

NOTICE TO ALL PROPOSERS

ADDENDUM NO. 1

TO THE REQUEST FOR QUALIFICATIONS FOR

TUCSON AIRPORT AUTHORITY PROJECT

- 20124620 Rehabilitate Runway 6L/24R (Design/Construct)**
- 20124621 Realign Taxiway Hot Spot Mitigation at Taxiway B (Design)**
- 20123492 Reconstruction of Runway 15/33 (Design)**

January 3, 2025

The following Addendum dated January 3, 2025, shall be made a part of the Request for Qualifications (RFQ) dated December 17, 2024, for 20124620 Rehabilitate Runway 6L/24R (Design /Construct), 20124621 Realign Taxiway Hot Spot Mitigation at Taxiway B (Design), and 20123492 Reconstruction of Runway 15/33 (Design).

GENERAL

1. The Pre-Submittal Conference Summary dated January 3, 2025, and associated sign-in sheets are attached to this Addendum No. 1.
2. We are attaching RW 6L/24R pavement evaluation report to this addendum

CHANGES TO DOCUMENTS

The following adjustments have been corrected to the Selection Criteria.

Selection Criteria	Relative Weight of Selection Criteria (Total = 100 points)
(A) General Information, Workload, and Proposed Project Schedule	15
(B) Firm Qualifications and Experience	20
(C) Staff Qualifications and Experience (Project Team)	25
(D) Client References	5
(E) Quality Control Plan	10
(F) Project Approach	25

RESPONSES TO QUESTIONS

Q1: Please confirm that the *Dollar Amount* in the Statement of Proposed DBE Utilization is to be left blank in accordance with Section 3(G) No Price or Cost Information.

ANSWER: Please leave Dollar Amount blank.

Q2. We respectfully request clarification from TAA, regarding the completion of an SF330 Part I and II as part of the consultant response.

ANSWER: We are omitting the requirement for the SF330 for this RFQ

Q3: Section VI, Subsection A, 2, b asks the respondent to “Provide a chart that shows the percentage of firm’s total work-hour capacity that its current work represents...” Can you clarify this request? We are a firm that has offices nationwide, are you looking for this information for the entire firm or the key personnel/office that is performing the work?

ANSWER: The Key Office and Personnel that the firm assigned to the proposed projects

PRE-SUBMITTAL CONFERENCE SUMMARY

Project Number/Name: 20124620 Rehabilitate Runway 6L/24R (Design/Construct)
20124621 Realign Taxiway Hot Spot Mitigation at Taxiway B (Design)
20123492 Reconstruction of Runway 15/33 (Design)

Date: January 2, 2025

Time: 9:00 a.m.

Location: Ryan Airfield Administration Building

Project Funding: TAA/FAA/ADOT

TAA Contract Administrator: Debbie Cruz

TAA Project Director: Dexter DeVera

SIGN-IN AND INTRODUCTIONS

1. See attached sign-in sheet for attendees.
2. Sara Perry welcomed all attendees and made brief introductions. She indicated that the minutes of the pre-submittal conference and the sign-in sheets would be distributed to all attendees and RFQ holders of record.

GENERAL INFORMATION

1. The Project will be funded by FAA and ADOT grants, and TAA funds. All Federal and State provisions will apply. During construction, the Contractor will be responsible for submitting certified payrolls and the Consultant will be required to submit the required FAA Weekly Construction Progress Reports.
2. The selected Respondent will be required to provide programming, design, estimating, construction documents and bidding assistance, and construction administration services for the project.
3. TAA shall not be held responsible for any oral instructions. All questions must be in writing and should be directed to via email Debbie Cruz, (dcruz@flytucson.com). Any changes to this RFQ will be in the form of an Addendum, which will be furnished to all registered RFQ holders.
4. This RFQ does not obligate TAA to award the contract to any firm or to pay any cost incurred in the proposal process or in the preparation of Statements of Qualifications

(SOQs) submitted in response to this RFQ. TAA reserves the right to reject any and all SOQs or to accept any firm which is deemed to be advantageous to the public and TAA.

5. The SOQ and other requested information must be completed, in its entirety, to the best of the Respondent's ability and the Respondent must represent and warrant that all information contained therein is true and correct to the best of Respondent's knowledge.
6. No representative or agent of the Respondent may contact any member of the staff or Selection Committee, any member or director of TAA or any other agent or consultant of TAA, either directly or indirectly, except as follows: all questions related to the RFQ or RFP process and questions regarding the project may be directed in writing to Debbie Cruz via email at dcruz@flytucson.com.
7. Until an award and execution of a contract by TAA, only the name of each Respondent on the short list may be made available to the public. All other information received by TAA in response to this RFQ or contained in the SOQs shall be confidential. The SOQs will be open to public inspection after the contract is awarded and executed by TAA. To the extent the firm designates, and TAA concurs, trade secrets and other proprietary data contained in the firms' SOQs will be kept confidential.
8. Any questions that Respondents may have about the RFQ, or the project should be emailed to Debbie Cruz no later than Wednesday, January 8, 2025. Answers will be provided via Addendum to all RFQ holders of record. A final Addendum, if necessary, will be issued on Friday, January 10, 2025. Respondents who have obtained a copy of the RFQ through a source other than TAA should confirm that they are included on the TAA RFQ holder list to ensure receipt of all Addenda.
9. DBE. It is the policy of the Department of Transportation ("DOT) and TAA that Disadvantaged Business Enterprise firms ("DBEs") as defined in 49 CFR Part 26 (the "DBE Regulations), shall have a fair and equal opportunity to participate in the performance of contracts financed in whole or in part with federal funds. TAA, in compliance with 49 CFR § 26, has adopted a program regarding the participation of DBEs on federally funded projects. A copy of this program is available upon request. TAA has set an aspirational 7% (7% of the dollar value of the contract) DBE participation goal for this contract. DBE participation is determined according to the standards and rules set forth in the DBE Regulations, and the firm should consult those regulations (see 49 CFR § 26.55 in particular). If a proposer or subconsultant of the proposer are certified as DBE, the work performed by both shall be counted towards meeting the aspirational goal. Any work performed by a non-DBE proposer or subconsultant shall not. The firm must make a "good faith effort" to meet the stated aspirational participation goal. The firm should consult Appendix A of the DBE Regulations for guidance on what constitutes "good faith efforts." **As a matter of responsibility, firms must complete and submit the "Statement of Proposed DBE Utilization" in the form provided, with its submittal, including evidence of good faith effort related to TAA's goal if the 7% aspirational goal is not met in part or in**

full. Firms and firms' subcontractors/subconsultants who are submitting as DBEs must be certified DBEs in Arizona in good standing prior to the date submittals are due. TAA recognizes current DBE certifications by the Arizona Department of Transportation (ADOT), City of Phoenix, and City of Tucson. For information regarding DBE firms recognized by TAA, or if you have any questions about TAA's DBE Program, please contact Bert Resimont, TAA DBE Liaison Officer, at 520-573-8100.

The successful proposer will be required to submit the following information: (1) the names and addresses of DBE firms that will participate in the contract; (2) a description of the work that each DBE firm will perform; (3) the percentage of utilization of each DBE firm participating; (4) written documentation of the bidder/proposer's commitment to use a DBE subcontractor whose participation it submits to meet the aspirational contract goal; and (5) if the proposer cannot meet the aspirational DBE goal in part or in full, evidence of good faith effort undertaken by the proposer as described in Appendix A to 49 CFR Part 26. To count toward meeting a goal, each DBE firm must be certified in a NAICS code applicable to the kind of work the firm would perform on the contract.

As a condition of the agreement between the parties, the firm awarded the contract will be required to report DBE participation efforts listing (1) all certified DBE subcontractors who will be working on the Project, including work performed by firm's own forces if firm is a DBE and (2) the estimated amount of dollars that will be paid to any DBE subcontractor providing services. This information will be reported on a form to be provided by TAA. In addition, firm must provide written confirmation from each DBE of its participation in the firm's work. Firm will be required to track all payments to DBEs working on the Project. At the completion of the Project, firm will be required to complete and submit a final certification of payments to DBE firms on a form to be provided by TAA.

PROPOSAL REQUIREMENTS

1. Sara Perry indicated that SOQ requirements are outlined in Section VI of the RFQ, beginning on page 8.
2. Respondents should review the insurance requirements on page 6 of the RFQ to confirm they can comply.
3. Client references provided in the SOQs should be current, limited to the last 5 years, and should not include TAA.
4. Failure on the part of a Respondent to provide any portion of the required documentation may be cause for rejection of the SOQ. Resolution of any conflict between any of the SOQ documents that may arise shall be at TAA's sole discretion.
5. SOQs are due on or before 2:00 p.m. Local Tucson Time on Thursday January 16, 2025, at TAA's Administration Building, 7250 S. Tucson Blvd, Suite 300, Tucson, Arizona 85756

and must be time stamped by the receptionist to record TAA's receipt of the SOQ. SOQs submitted after that time and date may not be accepted.

6. One (1) Original and Five (5) copies of the SOQ should be submitted to TAA and should be clearly labeled with the project title and number and the Respondent's name and addressed to the attention of Debbie Cruz, Procurement Administrator.
7. SOQs may be withdrawn either personally or by written request any time before the scheduled date and time of receipt.

SELECTION PROCESS:

1. TAA is conducting a selection process in accordance with the requirements of Title 34 A.R.S. to select one firm to provide consulting services for the project listed in the RFQ.
2. SOQs from interested firms will be evaluated by a Selection Committee, which will rank the SOQs based on qualifications and select three to five Respondents to be short-listed. All Respondents will be notified as to which firms have been selected for the short list. Short-listed firms will be scheduled for interviews.
3. Short-listed firms must be available for an interview scheduled for Wednesday, February 19, 2025.
4. The Selection Committee will then prepare a final ranking of the short-listed firms, which will be submitted to the TAA Vice President of Planning and Development Division for final review and approval of the highest ranked firm.

SCOPE OF WORK:

1. Dexter De Vera indicated that submission of a Construction Management Plan is anticipated.
2. Dexter De Vera reviewed the Scope of Work.

DISCUSSION:

The floor was opened to questions and answers and discussion followed.

1. For Project 20124620 Rehabilitat Runway 6L/24R, did you say Bid opening or Design complete by May 1, 2025?

ANSWER: Bid opening no later than May 1, 2025.

2. For Project 20124620 Rehabilitat Runway 6L/24R, would it be just removing asphalt?

ANSWER: We believe there will no sub removal, just removing asphalt based on investigation and design.

3. In shortening Runway 15/33, are you thinking of taking the taxiway back to the hold line?

ANSWER: Our key goal for this project is to eliminate the hot spot.

4. Is there a need for an environmental assessment for these projects?

ANSWER: TAA has submitted a simplified CATEX for all three projects.

5. For projects 20124621 Realign Taxiway Hot Spot Mitigation at Taxiway B and 20123492 Reconstruction of Runway 15/33, are construction administration services within the scope?

ANSWER: Currently these projects are just for the design services (Level I and II).

6. For projects 20124621 Realign Taxiway Hot Spot Mitigation at Taxiway B and 20123492 Reconstruction of Runway 15/33, will these be one Bid package or two?

ANSWER: At this time, the TAA is anticipating that both projects can be designed into one design package, but there should be two bid schedules for ease of tracking the two separate grants.

7. Will all of the connected taxiways going to 15/33 remain or does TAA want them to be adjusted?

ANSWER: TAA would like to have them designed as close as possible to the FAA requirements.

7. Please confirm that the crosswind Runway and only one Runway can be closed at one time?

ANSWER: One Runway must remain open. The crosswind Runway and one other Runway can be closed at the same time.

8. It appears the Selection Criteria is missing point assignments for the Project Approach. Should the Selection Criteria chart be adjusted?

ANSWER: Yes. This is addressed in Addendum #1.

Attendees were reminded that the SOQ due date and time is Thursday, January 16, 2025, at 2:00 p.m.

The conference adjourned at 9:27 a.m., and a site visit was conducted.

The above is intended to be a summary of the proceedings as recalled by Sara Perry. The proceedings were tape-recorded and the tape is on file in the TAA Planning & Development Department.

Tucson Airport Authority
7250 S Tucson Blvd., Ste. 300
Tucson, AZ 85756
(520) 573-8100

ATTENDANCE SIGN IN SHEET



Pre-Submittal Conference

20124620 Rehabilitate Runway 6L/24R (Design/Construct), 20124621 Realign Taxiway Hot Spot Mitigation at Taxiway B (Design), 20123492 Reconstruction of Runway 15/33 (Design)

Date: January 2, 2025	Time: 9:00 a.m.	Location: Ryan Conference Room	
NAME	ORGANIZATION	PHONE	EMAIL ADDRESS
Dexter DeVera	TAA	(520) 573-8100	ddevera@flytucson.com
Sara Perry	TAA	(520) 573-8100	sperry@flytucson.com
Debbie Cruz	TAA	(520) 573-8100	dcruz@flytucson.com
Kathy Myers	TAA	(520) 573-8100	kmyers@flytucson.com
Bert Resimont	TAA	(520) 573-8100	bresimont@flytucson.com
Adam Kretschmer	TAA	(520) 573-8100	akretschmer@flytucson.com
Victor Palma	TAA	(520) 573-8100	vpalma@flytucson.com
Carolyn Laurie	TAA	(520) 573-8100	claurie@flytucson.com
Scott Robidoux	TAA	(520) 573-8100	srobidoux@flytucson.com
Lance Belhumeur	TAA	(520) 573-8100	lbelhumeur@flytucson.com
Brett Shank	RS&H	(505) 933-9830	brett.shank@rsandh.com
Pedro Barragan	RDM	(813) 251-6662	pbarragan@rdmintlinc.com

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Pre-Submittal Conference

20124620 Rehabilitate Runway 6L/24R (Design/Construct), 20124621 Realign Taxiway Hot Spot Mitigation at Taxiway B (Design), 20123492 Reconstruction of Runway 15/33 (Design)

Date:	January 2, 2025	Time:	9:00 a.m.	Location:	Ryan Conference Room
Jim Cunningham	Dibble	(520) 495-4065	jim.cunningham@dibblecorp.com		
Brandon Robinson	Kimley-Horn	(602) 906-1185	brandon.robinson@kimley-horn.com		
Mike Smejkal	Stantec	(520) 419-3621	mike.smejkal@stantec.com		
Lance McIntosh	C&S	(602) 769-0563	lmcintosh@cscos.com		
Jose Aguilar	Ardurra	(520) 271-6496	jagilar@ardurra.com		
Scott Sikel	HDR	(602) 999-0684	scott.sikel@hdrinc.com		
Mike Wall	WSP	(585) 261-6634	michael.wall1@wsp.com		
Duane Dana	Dibble		duane.dana@dibblecorp.com		
Sylia Romo	Dibble		Sylvia.Romo@dibblecorp.com		
Ryan Hayes	Mead & Hunt		Ryan.Hayes@meadhunt.com		
Drew Seybold	Mead & Hunt		Drew.Seybold@meadhunt.com		
Kimberly Noe	Stantec		Kimberly.Noe@stantec.com		
Matthew Munden	ADOT		mmunden@azdot.gov		

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Pre-Submittal Conference

20124620 Rehabilitate Runway 6L/24R (Design/Construct), 20124621 Realign Taxiway Hot Spot Mitigation at Taxiway B (Design), 20123492 Reconstruction of Runway 15/33 (Design)

Date:	January 2, 2025	Time:	9:00 a.m.	Location:	Ryan Conference Room
	<u>Jeff Webbe</u>		<u>ADOT</u>		<u>jwebbe@azdot.gov</u>

July 15, 2024

Tucson Airport Authority
7250 South Tucson Boulevard, Suite 300
Tucson, Arizona 85756

Attn: Victor Palma

Re: Pavement Evaluation
Ryan Airfield, Runway 6L-24R
9698 West Tucson-Ajo Highway
Pima County, Arizona

WT Job No. 29-424341-0

Western Technologies Inc. (WT) has completed a limited pavement evaluation of Runway 6L-24R in accordance with WT Proposal No. 29-424341-P, dated July 11, 2024. The purpose of our services was to evaluate the existing pavement conditions (transverse cracking in particular) and to provide recommendations for mitigation of current distresses and options to restore the surface of the runway.

1.0 PROJECT DESCRIPTION

Based on information provided by Victor Palma of the Tucson Airport Authority (TAA), we understand that Runway 6L-24R was reconstructed in 2011 by treating 12 inches of subgrade soil with lime, placing 6 inches of aggregate base course, then paving 3 inches of asphalt concrete.

Since transverse cracks over 2 inches wide developed in the asphalt concrete over time, the pavements along Runway 6L-24R were repaired in October 2023 by saw-cutting on either side of then-existing cracks, removing the cracked asphalt, and placing new asphalt concrete. In general, saw cuts were about 2 feet wide; however, some areas were expanded to encompass additional cracking (e.g., Location R5, see photo log page A-3). Cracks less than 2 inches were crack-sealed and the entire runway was then seal-coated.

In the 8 months since repairs were made, relatively large cracks have opened on each side of the repaired areas. In addition, transverse cracks that were previously not repaired because they were less than 2 inches wide have now grown to be greater than 2 inches wide.

We understand the asphalt concrete used to repair the cracks in 2023 was Mix Code 311512J from Vulcan Material Company's Orange Grove Plant. According to the mix design, the asphalt concrete is described as a PAG 2 High Volume mix using 5.9 percent PG 70-10 binder and having design air voids of 3.9 percent. The Marshall bulk density is listed at 142.8 pcf and the Rice

theoretical maximum density is listed at 148.6 pcf. No information is currently available about the original asphalt concrete from 2011.

Should any of our information or assumptions not be correct, the Client will notify WT immediately.

2.0 VISUAL EVALUATION

WT visually evaluated the current surficial conditions of the runway on July 11, 2024. In general, the asphalt concrete along the runway is in very good condition. The only issues from a pavement condition index standpoint are the presence of longitudinal and transverse cracks. There are relatively few cracks; however, the cracks observed are relatively wide.

There were two areas along the centerline where longitudinal cracks were observed extending on the order of 100 feet. These cracks are on the order of 3/4-inch wide and currently sealed.

Transverse cracks were observed at spacings varying from about 100 feet to about 500 feet. It appeared that 10 of the transverse cracks had been repaired in 2023 and 5 had not been repaired.

Within the 10 repaired areas, the joints on either side of the repairs had opened up creating what are essentially 2 new cracks where 1 had been present before. The joints varied from hairline to over 2 inches wide. Joint sealant had been applied to these cracks, but the joint sealant had sunk into the cracks in most areas leaving open gaps at the surface.

Photos of each repaired and unrepaired crack are shown on the attached photo log. Repaired areas have been identified as photos R1 through R10. Unrepaired cracks have been identified as U1 through U5 and longitudinal cracks have been identified as L1 and L2. Numbers were assigned by counting from the west near Runway 15-33 to the east.

3.0 FIELD EXPLORATION

WT cored the existing runway pavements at 6 locations where transverse cracks had been removed and repaired in 2023. A 7th core was obtained in the existing asphalt concrete adjacent to a patch for comparison. All cores were marked and taken to WT's Tucson laboratory for evaluation of thickness and unit weight. Upon completion of the cores, the holes were patched with hot-mix asphalt concrete.

The numbers given to each core were intended to correspond to the number of the patch established by counting from the west (at Runway 15-33) and moving east. It was discovered later that the patches were mis-counted in the field. Therefore, the numbers of the cores have been updated and the original core numbers have been designated with a strike through on the attached test results form.

4.0 LABORATORY EVALUATION

Cores of the asphalt concrete were evaluated for thickness and unit weight. The unit weights were then compared to the theoretical maximum density listed in the mix design to calculate in-place air voids. Results are attached and are summarized in Table 1, below.

Table 1: Asphalt Concrete Core Result Summary

Core No.	Thickness (in)	Unit Weight (pcf)	Theoretical Max. Density (pcf)	In-Place Air Voids (%)
R1	4.87	137.9	148.6	7.1
R2	4.76	131.0	148.6	11.8
R6	4.81	127.7	148.6	14.0
R7	5.23	129.8	148.6	12.6
7B	3.21	141.4	148.6 ¹	4.7
R9	5.27	132.7	148.6	10.6
R10	4.99	135.8	148.6	8.5

5.0 CONCLUSIONS

5.1 General

Runway 6L-24R appears to be in very good condition with the exception of excessively wide transverse cracking. It is inevitable that asphalt concrete will shrink and crack over time; however, the circumstances along Runway 6L-24R are unusual as described below.

5.2 Transverse Crack Frequency

Typically, transverse cracking occurs every 20 to 50 feet and cracks range from hairline to about 3/4-inch wide. Asphalt concrete along Runway 6L-24R has transverse cracking occurring about every 100 to 500 feet. The result is that the fewer number of cracks have resulted in relatively wide cracks.

Looking at the approximately 3,880-foot-long portion of Runway 6L-24R that is east of Runway 15-33 and considering the 10 transverse cracks that were repaired in 2023 and 5 transverse cracks that have not been repaired, having only 15 transverse cracks in this distance is an unusually small number. That averages to be about 1 transverse crack for every 260 feet of length.

¹ The asphalt concrete used for runway construction in 2011 is not known; however, for comparison purposes, the same theoretical maximum density was used for all cores.

5.3 High In-place Air Voids

Laboratory test results indicate that the asphalt concrete placed within the patches in 2023 was not compacted to standards that would apply to typical pavements. Generally, in-place air voids in asphalt concrete are intended to be less than about 7 or 10 percent, depending on the application and the specifications. As examples, PAG (Pima Association of Governments) Standard Specifications for Public Improvements indicates in-place air voids of 7.0 percent and less are acceptable. FAA (Federal Aviation Administration) Standard Specifications for Construction of Airports (AC 150/5370-10H) indicates in-place air voids of 7.2 percent and less are acceptable for surface course mat density and in-place air voids of 9.5 percent and less are acceptable for joint density.

In this case, the asphalt concrete in the patches indicated in-place air voids ranging from 7.1 to 14.0 percent with an average of 10.8 percent for the 6 cores obtained for this evaluation. When asphalt concrete is not compacted adequately and the in-place air voids are high, then the pavement is susceptible to a higher degree of shrinking and cracking.

5.4 Thickness

The 10 patches that were made in 2023 appear to have resulted in asphalt concrete thicknesses of between 4-3/4 inches and 5-1/4 inches, as shown in Table 1. This is substantially more than the 3 inches of existing pavement from 2011. While thicker asphalt concrete may initially appear to be beneficial for the long-term performance of the patches, the thickness of the patches may have hampered the contractor's ability to adequately compact the material during repair work. Depending on the mix and the contractor's equipment, asphalt concrete lifts are typically limited to between 1-1/2 inches and 4 inches. The compaction equipment used for the 2023 repairs may not have been sufficient to compact a roughly 5-inch lift of asphalt concrete in such narrow areas.

5.5 Seal Coating

In general, seal coating asphalt concrete is recommended on a regular basis to protect pavements and extend their services life. It should be noted; however, that having a fresh seal coat with a dark black finish does cause asphalt concrete to absorb more heat from sunlight and undergo more thermal expansion and contraction than a gray, non-seal-coated pavement. Applying the black seal coat may have contributed to the seemingly quick development and growth of transverse cracks reported after the 2023 repair project. Overall, however, the use of seal coats to preserve and protect asphalt concrete is preferable to leaving pavements unsealed.

6.0 RECOMMENDATIONS

Based on the results of our evaluation, we recommend that transverse cracks less than 1 inch be filled with crack sealer and that cracks greater than 1 inch be repaired by removal and replacement.

In project specifications for crack repair by removal and replacement, the width of the repair should be at least as wide as the compaction equipment proposed for use by the contractor. This

might mean that 3- or 4-foot-wide patches are used to accommodate a relatively narrow, vibrating smooth-drum roller.

Likewise, the thickness of the patches should be at least 3 inches to match the existing pavement, but it must also be within the compaction abilities of the equipment proposed for use by the contractor. A 3-inch-thick, well compacted patch is better and will perform longer than a 5-inch-thick, under-compacted patch.

Finally, consideration should be given to performing cores within new pavement patches to verify the degree of compaction achieved by the contractor. There are some in the engineering and construction community who might assert that contractors should not be held to compaction specifications for patches; however, it would be prudent to evaluate whether the pavement patches have been adequately compacted and will be suitable for the long-term performance of the runway.

In addition to drilled cores in the new pavement patches, samples of the hot mix asphalt should be obtained during construction to determine the theoretical maximum density that will be used in the calculation of in-place air void contents of the cores.

7.0 CLOSURE

We prepared this report as an aid to the owner of the airport and their consultants and contractors. The comments, statements, recommendations and conclusions set forth in this report reflect the opinions of the authors. These opinions are based upon data obtained at the location of the explorations, and from visual observations. Work on your project was performed in accordance with generally accepted standards and practices utilized by professionals providing similar services in this locality. No other warranty, express or implied, is made. If you have any questions or if we can be of further assistance, please contact us.

Sincerely,
WESTERN TECHNOLOGIES INC.



Registered Professional Engineer (Civ/Il)
CERTIFICATE NO. 27776
RANDALL D. HARRIS
Date Signed 7/15/24
ARIZONA, U.S.A.

Randall D. Harris, P.E.
Tucson Area Manager



Registered Professional Engineer (Civ/Il)
CERTIFICATE NO. 43814
JUSTIN M. HEINECKE
Date Signed 7/15/24
ARIZONA, U.S.A.

Justin M. Heinecke, P.E., R.G.
Geotechnical Services Manager

Enclosures

Attachment A: Photographic Log
Ryan Airfield Runway 6L-24R Pavement Evaluation
WT Job No. 29-424341-0

Repaired Transverse Cracks: 1st and 2nd from West



R1. View north.



R1. View south.



R2. View north.

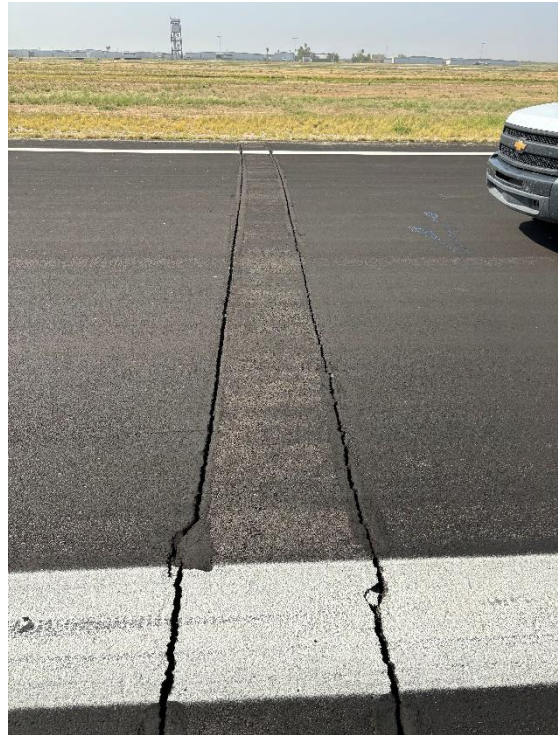


R2. View south.

Repaired Transverse Cracks: 3rd and 4th from West



R3. View north.



R3. View south.



R4. View north.



R4. View south.

Repaired Transverse Cracks: 5th and 6th from West



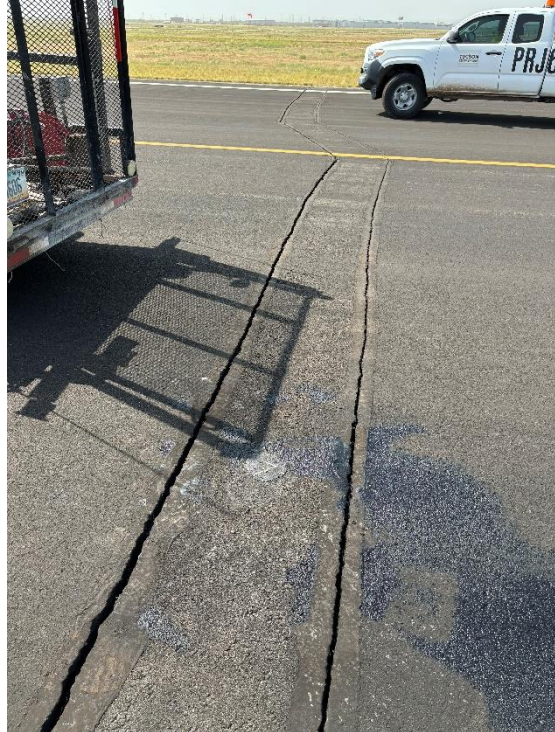
R5. View north.



R5. View south.



R6. View north.



R6. View south.

Repaired Transverse Cracks: 7th and 8th from West



R7. View north.



R7. View south.



R8. View north.



R8. View south.

Repaired Transverse Cracks: 9th and 10th from West



R9. View north.



R9. View south.



R10. View north.



R10. View south.

Un-repaired Transverse Cracks: 1st and 2nd from West



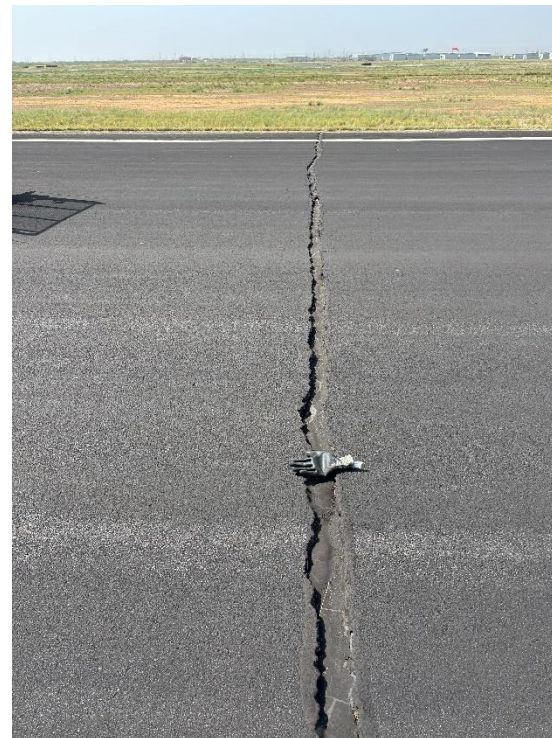
U1. View north.



U1. View south.



U2. View north.

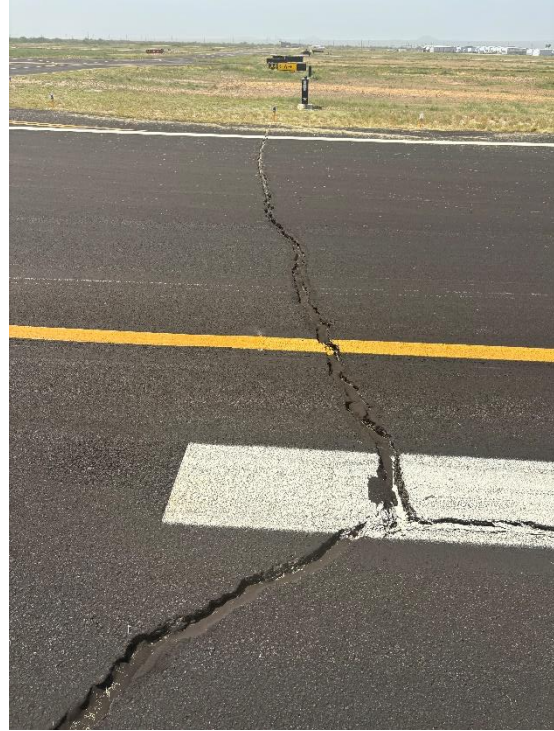


U2. View south.

Un-repaired Transverse Cracks: 3rd and 4th from West



U3. View north.



U3. View south.



U4. View north.



U4. View south.

Un-repaired Transverse Cracks: 5th from West



U5. View north.



U5. View south.

Longitudinal Cracks: 1st and 2nd from West



L1. View west.



L2. View west with Crack U3 in foreground.


**DENSITY TESTS ON ASPHALT
CONCRETE**

 Date of Report **07/15/24**

 Client **TUCSON AIRPORT AUTHORITY**
7250 SOUTH TUCSON BOULEVARD, SUITE 300
TUCSON, ARIZONA 85756

 Job No. **29-424341-0** Page **1** of **1**

 Event No. **1** Lab No. **34278**

 Authorized By **VICTOR PALMA** Date **07/11/24**

 Sampled By **HARRIS/WT** Date **07/11/24**

 Submitted By **HARRIS/WT** Date **07/11/24**

 Project **RYAN AIRFIELD EMERGENCY PAVEMENT EVALUATION**

 Location **RUNWAY 6L-24R**

 Type of Asphalt Concrete **PAG 2 HIGH VOLUME**

 Supplier / Source **VULCAN/ORANGE GROVE**

 Control Density, pcf **148.6** per **THEORETICAL RICE**

 Product Code **311512J**

 Maximum Theoretical Density, pcf **148.6**

 Placement Date **10/23?**

Reference/Lab No. *

 Mat Specification **93.0** % Minimum

Ambient Temp., °F

 Joint Specification **--** % Minimum

 Specified thickness, in. **3.0** Tolerance, in. **1/4**
TEST RESULTS

TEST / SPECIMEN NO.	TEST LOCATION, HORIZONTAL	TEST LOCATION, VERTICAL
R1	1ST PATCH FROM WEST, NORTH OF CENTERLINE	100.0
R2	2ND PATCHE FROM WEST, SOUTH OF CENTERLINE	100.0
7 R6 **	6TH PATCH FROM WEST, NORTH OF CENTERLINE	100.0
8 R7 **	7TH PATCH FROM WEST, SOUTH OF CENTERLINE	100.0
8B 7B **	EXISTING RUNWAY NEAR CORE 7	100.0
10 R9 **	9TH PATCH FROM WEST, NORTH OF CENTERLINE	100.0
11 R10 **	10TH PATCH FROM WEST, NEXT TO CENTERLINE	100.0

 CORE METHOD: BULK SPECIFIC GRAVITY & DENSITY OF BITUMINOUS MIXTURES - SAMPLING ASTM D5361 MAG 321

 THICKNESS ASTM D3549 SATURATED SURFACE DRY SPECIMENS: ASTM D2726 AASHTO T166

 COATED SPECIMENS ASTM D1188 AASHTO T275

SPECIMEN NO.	AVERAGE THICKNESS (HEIGHT), IN.	BULK S.G.	% WATER ABSORPTION	TMD*	% COMPACTION	% AIR VOIDS	IN SPEC.			COMMENTS
							THICKNESS	COMPACTION	AIR VOIDS	
R1	4.87	2.215	--	2.385	92.9	7.1	YES	NO	NO	PARAFILM
R2	4.76	2.104	--	2.385	88.2	11.8	YES	NO	NO	PARAFILM
7 R6 **	4.81	2.051	--	2.385	86.0	14.0	YES	NO	NO	PARAFILM
8 R7 **	5.23	2.085	--	2.385	87.4	12.6	YES	NO	NO	PARAFILM
8B 7B **	3.21	2.272	0.8	2.385	95.3	4.7	YES	YES	YES	
10 R9 **	5.27	2.132	--	2.385	89.4	10.6	YES	NO	NO	PARAFILM
11 R10 **	4.99	2.182	--	2.385	91.5	8.5	YES	NO	NO	PARAFILM

 Comments: **FINISHED ASPHALT GRADE = 100.0 FT**
*** REF VULCAN MIX DESIGN FOR THEORETICAL MAXIMUM DENSITY**
**** PATCHED AREAS WERE MIS-COUNTED IN FIELD; INCORRECT CORE NUMBERS HAVE STRIKE-THROUGHS**

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 REVIEWED BY: **/S/ RANDY HARRIS**

(SIGNED ORIGINAL ON FILE)