buckeye, Goodyear, and MCDOT to clarify maintenance roles		✓	✓	✓			Early coordination during project kickoff to establish the scope as mainline capacity improvements, with no improvements to crossroads and existing maintenance roles . If IGAs are needed, develop detailed schedule for completion prior to Stage IV.
	Citrus Road Bridge was not built per original record drawings , resulting in construction delays for redesign	✓	✓					Review previous Citrus Road bridge median widening plans and change order log from SR 303 System T1 project to determine if any change of conditions were encountered in the first Citrus widening in 2010.



Project Manager
Greg Fly, AZ PE #49430
 Greg has managed design efforts on ADOT urban freeway projects that represent over \$1.4B of year-of-expenditure construction dollars and partnered with over 50 Arizona stakeholder agencies.

Greg Brings Value to This Project

- 33 miles of managing MAG freeway widening final design projects
- PM for the recently advertised SR 101L, Princess Drive to Shea Boulevard Widening, which conformed to the new EPA air quality process
- Completed five freeway widening projects with Stanley and CDG
- Will lead value engineering services for I-10 Jackrabbit Trail TI DCR, which may influence widening efforts on I-10

Greg's Recent Freeway Widening Experience

- SR 101L, Princess Drive to Shea Boulevard GPL Widening (PM)
- SR 101L, I-17 to Princess Drive GPL Widening GEC (PM)
- ADOT SR 202L South Mountain Freeway: I-10, 39th Ave to 79th Ave Widening (Design Manager)
- SR 202L, SR 101L to Broadway Road GPL Widening (Segment PM)
- SR 202L, I-10 to SR 101L HOV Widening (Segment PM)

Concurrent Projects and Commitments at NTP

SR 101L, Princess Drive to Shea Boulevard: 5%; SR 260 Lion Springs: 5%

Organization Chart

WSP is bringing the SR 101L, Princess Drive to Shea Boulevard Widening team (now fully available) to the I-10 widening project—they understand the details, coordination, issue anticipation, and responsiveness needed for delivering inside and outside widening design (**Figure 9** and **Table 6**).

Figure 9. WSP Team Organization Chart

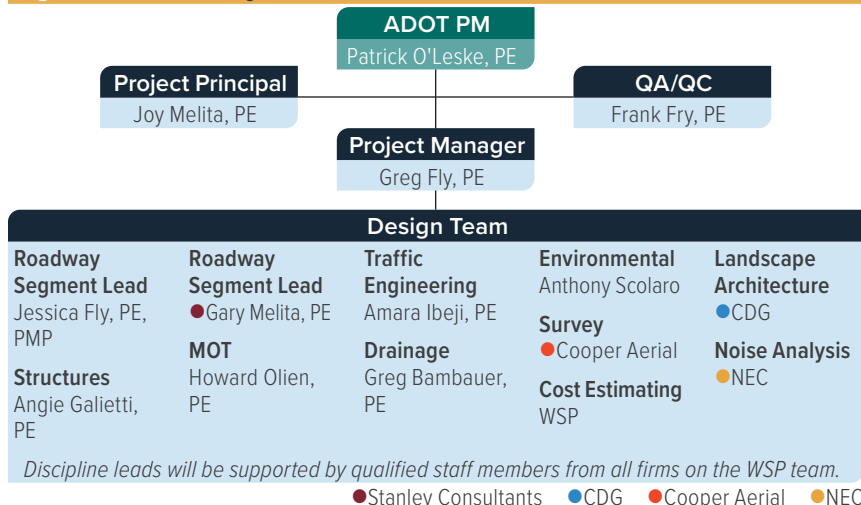


Table 6. Key Personnel (company responsibilities and corporate titles are included on their resumes)

 70% 19 Years BSCE Roadway Segment Lead Jessica Fly AZ PE #52512	<ul style="list-style-type: none"> ➤ Segment and roadway lead on SR 101L GPL widening projects with Greg and SCI, including gore geometrics, jointing details, and quantity calculations ➤ Recent experience delivering DE/DV documentation, IGA exhibits/agreements, and Bentley OpenRoads ➤ Design oversight experience with constructing GPLs/HOVs, bringing practical lessons learned to I-10
 90% 34 Years MSCM, BSCE Roadway Segment Lead Gary Melita AZ PE #30516	<ul style="list-style-type: none"> ➤ Led design on more than 150 miles of new ADOT freeway and freeway widening ➤ Understands ADOT's design practices and project development process, as well as construction techniques, excelling in the technical skills needed to deliver quality work ➤ Knowledgeable of current air quality practices (SR 101L, 75th Avenue to I-17); combined with Greg's experience, provides ADOT the most comprehensive understanding of this evolving process
 50% 15 Years BSCE Structures Angie Galietti AZ PE #58889	<ul style="list-style-type: none"> ➤ Led design of 34 ADOT interstate bridges using all delivery methods ➤ Excels at optimizing bridge design with constructability in mind ➤ Experienced in anticipating and designing the details needed as part of freeway widening, like bifurcated barrier, bridge widening, culvert headwalls, catch basins, and sign structures
 60% 37 Years BSCE MOT Howard Olien AZ PE #26335	<ul style="list-style-type: none"> ➤ 30 years of lighting design experience on ADOT freeways with multiple freeway system interchanges and hundreds of miles of median lighting ➤ Extensive MOT design experience on ADOT's freeway widening projects on SR 101L, SR 202L, and I-10 ➤ Detailed traffic design using MUTCD and ADOT traffic design guidelines
 70% 22 Years BSCE Traffic Engineering Amara Ibeji AZ PE #40984	<ul style="list-style-type: none"> ➤ Significant traffic analysis and design experience on ADOT urban freeway facilities, including SR 101L and I-10 widening projects ➤ Established working relationships with ADOT Traffic Group and TSMO developed through collaborating on numerous projects ➤ Known for efficiently delivering traffic reports, plans, specifications, and estimates on schedule
 60% 27 Years BS Hydrology Drainage Greg Bambauer AZ PE #37844	<ul style="list-style-type: none"> ➤ Directed the drainage design on 50± miles of ADOT freeway projects including I-10 and SR 101L GPL/HOV widenings ➤ Specialized drainage experience that entails urban freeway closed and open systems, flood control facilities, hydraulic modeling, and drainage conveyance ➤ Proficient at interdisciplinary reviews to ensure no conflicts with other infrastructure
 50% 29 Years BSCE Environmental Anthony Scolaro	<ul style="list-style-type: none"> ➤ Extensive knowledge of NEPA process and ADOT assignment, completing numerous clearance documents and compliance reviews for freeway facilities ➤ Proven ability to deliver a legally compliant NEPA decision document in an expedited timeframe ➤ Attentive to detail and implementation of new environmental requirements (cultural and species) and processes (air quality)
 30% 27 Years BSCE QA/QC Frank Fry AZ PE #37622	<ul style="list-style-type: none"> ➤ As the quality manager for the WSP AZ offices, Frank is current with best practices and leads training, auditing, and compliance efforts for staff ➤ Clear understanding of design standards, guidelines, and quality expectations from extensive ADOT freeway design experience (including GPL/HOV widening) ➤ Key contributor of cost saving solutions developed as part of VE, interdisciplinary and constructability reviews

🕒 Project Availability/Commitment 📅 Total Years of Experience 🎓 Education

Figure 10. WSP and Stanley have Experience Across the Entire Breadth of the Valley's Freeway System



Table 7. WSP Team's ADOT Central District Freeway Experience

1 SR 101L, Princess Drive to Shea Boulevard GPL Widening

WSP designed 4.5 miles of GPL widening, including four bridge improvements. This recently completed this freeway widening (outside) project included SCI and Cooper as subs, delivering final design in under one year and working closely with the EPA to meet new air quality requirements.

2 SR 101L, I-17 to Pima Road GPL Widening GEC

WSP served as GEC for 13 miles of GPL widening (outside), including 25 bridges and 10 TI improvements. We supported ADOT with contract/specifications development, design oversight, construction admin to ensure the contractor met project requirements, and assisted ADOT with backup and documentation to address deficiencies.

3 SR 101L, 75th Avenue to I-17 GPL Widening

WSP and CDG are supporting SCI with design services to add 6 miles of GPLs to SR 101L (outside), increasing safety, capacity, and operations. This project also includes more than 1 mile of improvements along I-17. Just wrapping up, Gary Melita is completing the EPA air quality requirements.

4 SR 202L, SR 101L to Broadway Road GPL Widening

WSP provided final design for GP and HOV lane widening on SR 202L (inside and outside), led by Greg Fly, including 8 miles of GPL widening with 14 TI ramp reconstructions, PCCP widening details, four bridge widenings, retaining walls, drainage system extensions, traffic/FMS elements, and MOT strategies.

5 SR 202L South Mountain Freeway

WSP led design services for 22 miles of new urban freeway including 5 miles of I-10 widening with support from SCI and CDG. Work included detailed traffic control plans, public outreach, environmental compliance, geotechnical investigation, and agency/stakeholder coordination.

DETAILS			KEY PERSONNEL										SIMILAR TASKS & ELEMENTS															
Owner	Role	Fee Value	Greg Fly	Jessica Fly	Gary Melita	Angie Galletti	Howard Olien	Amara Ibeji	Greg Bambauer	Anthony Scolaro	Frank Fry	Stanley	Cooper	CDG	NEC	GPL – HOV Widening	Ramp Geometrics	DE – DV Approval	Maintenance of Traffic	Traffic – TSMO	Operations Analysis	Drainage	Bridge – Walls	Geotech	Utilities	Right-of-Way	NEPA	Local Agency – IGA
ADOT	Prime	\$6.8M	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
ADOT	Prime	\$4.2M	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
ADOT	Sub to SCI	\$1.3M	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
ADOT	Sub	\$1.3M	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
ADOT	Prime Design	\$60M	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Table 8. Our Subconsultant Partners

Stanley Consultants Inc. (SCI) and WSP have partnered extensively on freeway widening on the MAG system for ADOT. They will add capacity to our team as an exclusive subconsultant for multidisciplinary support for the west segment design, providing **resources, efficiency, innovation, and cost savings**. Their similar relevant experience includes:

- SR 101L, Princess Boulevard to Shea Drive Widening
- SR 101L, 75th Avenue to I-17 GPL Widening
- SR 202L, SR 101L to Broadway Road GPL Widening

Cooper Aerial (Cooper) will provide survey and mapping services, similar to their work with WSP on SR 101L widening and other projects. Their expertise includes aerial photogrammetry, 3D mapping, LiDAR, field surveying, and drone imagery. We rely on Cooper because of their **exceptional aerial and supplemental survey products—on time and in a ready to use format**. Their similar relevant experience includes:

- SR 101L, Princess Boulevard to Shea Drive Widening
- SR 101L, Shea to SR 202L GPL Widening
- SR 189 (US-Mexico Border)

Corral Design Group (CDG) completed more than 150 projects for ADOT, including partnering with WSP on **SR 202L, SR 101L to Broadway Road GPL Widening and SR 202L South Mountain Freeway and other ADOT projects**. They will provide erosion control and landscaping/aesthetics support, streamlining stakeholder coordination efforts with their previous area work. Their similar relevant experience includes:

- SR 101L, 75th Avenue to I-17 GPL Widening
- SR 202L South Mountain Freeway
- SR 202L, I-10 to SR 101L GPL Design-Build

Newton Environmental Consulting (NEC) will support our team with continued corridor noise analysis. As part of their extensive ADOT work, **NEC completed the noise study for I-10, SR 85 to Verrado Way**. The City of Buckeye shares these results with developers to ensure needs are met and avoid throwaway. **Building from past work will save ADOT time and money**. Their similar relevant experience includes:

- I-10, SR 85 to Verrado Way
- SR 101L, I-17 to Pima Road
- I-17, Anthem Way TI to Junction SR 69 – Cordes Junction



Project Manager
Greg Fly, AZ PE #49430

- 🕒 90% Available/Committed
- 📅 20 Years of Experience (20 with WSP)
- 📖 BS Civil Engineering

Greg will Lead from Experience

- 33 miles of MAG freeway widening design management
- PM for the recently advertised SR 101L, Princess to Shea Widening, which conformed to the new EPA air quality process
- Completed five freeway widenings with Stanley and CDG
- Will lead value engineering services for I-10 Jackrabbit Trail TI DCR, which may influence widening efforts on I-10

ADOT can trust Greg with this project. He has extensive experience completing successfully completing more than 33 miles of MAG freeway widening projects and met with ADOT, Buckeye, and other stakeholders and understands this project, its goals, and priorities. Greg also has longtime relationships working with our subconsultants completing freeway widening projects, like Gary Melita (Stanley) on SR 101L, Princess Drive and Shea Boulevard, and other SR 101L and SR 202L widening projects (GPL and HOV). SR101L, Princess Drive to Shea Boulevard demonstrates Greg's ability to complete this design in one year. Greg supported ADOT with IGAs, public/council meetings, and conformance approval under new EPA air quality practices, the first ADOT project to meet the new practices and be fully approved by the EPA. Through a close partnership with Beverly Chenausky, he has developed a solid understanding of the EPA requirements and can help ADOT efficiently navigate the approval process on this project, avoiding costly delays.

An added value to Greg's leadership on this project will be his value engineering role on the I-10 Jackrabbit Trail TI DCR through the Alt Delivery On-Call, which is a key component of this widening project. He will provide ADOT a comprehensive view of these two projects, identifying opportunities to reduce costs, save time, and improve MOT conditions.

Corporate Title/Role: Senior Vice President

Current Commitments: SR 101 Pima Freeway (Princess Dr to Shea Blvd): 5%; SR 260 Lion Springs: 5%

Professional Experience

ADOT SR 101L, Princess Drive to Shea Boulevard, Scottsdale, Arizona: Greg was project manager providing final design services for the addition of a new general-purpose lane in each direction and the widening of four major structures. He led the effort with the coordination with City of Scottsdale, CAP, Beverly Chenausky (ADOT Air Quality), and other stakeholders. WSP's responsibilities include environmental documentation preparation, utility relocation coordination, roadway design, drainage design, geotechnical investigations and reports, structure analyses, traffic design, and construction bid document preparation. *The purpose of the is project is to add capacity, reduce congestion and improve safety.*

I want to express to you appreciation for the job Greg Fly and his team did to lead and deliver the 101L widening project, from Princess - Shea (F0123 01C)... he consistently communicated and followed up as necessary to keep things moving forward and responded when we needed him to. To say the team did a 'good' job navigating through some of the requests and changes is an understatement.

Derek B. Boland, PE
ADOT Project Management Group

ADOT SR 101L, I-17 to Pima Road GEC DB, Phoenix Metro, Arizona: Project manager that led the GEC services during procurement for this project. Greg worked with ADOT PMG and the ADOT Technical Groups to develop the procurement documents and provided support during the One-on-One and Alternative Technical Concept review process. In addition, Greg coordinated with City of Phoenix and City of Scottsdale on allowable ramp closures and weekend detour routes. Major elements of the project include adding an additional GPL to SR 101L in each direction from I-17 to the Princess/Pima, 28 bridge widenings, one new bridge.



ADOT SR 202L South Mountain Freeway, Phoenix Metro, Arizona: Design manager on this project that completed the SR 202L from I-10 (Maricopa Freeway) to I-10 (Papago Freeway). Greg's responsibilities included serving as the overall design manager and segment design manager for the Pecos construction segment, which included the management and oversight of all design disciplines and subconsultants for the preparation of final plans and specifications. He also was the overall roadway design lead during the design-build pursuit process that took the project to 30% plans prior to selection. WSP led the design of SR 202L South Mountain Freeway P3, a 22-mile, four-lane freeway that includes 13 interchanges; two half-diverging diamond interchanges; one double-roundabout interchange; 40 bridges; a 6-mile, 20-foot-wide adjacent shared-use path for pedestrians, bicyclists, and other non-vehicular traffic; five multi-use underpass crossings; and 4.5 miles of widening improvements for I-10. The project also included a rigorous quality control process to ensure compliance with the project's technical provisions. *With a construction cost in excess of \$1 billion, Greg lead the WSP design team (with Stanley) and delivered nearly 8,000 plan sheets of technical information within 18 months.*



ADOT SR 101L, 75th Avenue to I-17 GPL Widening, Phoenix Metro, Arizona: Quality reviewer for adding a general-purpose lane from 43rd Avenue to I-17, approximately 3 miles of the 6-mile project corridor. Project design includes mainline widening, bridge widenings, traffic analyses, new retaining and sound walls, modifications to onsite and offsite drainage facilities, lighting, ITS, signing, pavement marking, landscaping and irrigation, utility coordination, ADA compliance, traffic signal modifications and maintenance of traffic. The project also includes ROW, utility and environmental clearance coordination, stakeholder coordination with City of Phoenix, City of Glendale, City of Peoria, MAG, FHWA, and FDCMC. WSP is a subconsultant to Stanley for the delivery of this project. Greg's responsibilities included checking roadway design elements, interdisciplinary conflicts, consistency with other SR 101L segments, and overall QA/QC.

Project Manager

Greg Fly, AZ PE #49430

Professional Experience Continued

ADOT SR 202L, SR 101L to Broadway Road GPL

Widening Design-Build, Mesa, Arizona: Deputy project manager and roadway engineer lead for WSP's work on this project to widen HOV lanes and add GPLs to SR 202L/ Red Mountain Freeway. Greg was involved from the proposal stage and was responsible for post-design coordination for WSP. WSP, as a subconsultant, provided design services for this ADOT project, which involved GP and HOV lane widening along SR 202L, from SR 101L to Broadway. WSP's responsibilities included the design of 20 miles of GP and HOV lane PCCP widening, four bridge structure widenings, retaining walls, drainage, signing, striping, lighting, maintenance of traffic, landscaping, and freeway management system components of the project. *The WSP design widened SR 202L through 10 ramp gores and maintained ramp traffic without any long-term closures.*



ADOT US 60/Bell Road Interchange DB, Phoenix,

Arizona: Project manager responsible for oversight of roadway and wall designs for US 60. Greg was the design lead during the DB pursuit process which took the project to 30 percent plans prior to selection. WSP provided final design services for the for the roadway improvements to US 60 portion of the project. The project provided a grade-separated crossing of US 60 with Bell Road elevated over US 60 and the Burlington North and Santa Fe Railroad Railway, with new access ramps connecting US 60 with Bell Road in the median area of US 60. *WSP delivered final sealed plans that were released for construction within four months of NTP.*

ADOT SR 202L, I-10 to Gilbert Road Design-Build,

Phoenix Metro, Arizona: Roadway Lead for the I-10 to SR 101L segment of this project. Greg's responsibilities included geometric design, modeling, coordination with ADOT staff and stakeholders to deliver sealed plans in a compressed schedule. WSP was responsible for the design of two freeway-to-freeway HOV ramp bridge structures, and median widening of the existing freeway to accommodate new HOV lanes on SR 202L from I-10 to Gilbert Road. The project included the design of four freeway-to-freeway HOV ramp bridge structures; internal and external widening of the existing freeway to accommodate the HOV lanes and reconfigured interchange ramps; and more than 20 lane miles of PCCP, retaining walls, drainage, signing, and striping and lighting.



ADOT SR 202L, University Drive to Southern Avenue,

Mesa, Arizona: Design engineer responsible for barrier calculations and the production of the plans and estimates on this 2.2-mile segment of depressed urban freeway for ADOT. WSP provided design services for a section of the Red Mountain Freeway, from University to Southern Avenue. The project also included the design of three cast-in-place box girder bridges in addition to other construction services. The scope of work involved widening of the existing section of urban freeway for ADOT between the on-and-off ramps in both the eastbound and westbound direction to facilitate the addition of the auxiliary lanes, as well as the relocation of drainage and FMS systems.

ADOT I-10, State Route 87 to Picacho Peak Widening

Design, Pima County, Arizona: Greg served as roadway designer responsible for providing quality control reviews for geometric and roadway portions of the construction documents. WSP provided final design of proposed improvements on Interstate 10, resulting in an interim widening from two lanes in each direction to three, by adding lanes generally on the outside of the roadways. The goal of the project was to increase capacity and improve traffic operations and safety for this segment of Interstate 10, which extends from the state Route 87 Interchange westbound entrance ramp connection to Interstate 10 to the Picacho Peak State Park. WSP's responsibilities included utility relocation, right of way acquisition, construction of two new bridges, drainage facilities, traffic signals, and lighting.



ADOT SR 51 DB HOV Lane Design Services, Phoenix,

Arizona: Design engineer involved in the production of as-built plans for this DB project. WSP served as the lead designer for this 10-mile project to add HOV lanes and ramp improvements to widen SR 51 from McDowell Road to Shea Boulevard. The project consisted of the preparation of final design plans, including roadway, drainage, traffic, utility relocation, and landscape, as well as special provisions and cost estimates. The fiber network included 14 miles of fiber optic cable, the plan and equipment for field ITS equipment, CCTV, VMS, ramp meter, detector Station, WIM and traffic signals.



Roadway/Segment Lead

Jessica Fly, AZ PE #52512, PMP

🕒 70% Available/Committed

📅 19 Years of Experience (19 with WSP)

📖 BS Civil Engineering

Why Jessica is Leading Roadway Design

- Segment and roadway lead on SR 101L GPL widening projects with Greg and SCL, including gore geometrics, jointing details, and quantity calculations
- Recent experience delivering DE/DV documentation, IGA exhibits/agreements, and Bentley OpenRoads
- Design oversight experience with constructing GPLs/HOVs, bringing practical lessons learned to I-10

Our entire team has extensive freeway widening experience and Jessica in particular has played a major role on these projects for ADOT. As segment lead, she'll oversee design of outside widening on I-10, using her experience as designer, design-build partner, and GEC to develop design solutions that work within ADOT standards and budget.

Jessica Fly has a broad range of traffic and roadway engineering experience includes large scale highway design projects and she has been key team member on our recent widening projects with Stanley along the SR 101L and SR 202L. Jessica's experience has allowed her to work from conception through to design, developing unique design solutions. Her experience with planning, development, and initial design phase in conjunction with final design and construction management experience provides her with great versatility and a complete skill set to approach transportation engineering challenges with unique insight.

Corporate Title/Role: Vice President

Professional Experience



ADOT SR 101, Princess Drive to Shea Boulevard, Scottsdale, Arizona: Design segment manager for adding a new general-purpose lane in each direction and widening four major structures. Jessica led roadway design using OpenRoads, provided multidisciplinary coordination, prepared special provisions, and compiled the overall project cost estimate. She also supported Greg with stakeholder coordination, including City of Scottsdale, CAP, MAG, and FHWA. WSP's responsibilities include environmental documentation preparation, utility relocation coordination, roadway design, drainage design, geotechnical investigations and reports, structure analyses, traffic design, and construction bid document preparation.

ADOT SR 101L, 75th Avenue to I-17 GPL Widening, Phoenix Metro, Arizona: Design segment manager responsible for scoping and final design for improvements associated with adding one lane in each direction, system and service TI ramp and gore reconstruction, bridge widenings, on-site drainage, and signing/pavement marking infrastructure. Other corridor improvements include lighting, ITS, and landscaping. WSP is providing roadway, wall, drainage, signing, pavement marking, and bridge design services. Jessica's responsibilities include segment design management, roadway design, OpenRoads modeling, alternative analyses, stakeholder coordination, utility coordination, risk management, quality control and interdisciplinary coordination.

ADOT SR 101L, I-17 to Pima Road DB, Phoenix Metro, Arizona: Project manager for GEC services during construction on this GPL widening project that included 13 miles of urban freeway widening, 12 bridge widenings, reconstruction of service TI ramps and gores, and other corridor signing, lighting, and landscape improvements. Jessica was responsible for project scope development, contract development, design oversight, and construction management services. Her responsibilities included stakeholder coordination, alignment of project scope to available budget, preparing requests for qualifications/requests for proposal documents, design phase oversight and plan reviews, project document control, and construction administration tasks including RFI response, resolving field issues, reviewing change orders, and assisting the ADOT RE and inspection staff.

ADOT SR 202L South Mountain Freeway, Phoenix Metro, Arizona: Design segment manager for the design of a new 22-mile, four-lane freeway facility including 13 new interchanges; two half-diverging diamond interchanges; one double-roundabout interchange; 40 bridges; a six-mile, 20-foot-wide adjacent shared-use path for pedestrians, bicyclists, and other non-vehicular traffic; five multi-use underpass crossings; and 4.5 miles of widening improvements for I-10. Jessica's responsibilities included roadway segment management, roadway design, InRoads modeling, alternatives analyses, interdisciplinary coordination, plan production, and quality control.

ADOT SR 202L, SR 101L To Broadway Road GPL Widening, Mesa, Arizona: Roadway engineer assisting with the design of two freeway-to-freeway high occupancy vehicle ramp bridge structures within the I-10 system TI, and median widening of the existing freeway to accommodate new high occupancy vehicle lanes on SR 202L from I-10 to Gilbert Road. The project included the design of four freeway-to-freeway high occupancy vehicle ramp bridge structures; internal and external widening of the existing freeway to accommodate the high occupancy vehicle lanes and reconfigured interchange ramps; and more than 20 lane miles of Portland cement concrete pavement, retaining walls, drainage, signing, and striping and lighting. Jessica's responsibilities included roadway design, InRoads modeling, interdisciplinary coordination, plan preparation, post design services, and project documentation and quality control tasks.

ADOT SR 202L, I-10 to Gilbert Road Design-Build, Phoenix Metro, Arizona: Roadway engineer responsible for interdisciplinary coordination, roadway design, InRoads modeling, plan preparation, post design services, and project documentation and quality control tasks. WSP was responsible for the design of two freeway-to-freeway high occupancy vehicle ramp bridge structures, and median widening of the existing freeway to accommodate new high occupancy vehicle lanes on SR 202L from I-10 to Gilbert Road. The project included the design of four freeway-to-freeway high occupancy vehicle ramp bridge structures; internal and external widening of the existing freeway to accommodate the high occupancy vehicle lanes and reconfigured interchange ramps; and more than 20 lane miles of Portland cement concrete pavement, retaining walls, drainage, signing, and striping and lighting.

ADOT US 60/Bell Road Interchange DB, Phoenix, Arizona: Roadway Design Segment Manager for the US 60 portion of the project. WSP provided final design services for the interchange at US 60 and Bell Road. The project provided a grade-separated crossing of US 60 with Bell Road elevated over US 60 and the Burlington North and Santa Fe Railroad Railway, with new access ramps connecting US 60 with Bell Road in the median area of US 60. Jessica's responsibilities included significant coordination with the prime designer and contractor throughout the project duration, work task staffing/scheduling, utility conflict identification and relocation plan coordination, final design plan preparation, requests for information/notice of design change/field design change/shop drawing review, and QA/QC.



Roadway/Segment Lead

Gary Melita, AZ PE #30516

- 🕒 90% Available/Committed
- 📁 34 Years of Experience (30 with Stanley)
- 📖 MS Const. Mgmt, BS Civil Engineering

Gary's Value to ADOT and our Team

- Led design on more than 150 miles of new ADOT freeway and freeway widening
- Understands ADOT's design practices and project development process, as well as construction techniques, excelling in the technical skills needed to deliver quality work
- Knowledgeable of current air quality practices (SR 101L, 75th Avenue to I-17); combined with Greg's experience, provides ADOT the most comprehensive understanding of this evolving process

With three decades of ADOT experience, Gary will lead design for inside widening of I-10, partnering with Gary and Jessica to complete the overall design of this project as he's done on seven previous projects where WSP and Stanley have teamed together. While Gary tackled the first ADOT project to undergo EPA air quality review, Gary undertook the second. His knowledge paired with Greg's provides ADOT the most comprehensive understanding of this process to ensure this project remains on schedule.

Gary brings 34 years of ADOT experience (including four years employed by ADOT) related to the planning, design and construction of urban freeways, rural highways, service and system traffic interchanges, safety and roadway rehabilitation projects. He is a hands-on engineer with a proven ability in coordinating interdisciplinary teams, collaborating to resolve issues, and engaging diverse project stakeholders. His strong technical and team leadership skills have gained him a reputation for making sound decisions and being highly responsive to ADOT in meeting their schedule, budget and quality requirements.

Gary has managed and led the design on numerous urban freeway and traffic interchange (TI) projects in Maricopa County and many other diverse projects around the state of Arizona. Below is select list of urban freeway scoping and final design projects highlighting his management, design, and construction experience.

Corporate Title/Role: Senior Project Manager

Professional Experience



ADOT SR 101L, Add General Purpose Lanes, 75th Avenue to I-17, Glendale and Phoenix, Arizona: Project manager responsible for completing a scoping report and final design for adding GP lanes to 6 miles of existing urban freeway between 75th Avenue and I-17 and improvements to the 75th Avenue TI to create a triple left-turn on SB 75th Avenue to EB SR 101L. Construction includes widening the mainline pavement; 75th Avenue median island, ADA, and traffic signal modifications; widening three SR 101L overpass bridges; new retaining and sound walls; modifications to onsite and offsite drainage facilities, lighting, FMS, signing, pavement marking, landscaping, and irrigation; erosion control; utility coordination; and maintenance of traffic. The project includes utility, ROW, and environmental clearances; coordination with ADOT technical disciplines, City of Glendale, City of Peoria, City of Phoenix, MAG, FHWA, FCDMC, and utilities; and two public information meetings presenting 3D video simulations of proposed improvements. *The purpose of this project is to add capacity, reduce congestion, and improve safety similar to the current SR 101L Pima/Princess to Shea Boulevard project. WSP is a subconsultant currently working with Stanley to successfully complete this project.*

ADOT SR 202L, SR 101L to Broadway Road (HOV Lanes) Design-Build, Mesa, Arizona: Project segment lead responsible for design of median HOV lanes for a 7-mile segment of SR 202L as part of a Design-Build team that designed and constructed 5 miles of new general purpose and 15 miles of new HOV Lanes. Stanley Consultants' segment included new median HOV lanes, median concrete barrier, onsite drainage system modifications, conversion to median lighting, FMS modifications, signing/pavement marking, and traffic control. *Stanley and WSP were subconsultants and worked together with other design firms to successfully compete this project.*

ADOT SR 202L South Mountain Freeway, Phoenix Metro, Arizona: Segment engineer responsible for roadway design and multi discipline coordination for 7.5 miles of urban freeway design from Elliot Road to north of Buckeye Road with seven service TIs as part of the new 20 miles South Mountain Freeway Design-Build-Maintain project. *Stanley worked with WSP as a subconsultant to successfully complete this project.*

ADOT SR 101L, Red Mountain Freeway to Santan Freeway (HOV Lanes), Mesa, Arizona: Project manager responsible for design of 10 miles of new median HOV lanes on SR 101L. The project included utility clearance and coordination with ADOT, City of Chandler, Tempe and Mesa. Construction included new HOV lanes with center concrete median barrier, onsite drainage system modifications, conversion to median lighting, FMS modifications, signing/pavement marking, and maintenance of traffic.

ADOT I-17, Jomax Road and Dixileta Drive TIs, Phoenix, Arizona: Project manager responsible for design of two compact diamond traffic interchanges on I-17 with several miles of frontage roads. The project included utility, ROW, and environmental clearances and coordination with ADOT, City of Phoenix, property owners and utilities. Construction included new TI ramps, crossroad reconstruction, six multi-span AASHTO girder bridges, onsite and offsite drainage, erosion control, and traffic elements (Lighting, Signing, Striping, FMS, and maintenance of traffic).

ADOT SR 24, Ellsworth Road to Ironwood Drive – Interim Phase 2, Mesa and Pinal County, Arizona: Project manager responsible for designing 5 miles of interim urban freeway. The project was recognized by ACEC and ENR for its design and includes utility, ROW, and environmental clearances and coordination with ADOT, City of Mesa, Pinal County, Maricopa County, Town of Queen Creek, FCDMC, PMGA and utilities. Construction includes four new crossroad service TIs, two new overpass bridges, retaining walls, onsite and offsite drainage facilities, lighting, traffic signals, FMS, signing/pavement marking, erosion control, utility relocations, and maintenance of traffic.

ADOT SR 24 TI, SR 202L to Ellsworth Road- Phase 1, Mesa, Arizona: Lead project engineer responsible for multi-discipline final design and construction documents for 1 mile of SR24 and a system TI at SR 202L. The project included utility, R/W, and environmental clearances and coordination with ADOT, City of Mesa, FCDMC, PMGA, and utilities. Construction included new SR24 mainline, SR202L widening, Ellsworth Rd reconstruction, numerous bridges, retaining walls, onsite and offsite drainage facilities, concrete channel, erosion control, traffic signals, FMS, lighting, signing/pavement marking, and traffic control. *WSP was a subconsultant and worked with Stanley to successfully complete this project.*

ADOT US 60 (Grand Ave)/SR 303L TI – CMAR, Surprise, Arizona: Project manager responsible for design of a system-to-system TI and 2 miles of urban freeway. The project included utility, ROW, and environmental clearances and coordination with ADOT, City of Surprise, BNSF railroad and utilities. Construction included widening a four span SR303L structure over US60 and the BNSF Railroad, retaining and sound walls, onsite and offsite drainage facilities, lighting, traffic signals, FMS, signing/pavement marking, erosion control, utility relocations, and maintenance of traffic.



Structures

Angie Galietti, AZ PE #58889

🕒 50% Available/Committed

📅 15 Years of Experience (6 with WSP)

📖 BS Civil Engineering

Why Angie is Handling Structures

- Led design of 34 ADOT interstate bridges using all delivery methods
- Excels at optimizing bridge design with constructability in mind
- Experienced in anticipating and designing the details needed as part of freeway widening, like bifurcated barrier, bridge widening, culvert headwalls, catch basins, and sign structures

As part of our design team for the South Mountain Freeway, Angie recently assisted with structural design to widen nearly five miles of I-10. In addition to this work, she has played a key role widening interchanges for our SR 101L, Princess Drive to Shea Blvd project, and other freeway widening projects throughout the Valley. She'll apply this experience to widening the TI at Citrus Road, as well as helping Greg and the rest of the team integrate the Jackrabbit TI design.

As a supplementary PM for ADOT, she has developed unique and creative design solutions for bridges throughout the state. Her work exceptional and creative design solutions have been recognized by her peers and she recently spoke at the ACEC Roads and Streets conference about her work coordinating with stakeholders to cross SR 179 in Sedona.

Corporate Title/Role: Assistant Vice President

Professional Experience



ADOT SR 101L, Princess Drive to Shea Boulevard, Scottsdale, Arizona: Angie provided structural design support for the addition of a new general-purpose lane in each direction and the widening of four major structures. She worked with the team to review plans, calculations for retaining walls and substructure design of the widened existing PT box design. WSP's responsibilities include environmental documentation preparation, utility relocation coordination, roadway design, drainage design, geotechnical investigations and reports, structure analyses, traffic design, and construction bid document preparation.

ADOT SR 303L, MC 85 to Van Buren, Goodyear, Arizona: Structures engineer for WSP's subconsultant design of the new SR 303L freeway south of I-10 along the Cotton Lane alignment between MC 85 and Van Buren. Angie leads the design efforts for the Lower Buckeye TI OP and the SR303 mainline structure over SB Frontage Road and SB Elwood Off Ramp.

ADOT SR 202L South Mountain Freeway, Phoenix Metro, Arizona: As structures corridor lead and bridge engineer, Angie was responsible for various aspects of design and detailing for more than 23 bridges along portions of the design-build project. She also assisted in design of miscellaneous structures, soundwalls, and supporting spread footings. As the structures corridor lead from final design through post design, Angie managed submittals, contractor questions, standard details, and bridge consistency with all project bridge designers. WSP is lead designer for Loop 202 South Mountain Freeway. The 22-mile, four-lane freeway will include 13 interchanges; two half-diverging diamond interchanges; one double-roundabout interchange; 40 bridges; a 6-mile, 20-foot-wide adjacent shared-use path for pedestrians, bicyclists, and other non-vehicular traffic; five multi-use underpass crossings; and 4.5 miles of widening improvements for I-10. The project also includes a rigorous quality control process to ensure compliance with the project's technical provisions.

ADOT SR 101L, I-17 to Pima Road DB, Phoenix Metro, Arizona: Structural designer reviewer for GEC services during construction on this GPL widening project that included 13 miles of urban freeway widening, 12 bridge widenings, reconstruction of service TI ramps and gores, and other corridor signing, lighting, and landscape improvements. Angie was responsible for submittal reviews, design oversight, and construction management services. Her responsibilities included stakeholder coordination, alignment of project scope to available budget, preparing requests for qualifications/requests for proposal documents, design phase oversight and plan reviews, project document control, and construction administration tasks including RFI response, resolving field issues, reviewing change orders, and assisting the ADOT RE and inspection staff.

ADOT SR 101L, 75th Avenue to I-17 GPL Widening, Phoenix Metro, Arizona: Structural engineer responsible for supporting final design associated with adding one lane in each direction, system and service TI ramp and gore reconstruction, bridge widenings, on-site drainage, and signing/pavement marking infrastructure. Other corridor improvements include lighting, ITS, and landscaping. WSP is providing roadway, wall, drainage, signing, pavement marking, and bridge design services. Angie worked with the team to review plans, calculations for retaining walls and structural design of the widened existing PT box girder, including phased construction discussions.

ADOT I-10 Ruthrauff Traffic Interchange, Tucson, Arizona: Bridge engineer responsible for oversight, calculations and detailing the Ruthrauff OP and the Davis Avenue Superbox structure. Her responsibilities included the review of post design concerns and contractor questions. WSP provided design services for the traffic interchange at I-10 and Ruthrauff Road. The project widened I-10 to an eight-lane roadway and reconfigured the I-10 Ruthrauff Road traffic interchange, eliminating the at-grade crossing of the Union Pacific Railroad. This project "flipped" the roadway by lowering I-10 and raised Ruthrauff Road over I-10, the Union Pacific Railroad, and Davis Avenue/Highway Drive, while also raising the connecting frontage roads.

ADOT SR 202L, SR 101L to Broadway Road GPL Widening Design-Build, Mesa, Arizona: Structural engineer on this project to widen HOV lanes and add GPLs to SR 202L/ Red Mountain Freeway. While working for the prime firm, Angie was responsible for the County Club TI bridge widening in each direction. The two span bridge widening over Country Club Drive included the addition of (2) AASHTO Type V Prestressed Concrete I-girders on each side of the structure. Superstructure and substructure elements were chosen to mimic existing bridge geometry. Project responsibilities also included design review and coordination of roadway details, retaining walls, and geotechnical reports. The project involved GPL and HOV lane widening along SR 202L, from SR 101L to Broadway. WSP's responsibilities included the design of 20 miles of GPL and HOV lane PCCP widening, four bridge structure widenings, retaining walls, drainage, signing, striping, lighting, maintenance of traffic, landscaping, and freeway management system components of the project.

ADOT I-10/SR 303 TI Phase 2, Phoenix, Arizona: Structural engineer on this project that completed the anchor for the 40-mile SR303L. Angie was responsible for calculations and detailing for the abutment stem design for Ramp ES and the CIP PT Anchorage Zones for WB Frontage Road and Ramp ES. The substructure design included a deep beam analysis utilizing the strut and tie model in order to determine the allowable design.



MOT

Howard Olien, AZ PE #26335

🕒 60% Available/Committed

📅 37 Years of Experience (37 with WSP)

📖 BS Civil Engineering

Howard Will Keep Things Moving

- 30 years of lighting design experience on ADOT freeways with multiple freeway system interchanges and hundreds of miles of median lighting
- Extensive MOT design experience on ADOT's freeway widening projects on SR 101L, SR 202L, and I-10
- Detailed traffic design using MUTCD and ADOT traffic design guidelines

As the MOT Lead, Howard knows maintaining safe traffic flow is critical to the success this project. Working directly with ADOT Central District and Regional Traffic, along with our roadway and construction administration team members, he will bring a hands-on approach to develop the most optimal traffic management plan that maintains safety with the least disruption to the traveling public.

Howard Olien brings extensive experience in transportation engineering, transportation planning, and engineering computer applications, particularly on urban freeways and has led the design of signing, striping, traffic signal, traffic control, lighting, FMS, and MOT design for many similar ADOT projects, including the SR 202L South Mountain, Red Mountain, and Santan Freeways. Howard also served in a design oversight role on the I-10 Broadway Curve and SR 101L Pima Freeway Design-Build projects. He is fluent in many engineering computer applications from highway capacity analysis to lighting analysis. With Howard's many years of experience specializing in detailed traffic design, his level of knowledge and quality is reflective in his work and consistent approach. Howard looks for ways to incorporate the preferences of the ADOT staff into the MOT design to streamline construction. This extensive experience allows Howard to bring a holistic approach to traffic design, especially MOT, as he knows the Phoenix metropolitan area and has designed around various construction techniques and constraints. Howard is available and committed to ensuring the successful delivery of the traffic elements of this project.

Corporate Title/Role: Assistant Vice President

Professional Experience



ADOT SR 202L South Mountain Freeway, Phoenix, Arizona:

Traffic engineer responsible for design of the new median mounted lighting system, and modifications to the existing high mast lighting system for the high occupancy vehicle freeway-to-freeway connections from I-10 to SR 202L, as well as a 4-mile section along the freeway corridor. WSP was responsible for the design of two freeway-to-freeway high occupancy vehicle ramp bridge structures, and median widening of the existing freeway to accommodate new high occupancy vehicle lanes on state Route 202 from Interstate 10 to Gilbert Road. The project included the design of four freeway-to-freeway high occupancy vehicle ramp bridge structures; internal and external widening of the existing freeway to accommodate the high occupancy vehicle lanes and reconfigured interchange ramps; and more than 20 lane miles of Portland cement concrete pavement, retaining walls, drainage, signing, and striping and lighting.

ADOT I-10 Widening Picacho Peak Traffic Interchange to Pinal Air Park Design Services, Pinal County, Arizona:

Traffic engineer responsible for signing, striping, lighting, and traffic control design for a 13-mile section of I-10. Howard designed the traffic control plan, which had a special emphasis on control and use of temporary concrete barrier. WSP provided design services under an advance notice to proceed and an accelerated final design schedule to prepare construction documents for this section of Interstate 10, from the Picacho Peak Traffic Interchange to Pinal Air Park. The design included widening Interstate 10 from four lanes to six lanes, and total reconstruction of the Picacho Peak Traffic Interchange. The firm's responsibilities included extending 42 drainage structures, installing a median barrier, and sign rehabilitation.

ADOT I-10, SR 87 to Picacho Peak Widening Design, Pima County, Arizona:

Lead designer for traffic control, signing/striping, lighting, and traffic signals. WSP provided the final design of proposed improvements on Interstate 10, resulting in an interim widening from two lanes in each direction to three, by adding lanes generally on the outside of the roadways. The goal of the project was to increase capacity and improve traffic operations and safety for this segment of Interstate 10, which extends from the State Route 87 Interchange westbound entrance ramp connection to Interstate 10 to the Picacho Peak State Park. WSP's responsibilities included utility relocation, right-of-way acquisition, construction of two new bridges, drainage facilities, traffic signals, and lighting.

ADOT SR 202L University to Southern, Mesa, Arizona:

Design engineer responsible for lighting and freeway management design for 2 miles of depressed urban freeway. WSP provided design services for a section of the Red Mountain Freeway, from University to Southern Avenue. The project also included the design of three cast-in-place box girder bridges in addition to other construction services. The scope of work involved widening of the existing section of urban freeway between the on-and-off ramps in both the eastbound and westbound direction to facilitate the addition of the auxiliary lanes, as well as the relocation of drainage and flexible manufacturing systems.

ADOT I-10/Bullard Avenue Traffic Interchange, Goodyear, Arizona:

Design engineer responsible for design of signing, striping, traffic control, lighting and a new traffic signal. The project added a new traffic interchange in a rapidly developing suburban area.

ADOT I-10, West Quartzsite Traffic Interchange, Arizona:

Howard designed the traffic control for bridge work and roadway widening for a busy interstate interchange.

ADOT Casa Grande Interstate 10 Mainline Widening Design Services, Phoenix, Arizona:

Traffic control designer responsible for full length temporary signing and striping plans for the two major phases of the project, extensive coordination with the adjacent construction sections, and crossroad/frontage road traffic control during overpass construction. WSP provided the design and preparation of construction plans, technical specifications, and related construction documents for the Casa Grande-Tucson Highway Mainline reconstruction and mainline widening. The project consisted of widening Interstate 10 to an eight-lane roadway section with new service ramps at the Grant Road and Speedway Boulevard traffic interchanges, along with auxiliary lanes between the traffic interchanges.

ADOT Interstate 10/Santan Four-Level System Interchange Design Services, Tempe, Arizona:

Transportation engineer responsible for lighting and freeway management system design. Howard performed lighting analysis using new software and techniques. He also calculated voltage drop analysis and power supply infrastructure for a large scale highmast lighting system. WSP provided design services for the freeway-to-freeway system interchange between Interstate 10 and the new Santan Freeway. The project included the design of 1.5 miles of the Santan Freeway and widening Interstate 10 from four lanes to six general-purpose lanes and two high occupancy vehicle lanes. The Interstate 10/ Chandler Boulevard diamond interchange was also renovated as part of this project, with a new nine-lane bridge structure installed over the widened Interstate 10.



Traffic Engineering Amara Ibeji, AZ PE #40984

- 🕒 70% Available/Committed
- 📅 22 Years of Experience
- 📖 BS Civil Engineering

Amara Makes Projects Safer

- Significant traffic analysis and design experience on ADOT urban freeway facilities, including SR 101L and I-10 widening projects
- Established working relationships with ADOT Traffic Group and TSMO developed through collaborating on numerous projects
- Known for efficiently delivering traffic reports, plans, specifications, and estimates on schedule

Amara has over 22 years of traffic engineering and general design experience. He has extensive ADOT experience spanning over 20 years of projects located throughout the state. Serving as traffic lead on multiple ADOT projects, he has designed over 100 miles of striping, signage and lighting plans, multiple traffic control plans, construction phasing, maintenance of traffic (MOT), ITS/FMS, freeway lighting design elements, traffic signal design and signing and striping.

Over the years, Amara has retained a good working relationship with ADOT staff in various sections. He has served as project manager/lead project engineer or on past ADOT Traffic, District and Project Development On-Call contracts and assignments.

Corporate Title/Role: Assistant Vice President

Professional Experience



ADOT SR 101L, Princess Drive to Shea Boulevard, Scottsdale, Arizona: Amara is serving as Design traffic task lead responsible for all signal, signing, marking, lighting, ITS and traffic control design on this ADOT SR 101 GPL widening along approximately 5 miles of freeway corridor, six intersections and crossroads. Other key elements of this project include ramp and gore reconstruction, bridge widenings, on-site drainage, landscape and freeway wall design. This project is being completed on an accelerated schedule with extensive coordination with multiple team members, agencies, and utility stakeholders.

ADOT SR 101L, 75th Avenue to I-17 GPL Widening, Phoenix Metro, Arizona: Traffic lead supporting scoping and final design for improvements associated with adding one lane in each direction, system and service TI ramp and gore reconstruction, bridge widenings, on-site drainage, and signing/pavement marking infrastructure. Other corridor improvements include lighting, ITS, and landscaping. WSP is providing roadway, wall, drainage, signing, pavement marking, and bridge design services. Amara's responsibilities include segment design management, roadway design, OpenRoads modeling, alternative analyses, stakeholder coordination, utility coordination, risk management, quality control and interdisciplinary coordination.

ADOT SR 303L, MC 85 to Van Buren, Goodyear, Arizona: WSP is a subconsultant providing services for the design of the new SR 303L freeway segment south of I-10 along Cotton Lane alignment between MC 85 and Van Buren. WSP is providing all the traffic analysis evaluating several alternatives for the proposed improvement along SR 303. Twelve different scenarios including existing, 2050 No Build, 2050 Build, and nine different interim alternatives for year 2030 were prepared. The alternative analyses were prepared using Excel, HCS and Synchro and included 4 miles of freeway mainline and 5 interchange ramps/intersections. Amara is leading QA/QC efforts for this work effort reviewing all traffic analysis performed for the proposed alternatives. This includes reviewing MAG data, future traffic volume projections and recommendations provided.

ADOT I-17, Union Hills Road to Jomax Road Widening, Phoenix Metro, Arizona: As lead engineer, Amara led the development of the core traffic elements of this project including development of traffic signal modification plans at two interchanges along I-17, design for 12 ramp meters, design of freeway lighting as well FMS system including DMS and conduit trunkline over a length of over 12 miles. Amara prepared cost estimates and project specifications and provided post design services to address RFIs from the contractor during the project construction.

ADOT SR 303L, US 60 to Happy Valley Design Build, Phoenix Metro, Arizona: Amara led the development of the freeway lighting and FMS design plans on this design build project as well as utility coordination clearance and coordination efforts. The project involved coordination with the various ongoing projects at time of construction, as well as paying attention to desires of the adjoining municipalities including neighboring HOA communities. Specific lighting design criteria was incorporated to minimize any glare into neighboring homes. The project employed median, high mast and offset lighting. FMS infrastructure was designed and incorporated.

ADOT US 93, SR 71 to SR 89, Yavapai County, Arizona: Amara served as subconsultant project manager and traffic lead engineer responsible for preparing signing, marking and traffic control plans on this 5-mile US 93 widening project. US 93 was widened from a two-lane roadway to a four-lane divided highway. The project was led by ADOT statewide project management and involved multiple stakeholders including FHWA, Arizona State Land, Arizona Game and Fish, Yavapai County and the City of Wickenburg. Amara worked closely with multiple ADOT departments as part of this project through design and construction.

ADOT SR 101L & Chaparral Road Intersection Improvement Project Scottsdale, Arizona: Project manager and traffic engineering lead for this project. The major components of the project deliverables included detailed topographic surveys, paving plans detailing the new PCCP and asphalt concrete widening and median modification, relocation of an access road and shoulder slope modification along the farm parcel located at the southeast corner of the TI , traffic signal plan modification, traffic control plan, signing and striping plan, drainage memorandum, drainage plan showing relocation of catch basins, and FMS plans showing relocation of ramp meter conduits and metered load center cabinet. (Relevance to this Project: Project Management, Significant coordination with key stakeholder including Scottsdale Staff, Utility Companies, SRPMIC and TCE development).

ADOT I-10 at Wilmot, Rita, Kolb Traffic Signal Improvement Projects, Tucson, Arizona: Amara served as traffic lead and subconsultant Project Manager on the intersection improvement efforts for three intersections along I-10 in Tucson. Amara led traffic signal and lighting and ITS design efforts on this ADOT on-call traffic assignment. The project involved extensive utility coordination and right of way coordination. Amara prepared service request letters and coordinated with the local power provider to bring power to the three intersections. Project efforts required extensive ROW and TCE coordination with multiple agencies including State Land and the County.



Drainage

Greg Bambauer, AZ PE#37844

🕒 60% Available/Committed

📅 27 Years of Experience (16 with WSP)

📖 BS Hydrology

How Greg Keeps Projects Flowing

- Directed the drainage design on 50± miles of ADOT freeway projects including I-10 and SR 101L GPL/HOV widenings
- Specialized drainage experience that entails urban freeway closed and open systems, flood control facilities, hydraulic modeling, and drainage conveyance
- Proficient at interdisciplinary reviews to ensure no conflicts with other infrastructure

Greg has extensive experience as a drainage engineer/hydrologist, mostly in association with roadway improvement projects. His experience includes hydrologic and hydraulic analyses and design of storm drain, detention basin, cross drainage culvert and channel design, and river hydraulics (including scour analysis and flood-plain mapping). He has worked with assessing letters of map revisions, conditional letters of map revisions, and Federal Emergency Management Agency (FEMA) regulated watercourses, as well as designing to mitigate increases within the FEMA watercourse. He is proficient in using computer programs such as HEC-1, HEC-2, HECRAS, STORMCAD, and etc. His work typically includes preparing and reviewing drainage reports and plans.

Greg also has experience with all aspects of the SWPPP development. He oversees subconsultant SWPPP documents and develops the in-house SWPPP for local projects. He stays apprised of changes to the Environmental Protection Agency's (EPA) National Pollution Discharge Elimination System (NPDES) program by subscribing to periodic updates and reviewing training materials through the EPA's website, as well as local regulations through the Arizona Department of Environmental Quality.

Corporate Title/Role: Senior Vice President

Professional Experience



ADOT SR 101L, Princess Drive to Shea Boulevard,

Scottsdale, Arizona: Greg oversaw drainage design for the addition of a new general-purpose lane in each direction and the widening of four major structures. WSP's responsibilities include environmental documentation preparation, utility relocation coordination, roadway design, drainage design, geotechnical investigations and reports, structure analyses, traffic design, and construction bid document preparation.

ADOT SR 101L, I-17 to Pima Road GEC DB, Maricopa

County, Arizona: Greg served as the Lead Drainage Engineer for DB oversight project. Before the project was advertised for developer selection, prepared design requirements based on DCR conceptual design. Upon developer selection, role shifted into design oversight and coordination with developer design team. Reviewed drainage plans in accordance with the DRs and provided comments and/or approval accordingly.

ADOT SR 101L, 75th Avenue to I-17 GPL Widening,

Phoenix Metro, Arizona: Greg oversaw the final phases of design for this GP Lane widening project. He led the drainage team to implement Stage IV comments and address needed drainage design revisions to meet the drainage needs for the Stage V submittal. He provided drainage quality review and design guidance to meet submittal requirements.

ADOT SR 202L South Mountain Freeway, Phoenix Metro,

Arizona: Lead drainage engineer for three segments on this design build project that will complete the SR 202L from I-10 (Maricopa Freeway) to I-10 (Papago Freeway). As the drainage design lead for three segments of the project, Greg oversaw the day-to-day design activities for approximately 14-miles of the total 22-mile project. He coordinated with segment managers, corridor leads, contractors, and owners. From a drainage perspective, the project included culvert and pavement drainage design using HECRAS, HY-8 and INROADS STORM & SANITARY to compute the hydraulic analyses. FLO-2D modelling was used to confirm the design had no adverse downstream impacts to the Gila River Indian Community. WSP is lead designer for SR 202L South Mountain Freeway.

ADOT I-10 Val Vista to I-8 Final Design Services, Pinal

County, Arizona: Supervising engineer responsible for the oversight and design of drainage facilities for a 9-mile-long interstate widening project. Responsibilities included hydrologic and hydraulic analyses, and design of cross drainage culverts, roadside channels and outlet scour protection. Greg also provided oversight of a subconsultant conducting the on-site drainage design in addition to utility conflict identification and coordination. WSP is providing ADOT with final design of highway widening and roadway improvements for I-10, from Val Vista Road to Junction I-8. Improvements include adding lanes to both the inside and outside of I-10, which includes 12-foot shoulders in addition to reconstructing the ramps at an existing interchange. The project consists of a continuous 2.6-mile section in which the widening only occurs within the median in order to avoid impacting three existing overpasses. The project is designed to increase capacity and improve traffic operations and safety in the surrounding area.

ADOT I-10 Widening Picacho Peak Traffic Interchange to Pinal Air Park Design Services, Pinal County, Arizona:

Project engineer for post design services along I-10, from Grant Road to St. Mary's Road. Greg was responsible for addressing requests for information regarding the drainage portion of the project. WSP provided design services under an advance notice to proceed and an accelerated final design schedule to prepare construction documents for a section of I-10, from the Picacho Peak Traffic Interchange to Pinal Air Park. The design included widening I-10 from four lanes to six lanes, and total reconstruction of the Picacho Peak Traffic Interchange. The firm's responsibilities included extending 42 drainage structures, installing a median barrier, and sign rehabilitation.

ADOT SR 92 Design Services, Hunter Canyon, AZ:

Supervising engineer responsible for oversight of the drainage design. Greg's responsibilities included QA/QC of the plans, specifications, and estimate package; drainage analysis and report; floodplain mapping for several water courses; and design of culverts, roadside channels, and a detention basin. WSP provided general design services to ADOT for widening a 3.5-mile segment of SR 92 from Carr Canyon Road to Hunter Canyon. This project turned SR 92 into a five-lane roadway section and involved the installation of a new wildlife crossing, drainage improvements, utilities, and other infrastructure improvements.



Environmental Anthony Scolaro

- 🕒 50% Available/Committed
- 📅 29 Years of Experience (6 with WSP)
- 📖 Masters in Urban Planning

Anthony Avoids Costly Delays

- Extensive knowledge of NEPA process and ADOT assignment, completing numerous clearance documents and compliance reviews for freeway facilities
- Proven ability to deliver a legally compliant NEPA decision document in an expedited time-frame
- Attentive to detail and implementation of new environmental requirements (cultural and species) and processes (air quality)

Anthony Scolaro has extensive planning experience, specializing in environmental planning conducted in accordance with NEPA for highway, transit, and public works projects.

Currently in charge of environmental planning at WSP's Tempe office, he has managed the public outreach component of numerous transportation studies, including freeway widening projects in Maricopa County, and is skilled in writing and editing technical reports and impact assessments. His experience in environmental planning ranges from minor environmental overview memoranda to managing multiple tasks and reviewing technical reports for major EISs.

Anthony's familiarity with ADOT Environmental Planning staff and procedures qualifies him uniquely for freeway widening project undertaken by the agency. Environmental resource categories for which Anthony has prepared or overseen research and documentation include land use, socioeconomic impacts, Section 4(f) properties, cultural resources, noise impacts, air quality, and hazardous materials.

Corporate Title/Role: Vice President

Professional Experience



ADOT SR 101L, Princess Drive to Shea Boulevard, Scottsdale, Arizona: Anthony led environmental services for the widening of this freeway in both directions including the widening of four major structures. WSP's responsibilities included environmental documentation, utility relocation coordination, roadway design, drainage design, geotechnical investigations and reports, structure analyses, traffic design, and construction bid document preparation. New Air Quality regulations and review staff presented schedule challenges to the environmental clearance that Anthony helped successfully negotiate.

ADOT I-10 Broadway Curve General Engineering Consultant Services, Phoenix, Arizona: As environmental task manager Anthony played a major role in the development of the draft environmental assessment and worked with Arizona Department of Transportation to finalize the EA and FONSI for a schematic design of proposed widening of this section of Interstate 10 for design-build project delivery. Currently Anthony is leading the GEC's environmental compliance oversight on the construction phase of this project. Anthony coordinated completion of a Clean Waters Act Section 404 Individual Permit application as well as a Section 404 Nationwide Permit 33 Compliance memorandum for work in Waters of the United States associated with this project. Being dialed into this I-10 widening project from the EA through public comment, FONSI, procurement, and construction gives Anthony a unique perspective on environmental issues faced in widening this Arizona thoroughfare.

ADOT I-10, Ruthrauff Road TI, Tucson, Arizona: Environmental task manager overseeing the re-evaluation of a prior environmental assessment/Finding of No Significant Impact (FONSI) examining the potential environmental impact of depressing the I-10 mainline and bridging Ruthrauff Road over I-10 and the adjacent Union Pacific Railroad Sunset Route. Changes during final design required right-of-way acquisition and temporary construction easements outside of the previously cleared project footprint. Anthony coordinated with the design team, sub consultants, ADOT Environmental Planning, and ADOT Project Development, as well as other agencies and jurisdictions. This I-10 widening project gave Anthony particular insight into the importance of this Interstate route to local, regional, statewide, and national transportation and commerce. The project widened I-10 to an eight-lane roadway and reconfigured the I-10 Ruthrauff Road traffic interchange, eliminating the at-grade crossing of the Union Pacific Railroad. This project "flipped" the roadway by lowering I-10 and raising Ruthrauff Road over I-10, the Union Pacific Railroad, and Davis Avenue/Highway Drive, while also raising the connecting frontage roads. This reconfiguration dramatically improves the operations and capacity of both I-10 and Ruthrauff Road and significantly enhance the safety of the travelling public.

ADOT I-10, SR 87 to Picacho Peak Widening Design, Pima County, Arizona: Environmental task manager coordinated with subconsultants and ADOT EP to update technical analyses for this widening and realignment project that straightened and flattened I-10 between MP 210 and MP 213. This project required reevaluation of an environmental assessment and Finding of No Significant Impact issued earlier. Drainage structures tied to the widening of I-10 in this segment enlightened Anthony to the multiple disciplines affected when a freeway is widened, similar to the SR85 to Citrus Road project. WSP provided final design of proposed improvements on I-10, resulting in an interim widening from two lanes in each direction to three, by adding lanes generally to the outside of the roadways. The goal of the project was to increase capacity and improve traffic operations and safety for this segment of Interstate 10, which extends from the SR 87 Interchange westbound entrance ramp connection to I-10 to the Picacho Peak State Park. WSP's responsibilities included utility relocation, right-of-way acquisition, construction of two new bridges, drainage facilities, traffic signals, and lighting.

ADOT SR 303L, SR 30 to I-10 Environmental Assessment, Maricopa County, Arizona: Anthony served as environmental task manager who coordinated with ADOT Environmental Planning, subconsultants, and consultant project manager, prepared the draft environmental assessment (EA), supported the public hearing, and prepared the final EA and Finding of No Significant Impact (FONSI) for the extension of SR 303L south of I-10 in Goodyear. This new freeway segment 1 mile east of Citrus Road afforded Anthony a familiarity with this part of the Phoenix West Valley.

ADOT I-17/Willard Springs Road Traffic Interchange, Arizona: Environmental task manager prepared environmental commitments and coordinated with the consultant project manager and Arizona Department of Transportation Environmental Planning to obtain environmental clearance for the design of this bridge replacement project at a traffic interchange within the Coconino National Forest.



Quality

Frank Fry, AZ PE #37622

- 🕒 30% Available/Committed
- 📅 27 Years of Experience
- 📖 BS Civil Engineering

Frank Uses Best Practices for Best Results

- As the quality manager for the WSP AZ offices, Frank is current with best practices and leads training, auditing, and compliance efforts for staff
- Clear understanding of design standards, guidelines, and quality expectations from extensive ADOT freeway design experience (including GPL/HOV widening)
- Key contributor of cost saving solutions developed as part of VE, interdisciplinary and constructability reviews

Frank has more than 25 years of experience in design, project management and quality management of transportation projects for ADOT, TXDOT, and numerous municipalities in the southwestern United States. He serves as WSP's Quality Champion for Arizona. In this role, Frank trains staff on quality best practices, ensures WSP projects meet compliance requirements, and coordinates with Quality Champions nationwide to keep apprised of latest trends and lessons learned. In addition, brings an extensive technical background, performing civil engineering design and utility coordination for all types of roadways, drainage, and development projects. His expertise includes roadway design, intersection design, earthwork balancing, cost estimating, ADA compliance, and special provisions. He is proficient in the use of MicroStation and OpenRoads for roadway modeling, geometric design, earthwork analysis, and plan production. Last fall marked his seventh year teaching a senior-level highway geometric design class as an adjunct professor at the University of Arizona. Frank also assists ADOT supplemental project manager services. Frank's diverse experience makes him an excellent quality compliance manager. His focus on this project will be to ensure that standards are met and guide Greg and our team through a thoughtful process that will ensure overall quality of design.

Corporate Title/Role: Senior Vice President

Professional Experience



SR 101L, I-17 to Pima Road GEC DB: Before the project was advertised for developer selection, prepared design requirements based on DCR conceptual design. Upon developer selection, role shifted into design oversight and coordination with developer design team. Reviewed drainage plans in accordance with the DRs and provided comments and/or approval accordingly.

ADOT SR 202L South Mountain Freeway DB, Phoenix, Arizona: Led the roadway design and production for the easternmost 7-mile segment of the extension, including new traffic interchanges at 40th Street, 32nd Street, 24th Street, and Desert Foothills Parkway. Frank also assisted with earthwork calculations and modeling options through the significant rock-cut portion of Segment A and designed several options at the Desert Foothills Parkway TI including an option to elevate SR 202L above the crossroad. Another significant design feature was designing the alignment between existing ROW "pinch points" east of 40th Street while balancing geometric constraints, superelevation, drainage, and ramp cross slope breakover. Relevance to this project: horizontal and vertical layouts for various types of TIs, utility conflict identification, and detailed earthwork analysis.

ADOT I-10 Widening, Earley Road to I-8, Casa Grande, Arizona: Lead roadway engineer for the reconstruction and widening of I-10. Frank was responsible for roadway design, specifications, engineer's estimate, and post design services. The project included 4-miles of reconstruction to widen I-10 from four lanes to six, replacement of the bridge over Jimmie Kerr Boulevard, and drainage improvements without ROW acquisitions. WSP was responsible for identifying options to reduce costs while maintaining safety and increasing capacity. Approximately two-thirds of the project consisted of inside widening to reduce costs. Due to the extremely flat grades and cross slopes throughout the corridor, the project included detailed vertical profiling to match the existing cross slopes to ensure the proposed median barrier would be constructed at the correct elevation, and also included several segments that were designed to improve the deficient superelevation. Relevance to this project: geometric design, including new bridges, and significant evaluations to reduce ROW impacts and construction costs.

ADOT I-10 Ruthrauff Road TI Design Services, Tucson, Arizona: Utility coordinator and roadway reviewer responsible for utility clearance for all utility relocations within the project corridor, as well as roadway design and earthwork calculation reviews. This project reconstructed I-10 under Ruthrauff Road with ramp, frontage road, and drainage improvements. Due to A+B contracting, a detailed relocation schedule was prepared, including a "linear phase" diagram for each utility, to ensure

that each relocation could be performed on time and without adversely impacting other relocation efforts. This resulted in a reduction of at least three months for the overall relocation schedule. Relevance to this project: Relocation phasing of utilities to meet schedule demands, reducing project costs and schedule.

ADOT I-10, Val Vista to I-8 Widening, Pinal County, Arizona: WSP provided final design of highway widening and roadway improvements for Interstate 10, from Val Vista Road to Junction Interstate 8. Improvements include adding lanes to both the inside and outside of Interstate 10, which includes 12-foot shoulders in addition to reconstructing the ramps at an existing interchange. The project consists of a continuous 2.6-mile section in which the widening only occurs within the median in order to avoid impacting three existing overpasses. The project is designed to increase capacity and improve traffic operations and safety in the surrounding area.

City of Tucson Houghton Road Planning and Design Services, Tucson, Arizona: WSP provided planning and design services for the City of Tucson on a segment of Houghton Road through a series of Regional Transit Authority funded projects. The project included widening Houghton Road to a six-lane curbed, divided arterial roadway with bike lanes, sidewalks, and a multi-use path.

Broadway/22nd Final Design, Tucson, Arizona: lead roadway engineer for the modification of roadway geometrics to develop cross-sections for evaluation of refinements. Frank worked with the construction manager at risk contractor on several occasions to evaluate the design and look for modifications that could improve construction efficiencies. He also assisted with quantity reconciliations between the engineer's estimate and the construction manager at risk guaranteed maximum price. WSP provided design services for drainage improvements, which included new culverts, channels/swales, and a new storm drain system. Scour countermeasure, riprap plunge basin, or riprap apron design was included for each drainage facility requiring protection. River hydraulic modeling using HECRAS was conducted for the major watercourses within the project limits, including the Este Wash, which is a Federal Emergency Management Agency regulated watercourse.

From: [ADOT Business Engagement and Compliance Office](#)
To: [Hebert, Vernon](#)
Cc: ContractorCompliance@azdot.gov
Subject: Bidders List for WSP USA Inc.
Date: Wednesday, November 1, 2023 3:41:07 PM

WSP USA Inc., AZUTRACS Number: [16571](#) has submitted a Bidder/Proposer list for **2024-005** on 11/01/2023 at 3:40 PM MST (UTC - 07:00).

Bidders/Proposers for this firm include:

Firm Name	AZUTRACS #	Expiration Date	Email Address	Phone Number
Cooper Aerial	16537	08/11/2026	Phil@cooperaerial.com	602-678-5111
Corral Design Group, Inc.	10207	10/26/2025	ecorral@corraldesigngroup.com	602-222-9822
Newton Environmental Consulting, LLC	10770	03/09/2026	angie@newtonec.com	602-332-9642
Stanley Consultants, Inc.	11094	06/15/2026	Marketing-Phoenix@stanleygroup.com	602-333-2237

Date: October 11, 2023
TO: ALL INTERESTED PARTIES
SUBJECT: AMENDMENT NUMBER 01
REFERENCE: REQUEST FOR QUALIFICATIONS (RFQ)
CONTRACT NUMBER 2024-005
I-10, SR-85 TO CITRUS ROAD WIDENING

The following revisions are made to the referenced RFQ:

1. All references in the RFQ, ECS Consultant Contract Manual, ECS Information Bulletins and the ECS website related to submitting Statement of Qualifications (SOQ) through eCMS are hereby stricken. SOQ submittals will ONLY be accepted via email to the following address: ECSSOQ@azdot.gov. SOQs emailed to any other address will NOT be accepted.
2. Section 4.20, *Number 4. Professional Liability (Errors and Omissions Liability)*, subsection 4 b of the contract boilerplate, referenced in Section XVII of the RFQ, is changed:

From:

- b. In the event that the professional liability insurance required by this Contract is written on a claims-made basis, the Consultant warrants that any retroactive date under the policy shall precede the effective date of this Contract; and that either continuous coverage will be maintained or an extended discovery period will be exercised for a period of **three (3) years** beginning at the time work under this Contract is completed.

TO:

- b. In the event that the professional liability insurance required by this Contract is written on a claims-made basis, the Consultant warrants that any retroactive date under the policy shall precede the effective date of this Contract; and that either continuous coverage will be maintained or an extended discovery period will be exercised for a period of **eight (8) years** beginning at the time work under this Contract is completed.

Jessica McCall
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.

WSP USA Inc.

CONSULTANT NAME

SIGNATURE

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

Engineering Consultants Section

Katie Hobbs, Governor
Jennifer Toth, Director
Greg Byres, Deputy Director for Transportation/State Engineer
Steve Boschen, Division Director
Korina Lopez, Group Manager

Date: October 18, 2023

TO: ALL INTERESTED PARTIES

SUBJECT: AMENDMENT NUMBER 02

REFERENCE: REQUEST FOR QUALIFICATIONS
CONTRACT NUMBER 2024-005
I-10, SR-85 TO CITRUS ROAD WIDENING

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

Question 1:

The scope of work (page 29 of the RFQ) references the Jackrabbit Trail TI Initial DCR dated September 2023. Can you make this available for review?

Answer 1:

The Department is unable to provide the Initial DCR as it has not been finalized.

Question 2:

Multiple references are made to the DCR (pages 31-32) including "DCR, dated June 2023" throughout the scope of work. Are these meant to be referring to the Scoping Letter, dated June 2023?

Answer 2:

Yes, any references to the "DCR" are meant to reference the Scoping Letter, dated June 2023.

Question 3:

Landscape Architecture and Erosion Control references the DCR – is this meant to be the Scoping Letter? The scoping letter only mentions ADOT Roadside providing the seed mix and reviewing the aesthetics, but does not mention requirements for special aesthetics and landscaping. Can you confirm the intent?

Answer 3:

Any references to the "DCR" are meant to reference the Scoping Letter, dated June 2023. At this time, there is no expectation for aesthetics and landscape design. If this changes, the Consultant will perform these tasks.

Question 4:

Can you provide the signature page for Amendment No. 1?

Answer 4:

Yes, the signature block is now included in Amendment No. 1.

Jessica McCall

Jessica McCall
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.

WSP USA Inc.

Melita

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.: 2024-005

CONTACT PERSON: Joy Melita, PE

E-MAIL ADDRESS: joy.melita@wsp.com

TITLE: Senior Vice President

CONSULTANT FIRM: WSP USA Inc.

ADDRESS: 1230 W Washington Street, Suite 405

CITY, STATE ZIP: Tempe, AZ 85288

TELEPHONE: 480-966-8295

FAX NUMBER: 480-966-9234

DUNS #: 05-666-8700

ADOT CERTIFIED DBE FIRM? (YES/NO)

No

SUBCONSULTANT(S):	TYPE OF WORK	ADOT CERTIFIED DBE FIRM (YES/NO)
<u>Stanley Consultants Inc.</u>	<u>Civil Engineering</u>	<u>No</u>
<u>Cooper Aerial</u>	<u>Supplemental Survey</u>	<u>No</u>
<u>Corral Design Group</u>	<u>Erosion Control and Landscape Design</u>	<u>Yes</u>
<u>Newton Environmental Consulting</u>	<u>Noise Analysis</u>	<u>Yes</u>
<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>

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:	Stanley Consulting Inc.
CONTACT PERSON:	Steve Jimenez
E-MAIL ADDRESS:	JimenezSteve@stanleygroup.com
TITLE:	Principal
ADDRESS:	3133 E. Camelback Road
	Suite 100
CITY, STATE ZIP:	Phoenix, AZ 85016
TELEPHONE:	602-333-2237
FAX NUMBER:	602-333-2333
DUNS #:	87-770-2381

SUBCONSULTANT FIRM NAME:	Cooper Aerial
CONTACT PERSON:	Philip Gershkovich
E-MAIL ADDRESS:	phil@cooperaerial.com
TITLE:	President
ADDRESS:	11402 N. Cave Creek Rd
CITY, STATE ZIP:	Phoenix, Arizona 85020
TELEPHONE:	602-678-5111
FAX NUMBER:	N/A
DUNS #:	62-343-7324

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.

SUBCONSULTANT(S) TABLE:

SUBCONSULTANT FIRM NAME:	Corral Design Group, Inc.
CONTACT PERSON:	Edward 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
DUNS #:	09-725-4846

SUBCONSULTANT FIRM NAME:	Newton Environmental Consulting
CONTACT PERSON:	Angie Newton
E-MAIL ADDRESS:	angie@newtonec.com
TITLE:	Owner
ADDRESS:	9859 East Winchcomb Drive
CITY, STATE ZIP:	Scottsdale, AZ 85260
TELEPHONE:	602-332-9642
FAX NUMBER:	
DUNS #:	08-039-1343

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.

DBE GOAL ASSURANCE/DECLARATION

This Contract is Race Neutral (No DBE Goal-DBE use encouraged).

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.

Joy Melita

Signature

November 8, 2023

Date

Joy Melita, PE

Printed Name

Senior Vice President, Project Principal

Title

SOQ SUBMITTAL CHECKLIST

Place a check mark on the left side of the table indicating compliance with the following:

<input checked="" type="checkbox"/>	Required Page Limit Met
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<input checked="" type="checkbox"/>	Introduction Letter (Including all required elements/statements)
<input checked="" type="checkbox"/>	SOQ Proposal Formatted According to Requirements Listed in Part C and any applicable amendments
<input checked="" type="checkbox"/>	Correct SOQ Certification List Signed and Dated by a Principal or Officer of the Firm
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<input checked="" type="checkbox"/>	Supplemental Services Disclosure Form (REQUIRED for Supplemental Services Contract)
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