APPENDIX A
Cultural Resources Consultation

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PROGRAMMATIC AGREEMENT

AMONG

FEDERAL HIGHWAY ADMINISTRATION
ARIZONA STATE HISTORIC PRESERVATION OFFICE
ARIZONA DEPARTMENT OF TRANSPORTATION
ARIZONA STATE LAND DEPARTMENT
UNITED STATES ARMY CORPS OF ENGINEERS
TOHONO O'ODHAM NATION

REGARDING IMPROVEMENTS TO INTERSTATE 10 (I-10)
MILEPOSTS 247.48 to 253.00

INA ROAD TRAFFIC INTERCHANGE (TI)
010-D(216)S
010 PM 247 H8479 01D

INA ROAD TI TO RUTHRAUFF ROAD TI
010-D(211)L
010 PM 247 H7583 01L

RUTHRAUFF ROAD TI
010-D(213)S
010 PM 252 H8480 01D

AND

IMPROVEMENTS TO INA ROAD AND THE INA ROAD BRIDGE
I-10 INA ROAD TI TO SILVERBELL ROAD
BR-MRN-0(014)A
0000 PM MRN SB413 01C

PIMA COUNTY, ARIZONA

WHEREAS, the Federal Highway Administration (FHWA) and the Arizona Department of Transportation (ADOT) propose to widen and reconstruct Interstate 10 (I-10) between north of Ina Road and south of Ruthrauff Road and to improve Ina Road and the Ina Road Bridge over the Santa Cruz River between N. Oldfather Road east of the Ina Road Traffic Interchange (TI) and Silverbell Road (refer to map in Appendix A), federally funded projects in Pima County, Arizona (hereafter referred to as "Undertakings"); and

WHEREAS, this programmatic agreement (Agreement) supersedes the 1993 programmatic agreement regarding "Interstate 10 Tangerine Road to Junction I-10/I-19 Projects" among FHWA, ADOT, the Arizona State Historic Preservation Officer (SHPO), and the Advisory

Council on Historic Preservation (Advisory Council) with reference only to the subject Undertakings; and

WHEREAS, this Agreement supersedes the 2004 memorandum of agreement regarding the "Town of Marana's Project to Widen and Upgrade Features along Silverbell Road; Upgrade Ina Road, Including Replacement of the Bridge Structure; Develop the Cortaro District Park; and Install Bank Protection on the West Bank of the Santa Cruz River" among the Los Angeles District U.S. Army Corps of Engineers (USACE), SHPO, FHWA, and the Town of Marana only with reference to the subject Undertakings (that is, not including work along Silverbell Road, development of the Cortaro District Park, and installation of bank protection, all of which have been completed); and

WHEREAS, the direct area of potential effects (APE) for the subject Undertakings is defined as the existing and new roadway right-of-way (ROW) on I-10 between mileposts (MP) 247.48 and 252.97 including the I-10 TI at Ruthrauff Road and the I-10 TI at Ina Road, and on Ina Road between N. Oldfather Road and Silverbell Road, including new ROW and any temporary construction easements (TCEs) if required for the Undertakings; and

WHEREAS, the indirect APE for these Undertakings is defined as property parcels and subdivisions immediately adjacent to the project limits in corridors centered on existing I-10 between MPs 247.48 and 252.97, and on Ina Road between N. Oldfather Road and Silverbell Road and includes any historic buildings, structures or districts (That is, architectural properties) within those corridors that could be affected by visual, auditory, or atmospheric effects from the Undertakings; and

WHEREAS, these Undertakings will be funded by FHWA and FHWA is the lead Federal agency responsible for ensuring that Section 106 of the National Historic Preservation Act of 1966, as amended and recodified, 54 U.S.C. § 300101 et. seq. (NHPA), and its implementing regulations for *Protection of Historic Properties*, Title 36, Code of Federal Regulations, Part 800 (36 CFR 800) are applied, and which require a Federal Agency with direct or indirect jurisdiction over a Federal, federally assisted, or federally permitted or approved Undertaking to take into account the effects of the Undertaking on historic properties, defined as sites, buildings, structures, districts and objects in, or eligible for inclusion in, the National Register of Historic Places (NRHP), and therefore, pursuant to 36 CFR 800.2(a) and 800.14(b), FHWA is a signatory to this Agreement; and

WHEREAS, as lead federal agency, FHWA has consulted and will continue to consult with the SHPO pursuant to 36 CFR 800, and the SHPO is authorized to enter into this Agreement in order to fulfill its role of advising and assisting Federal agencies in carrying out their responsibilities pursuant to Sections 101 and 106 of the NHPA of 1966, as amended and recodified, 54 U.S.C. § 306108 , and pursuant to 36 CFR 800.2 (c)(1)(i) and 800.6(b)(1)(i), and

WHEREAS, SHPO is a signatory to this Agreement; and

WHEREAS, SHPO is authorized to advise and assist federal and state agencies in carrying out their historic preservation responsibilities and cooperate with these agencies under A.R.S. 41-511.04(d)(4); and

WHEREAS, the Advisory Council has been invited and has declined to be a signatory in this Agreement pursuant to 36 CFR 800.6(a)(1); and

WHEREAS, ADOT, acting on behalf of FHWA, will bid and administer these Undertakings, and therefore, ADOT is an invited signatory to this Agreement; and

WHEREAS, ADOT has participated in consultation and has agreed to provide information concerning the project areas and to cooperate with agencies to resolve adverse effects to historic properties; and

WHEREAS, project construction will occur on ADOT easements across State Trust land under the administration of the Arizona State Land Department (ASLD) where historic properties could be affected, and therefore, ASLD is an invited signatory to this Agreement; and

WHEREAS, project construction may affect Waters of the United States, and thus require issuance of an individual permit by USACE or use of Nationwide Permits Pursuant to Section 404 of the Clean Water Act; and therefore, USACE is an invited signatory to this Agreement; and

WHEREAS, hereinafter 'signatory' refers both to signatories and invited signatories to this agreement; and

WHEREAS, project construction will occur on land owned by ADOT, ADOT easements across State Trust Land, land under the jurisdiction of Pima County, the City of Tucson, and the Town of Marana, and private land owned by the Union Pacific Railroad; and

WHEREAS, FHWA has consulted with Pima County, the City of Tucson, the Town of Marana, and the UPRR pursuant to 36 CFR 800.2(c)(3), and FHWA has invited them to be concurring parties to this Agreement; and

WHEREAS, the Indian Tribes that may attach religious or cultural importance to affected cultural resources and Traditional Cultural Properties (TCP) have been consulted pursuant to 36 CFR 800.2(c)(2)(ii)(A-F), and the Ak-Chin Indian Community, the Gila River Indian Community, the Hopi Tribe, the Pascua Yaqui Tribe, the Salt River Pima-Maricopa Indian Community, the Tonto Apache Tribe, the White Mountain Apache Tribe, and the Yavapai-Apache Nation have been invited to be concurring parties to this Agreement, and the Tohono O'odham Nation is an invited signatory; and

WHEREAS, FHWA, in consultation with ADOT, SHPO, and other parties to this Agreement, has applied the criteria of adverse effect (36 CFR 800.5[a]) to NRHP-eligible properties located within the APE; and

WHEREAS, portions of the direct and indirect APE have been previously surveyed by ADOT to identify historic properties; and

WHEREAS, the proposed Undertakings may have an adverse effect upon historic properties that may be listed in or eligible for listing in the NRHP (Appendix A), and may possibly have effects to unidentified subsurface archaeological resources; and

WHEREAS, there may be TCPs potentially affected by these Undertakings that have not yet been identified; and

WHEREAS, additional inventories and data recovery necessitated by the Undertakings on state, county, city or other municipal property must be permitted pursuant to the Arizona Antiquities Act (Arizona Revised Statutes [ARS] 41-841, et seq.); and

WHEREAS, the Arizona State Museum (ASM) has defined authorities and responsibilities under ARS 41-841, et seq., that apply to state, county, city, and other municipal lands, and will develop burial agreements for the treatment and disposition of Human Remains or Funerary Objects, Objects of National or Tribal Patrimony, and Sacred Ceremonial Objects on state, county, city, and other municipal lands pursuant to ARS 41-844, and Human Remains and Funerary Objects from private lands pursuant to ARS 41-865; and has been invited to be a concurring party to this Agreement; and

WHEREAS, the ASM is the designated repository for these Undertakings and all artifacts and records resulting from the cultural resources investigations, excluding human remains and associated cultural objects, will be curated in accordance with 36 CFR 79 and ASM guidelines, and FHWA has invited ASM to concur on this Agreement; and

WHEREAS, FHWA recognizes the public benefit of mitigating the effects of this project and commits to inclusion of a public education component to the treatment program; and

WHEREAS, by their signature all parties agree that the regulations specified in the ADOT document, "ADOT Standard Specifications for Road and Bridge Construction" (Section 104.12, 2008) will account for the cultural resources in potential material sources used in project construction; and

NOW, THEREFORE, all parties agree that upon FHWA's decision to proceed with the Undertakings, FHWA shall ensure that the following stipulations are implemented in order to take into account the effects of the Undertakings on historic properties, and that these stipulations shall govern the Undertakings and all of their parts until this Agreement expires or is terminated.

STIPULATIONS

FHWA shall ensure that the following measures are carried out.

1. Identification and Evaluation of Historic Properties
    a) ADOT, on behalf of FHWA, shall ensure that additional inventory surveys, including evaluations of the built environment, are conducted as necessary to meet applicable state and federal standards and current professional standards for previously surveyed areas, and new surveys are conducted for areas not previously surveyed, or if design expands or modifies the direct and indirect APE.

    b) ADOT and FHWA shall consult with all parties to this Agreement on the NRHP eligibility of any newly identified cultural resources, TCPs, or cultural resources that are

unevaluated for inclusion in the NRHP, as well as on the effect of the Undertakings on any NRHP-listed or NRHP-eligible properties within the direct and indirect APE.

c) Should any party to this Agreement disagree with FHWA regarding eligibility, SHPO will be consulted by FHWA and resolution sought within 20 calendar days. If FHWA and SHPO disagree on eligibility, FHWA shall request a formal determination from the Secretary of the Interior, pursuant to 36 CFR 800.4(c)(2).

d) ADOT and FHWA shall consult with tribes and the SHPO regarding the identification and evaluation of TCPs within the APE.

e) FHWA shall ensure that ethnographic studies, if requested by the tribes and deemed appropriate and feasible by FHWA, will be completed by tribal ethnographers or professional ethnographers chosen in consultation with the tribes. These studies will identify TCPs that may be of religious and cultural significance to tribes, pursuant to 36 CFR 800.4(a)(4).

2. Development of Treatment Plans

a) ADOT, on behalf of FHWA, shall ensure that Treatment Plans for phased data recovery of historic properties, including archaeological sites, buildings, structures, objects, districts, and TCPs that cannot be avoided by project activities are prepared. The Treatment Plans for archaeological sites will be consistent with the Secretary of the Interior's Standards and Guidelines for Archaeological Documentation (48 FR 44734-37), the *Advisory Council on Historic Preservation's Treatment of Archaeological Properties: A Handbook*, and with the Arizona Antiquities Act standards, and will specify:

b) The properties or portions of properties where data recovery is to be carried out. For NRHP-eligible historic buildings, structures, objects, or districts, this should include archival research, completion of Historic American Buildings Survey/Historic American Engineering Record/Historic American Landscapes Survey forms; and completion or updating of NRHP nominations. The Treatment Plans also will specify any property or portion of property that would be destroyed or altered without treatment and the justification for lack of treatment;

c) The results of previous research relevant to the subject Undertakings, the research questions to be addressed through data recovery, with an explanation of their relevance and importance within an appropriate historic context;

d) The field, laboratory and/or archival analysis methods to be used, with an explanation of their relevance to the research questions;

e) The methods to be used for disseminating data to the professional community and the public;

f) A proposed schedule for project tasks, and a schedule for the submission of draft and final reports to consulting parties;

g) The proposed disposition and curation of recovered materials and records in accordance with ARS 41-844; and

h) Procedures for monitoring, evaluating and treating discoveries of unexpected or newly identified properties during geotechnical investigations or construction of the project, including consultation with other parties; and

i) A protocol for the treatment of human remains, in the event that such remains are discovered, describing methods and procedures for the recovery, inventory, treatment, and disposition of Human Remains, Funerary Objects, Sacred Ceremonial Objects, or Objects of Cultural Patrimony. This protocol will reflect concerns and/or conditions identified as a result of consultations among parties to this Agreement and as specified by the ASM.

j) The Treatment Plans will include a discussion of the public benefit of mitigation and recommendations for enhancing public education about, and interpretation of, the affected properties. This discussion should address proposed means to involve the public during fieldwork and/or in the future, and should include a strategy for a public outreach program with the goal of disseminating information about the results of the cultural resources investigations to the general public. This program will be implemented to inform and educate target audiences of the importance of archaeological and other cultural resources research and may include the following:

- Interpretive signage at the properties, as appropriate;
- Print media, such as: a short report written specifically for the public; an educational brochure and/or pamphlet; short reports for public magazines and/or journals;
- Electronic media, such as websites and various social media venues, and/or the production of a video of the fieldwork and analysis, as appropriate;
- Public outreach, such as: museum exhibits; traveling exhibits; presentations or lectures at local venues such as libraries, meetings of avocational organizations, conferences, and so forth; special presentations given during Archaeology and Heritage Awareness Month; participant booths at the Arizona Archaeology Expo, laboratory and/or collections tours, and public tours during fieldwork, as appropriate;
- Ways to enhance local heritage education curriculum.

3. Review and comment on Treatment Plans

a) ADOT, on behalf of FHWA, will distribute the draft Treatment Plans to all consulting parties, who will have 30 calendar days from receipt to review the Treatment Plans and provide comments to ADOT and FHWA. All comments are to be in writing. Lack of response within this review period will be taken as concurrence with the adequacy of the Treatment Plans.

b) If revisions to the Treatment Plans are made, ADOT, on behalf of FHWA, will distribute the revised Treatment Plans to all consulting parties, who will have 15 calendar days from receipt to review the revisions and provide comments to ADOT and FHWA. Lack of response within this review period will be taken as concurrence with the adequacy of the Treatment Plans.

c) The final Treatment Plans will be provided to all consulting parties by ADOT, on behalf of FHWA.

d) Once parties to this Agreement have reviewed a Treatment Plan, and concurred with its adequacy, FHWA shall issue authorization to proceed with the implementation of the Treatment Plan by the institution, firm, or consultant responsible for the work, subject to that entity obtaining all necessary permits.

4. In-field Meeting or Preliminary Report of Findings

ADOT, on behalf of FHWA, shall ensure either that an in-field meeting among consulting parts is held within 7 calendar days after the completion of all fieldwork to acquaint the parties with field results and to ensure that all signatories and invited signatories are satisfied that no additional field efforts are warranted,

or

that within 14 calendar days after the completion of all fieldwork, the institution, firm or consultant responsible for the work prepares and submits a brief Preliminary Report of Findings to ADOT and FHWA. This report will contain, at a minimum:

a) A discussion of the methods and treatments applied to each property with an assessment of the degree to which these methods and treatments followed the Treatment Plans along with a justification of all deviations, if any, from the approved Treatment Plans; and

b) Topographic site plans for the properties depicting all features and treatment areas; and

c) General description of recovered artifacts and other data classes, including features excavated or sampled; and

d) Discussion of further analyses to be conducted for the Data Recovery Reports, including any proposed changes in the methods or levels of effort from those proposed in the Treatment Plans.

5. Review and comment on the Preliminary Report of Findings

a) ADOT, on behalf of FHWA, will distribute the Preliminary Report of Findings to all consulting parties, who will have 15 calendar days from receipt to review and provide comments to ADOT and FHWA. All comments are to be in writing. Lack of response within this review period will be taken as concurrence with the adequacy of the report.

b) If revisions to the Preliminary Report of Findings are made, ADOT, on behalf of FHWA, will distribute the revised Preliminary Report of Findings to all consulting parties, who will have 10 calendar days from receipt to review the revisions and provide comments to

ADOT and FHWA. Lack of response within this review period will be taken as concurrence with the adequacy of the report.

c) ADOT and FHWA shall ensure that any written comments received are taken into account during the preparation of the final document.

d) If a signatory objects to any aspect of the report, FHWA shall resolve the objection according to the Dispute Resolution section herein.

e) Once the Preliminary Report of Findings has been accepted as a final document, ADOT, on behalf of FHWA, will notify all consulting parties that data recovery efforts are complete and have met with the agree-upon goals, and that construction may proceed.

6. Data Recovery Report

a) Within 24 months of completion of data recovery, FHWA shall ensure that a report will be prepared by the institution, firm or consultant responsible for the work incorporating all appropriate data analyses and interpretations.

b) ADOT, on behalf of FHWA, will distribute the draft Data Recovery Report to all consulting parties for review. All consulting parties will have 45 calendar days from receipt to review and provide comments to ADOT and FHWA. All comments are to be in writing. Lack of response within this review period will be taken as concurrence with the adequacy of the report.

c) If revisions to the Data Recovery Report are made, all consulting parties will have 20 calendar days from receipt to review the revisions and provide comments to ADOT and FHWA. Lack of response within this review period will be taken as concurrence with the adequacy of the report.

d) ADOT and FHWA shall ensure that any written comments received are taken into account during the preparation of the final document.

e) If a signatory continues to object to any aspect of the report, the FHWA shall resolve the objection according to the Dispute Resolution section herein.

f) Once the Data Recovery Report has been accepted as a final document, ADOT, on behalf of FHWA, shall provide final copies of the report to all consulting parties.

7. Discoveries

a) If historic or prehistoric archaeological materials or human remains are discovered after construction begins, the ADOT Resident Engineer (RE) in charge of the construction shall require ground-disturbing activities to immediately cease within the area of the discovery, take steps to protect the discovery, and promptly report the discovery to the ADOT Historic Preservation Specialist. The ADOT Historic Preservation Specialist shall notify and consult with appropriate agencies.

b) If the discovery involves graves or human remains as defined in ASM rules implementing ARS § 41-844 and 41-865 on state, county, city or other municipal property, or private lands, the Director of ASM (Director) shall be notified by ADOT. In consultation with the Director, ADOT shall immediately take steps to secure the discovery and Tribal representatives will be notified.

c) If human remains are not involved, and the discovery is located on state land, ADOT shall notify ASM as required under ARS 41-844. ADOT, in consultation with the Director and SHPO shall determine if the Treatment Plan previously approved by ASM, according to Stipulation 2, is appropriate to the nature of the discovery. If appropriate, the Treatment Plan shall be implemented by ADOT, on behalf of FHWA. If the Plan is not appropriate to the discovery, FHWA shall ensure that an alternative Plan for the resolution of adverse effects is developed and circulated to the consulting parties, for review and comment.

8. Professional Qualifications

a) ADOT, on behalf of FHWA, shall ensure that all cultural resources work carried out pursuant to this Agreement is conducted by or under the supervision of a person, or persons, meeting the Secretary of the Interior's Professional Qualifications Standards (48 FR 44738-44739), and that work on state, county or municipal property is authorized by an Arizona Antiquities Act permit.

9. Curation

a) ADOT, on behalf of, FHWA, shall ensure that all materials and records, excluding human remains and associated objects, resulting from the data recovery program conducted for these Undertakings shall be curated at the ASM in accordance with ARS 41-844 and 36 CFR Part 79.

10. Dispute Resolution

Should any party to this Agreement object within 30 days, to any action, plan, or report proposed or carried out pursuant to this Agreement, FHWA shall consult with the objecting party to resolve the dispute. The objection must be identified specifically and the reasons for objection documented in writing. If FHWA determines that the dispute cannot be resolved, FHWA shall notify the SHPO of the objection and shall:

a) Forward all documentation relevant to the dispute to the Advisory Council in accordance with 36 CFR 800.2(b)(2). Any comment provided by the Advisory Council, and all comments from the signatories to this Agreement, will be taken into account by FHWA in reaching a final decision regarding the dispute.

b) If the Advisory Council does not provide any comments regarding the dispute within 30 days after receipt of adequate documentation, FWHA may render a decision regarding the dispute. In reaching its decision, FHWA will take into account all written comments regarding the dispute from the signatories or invited signatories to the Agreement.

c) FHWA will notify all consulting parties of its decision in writing before implementing that portion of the undertaking subject to dispute under this stipulation. FHWA's decision will be a final agency decision.

d) It is the responsibility of ADOT, on behalf of FWHA, to carry out all other actions subject to the terms of this Agreement that are not the subject of the dispute.

11. Amendments

a) This Agreement may be amended by any signatory pursuant to 36 CFR 800.6(c)(7). The proposed amendment shall be submitted in draft form with the request to FHWA. Any signatory to this Agreement will consult to review and consider such an amendment. The amendment will be effective on the date a copy is signed by all of the signatories and invited signatories. FHWA shall file any amendments with the Advisory Council and provide notice to the concurring parties.

12. Agreement Review

a) ADOT, on behalf of FHWA, shall ensure that an annual report summarizing activities from the year is prepared and distributed to all parties to this Agreement, and that an annual meeting to discuss what has happened, and what is upcoming in the next year is held. Any signatory to this Agreement may request additional meetings of consulting parties to review the execution of this Agreement and the effectiveness and applicability of its stipulations.

13. Execution

a) This Agreement may be executed in counterparts, each of which shall be deemed an original and all of which together shall constitute one and the same instrument.

14. Termination

a) Any signatory may terminate the Agreement by providing 30 day written notification to the other signatories and concurring parties. During this 30-day period, the signatories and concurring parties may consult to seek agreement on amendments or other actions that would avoid termination pursuant to 36 CFR 800.6(b). In the event an agreement on amendments or other actions cannot be reached within the 30 day time frame, termination shall be effective on the 31st day. Subsequent to termination, FHWA will notify the signatories and concurring parties within 30 days whether it will initiate consultation to execute an Agreement with the signatories and concurring parties under 36 CFR 800.6(c)(1) or request the comments of the Advisory Council under 36 CFR §800.7(a) and proceed accordingly.

b) In the event that FHWA or ADOT cannot carry out the terms of this Agreement, FHWA will comply with 36 CFR 800.3 through 800.6.

15. Duration of Agreement

a) This Agreement will be null and void if its terms are not carried out within ten (10) years from the date of its execution, unless the signatories agree in writing to an extension for

carrying out its terms. Prior to such time, FHWA may consult with the other signatories to reconsider the terms of the Agreement and amend it in accordance with Stipulation 11.

b) Execution of this Agreement by the Signatories and Invited Signatories and its subsequent filing with the Advisory Council is evidence that FHWA has afforded the Advisory Council an opportunity to comment on the subject Undertakings and that FHWA has taken into account the effects of the Undertakings on historic properties.

SIGNATORIES

FEDERAL HIGHWAY ADMINISTRATION

By _____ Terrence Wilson Date 6/25/15

Title Environmental Coordinator

ARIZONA STATE HISTORIC PRESERVATION OFFICER

By James Garrison Date 9/16/15

Title AZSHPO

INVITED SIGNATORIES

ARIZONA DEPARTMENT OF TRANSPORTATION

By Paul O'Brien Date 6/23/15

Title Environmental Planning Group Manager

ARIZONA STATE LAND DEPARTMENT

By _____ Date _____

Title _____

UNITED STATES ARMY CORPS OF ENGINEERS

By _____ Date _____

Title _____

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SIGNATORIES

FEDERAL HIGHWAY ADMINISTRATION

By _____ Terrance Wilson Date 6/25/15

Title Environmental Coordinator

ARIZONA STATE HISTORIC PRESERVATION OFFICER

By _____ Date _____

Title _____

INVITED SIGNATORIES

ARIZONA DEPARTMENT OF TRANSPORTATION

By Paul O'Brien Date 6/23/15

Title Environmental Planning Group Manager

ARIZONA STATE LAND DEPARTMENT

By _____ Date OK SEPT 15

Title LEAD CULTURAL RESOURCES SPECIALIST

UNITED STATES ARMY CORPS OF ENGINEERS

By _____ Date _____

Title _____

TOHONO O'ODHAM NATION

By _____ Date_____

Title _____

CONCURRING PARTIES

ARIZONA STATE MUSEUM

By _____ Date_____

Title _____

CITY OF TUCSON

By _____ Date_____

Title _____

PIMA COUNTY

By _____ Date_____

Title _____

TOWN OF MARANA

By _____ Date_____

Title _____

UNION PACIFIC RAILROAD

By _____ Date_____

Title _____

AK-CHIN INDIAN COMMUNITY

By _____ Date_____

Title _____

GILA RIVER INDIAN COMMUNITY

By _____ Date_____

Title _____

HOPI TRIBE

By _____ Date_____

Title _____

PASCUA YAQUI TRIBE

By _____ Date_____

Title _____

SALT RIVER PIMA-MARICOPA INDIAN COMMUNITY

By _____ Date_____

Title _____

TONTO APACHE TRIBE

By _____ Date_____

Title _____

WHITE MOUNTAIN APACHE TRIBE

By _____ Date_____

Title _____

YAVAPAI-APACHE NATION

By _____ Date_____

Title _____

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Cultural Resources within the Project area				
	Designation / Name	**Type**	**NRHP Eligibility**	**Comment**
1	AZ Z:2:40 (ASM / Southern (Union) Pacific Railroad Main Line	In-use historic railroad	Eligible, Criterion A	Will not be affected; no treatment required
2	AZ AA:2:118 (ASM) / Old SR 84	In-use historic road	Eligible, Criterion D*	Document
3	AZ AA:12:11 (ASM)	Prehistoric artifact scatter	Eligible, Criterion D	Data recovery required
4	AZ AA:12:13 (ASM)	Prehistoric artifact scatter	Undetermined	Test for eligibility
5	AZ AA:12:14 (ASM) / Jaynes Station	Prehistoric artifact scatter an Historic settlement with artifact scatter	Eligible, Criterion D	Data recovery required
6	AZ AA:12:20 (ASM)	Prehistoric habitation site with features and burials, Historic dump, and Historic racetrack	Eligible, Criterion D	Data recovery required
7	AZ AA:12:91 (ASM) / Los Pozos	Archaic, Early Agricultural, and Prehistoric habitation site	Eligible, Criterion D	Data recovery required
8	AZ AA:12:92 (ASM) / El Taller	Archaic, Early Agricultural, and Prehistoric habitation site	Eligible, Criterion D	Data recovery required
9	AZ AA:12:111 (ASM) / Las Capas	Prehistoric Early Agricultural habitation site	Eligible, Criterion D	Data recovery required
10	AZ AA:12:314 (ASM)	Prehistoric habitation site with features and burials	Eligible, Criterion D	Data recovery required
11	AZ AA:12:380 (ASM)	Historic house foundation and artifact scatter	Undetermined	Research; document or data recover if eligible
12	AZ AA:12:503 (ASM) / Costello-King Site	Early Agricultural artifact scatter and prehistoric habitation site with features	Eligible, Criterion D	Data recovery required
13	AZ AA:12:688 (ASM)	Prehistoric artifact scatter	Eligible, criterion not specified	Data recovery required (within Las Capas)
14	AZ AA:12:739 (ASM)	Prehistoric artifact scatter	Undetermined	Test for eligibility
15	AZ AA:12:788 (ASM) / Rillito Fan Site	Archaic, Early Agricultural, and Prehistoric habitation site, also possible proto-Historic and Historic features/artifacts	Eligible, Criterion D	At edge of direct APE; test for presence in APE
16	AZ AA:12:798 (ASM) / Slip-up Site	Prehistoric one room structure with artifact scatter and roasting pit	Eligible, Criterion D	At edge of direct APE; test for presence in APE
17	AZ AA:12:836 (ASM)	Prehistoric and Historic artifact scatter, rock cairn and ash stain	Undetermined**	At edge of direct APE; test for presence in APE
18	AZ AA:12:858 (ASM)	Prehistoric artifact scatter / historic artifact scatter with shrine	Eligible, Criterion D	Data recovery required
19	AZ AA:12:859 (ASM)	Prehistoric artifact scatter	Eligible, Criterion D	Data recovery required
20	AZ AA:12:905 (ASM) / Massingale Road	Historic-age road	Undetermined, research required	Research; document if eligible
21	AZ AA:12:953 (ASM)	Prehistoric and Historic artifact scatter	Eligible, Criterion D**	Data recovery likely required
22	AZ AA:12:1004 (ASM)	Prehistoric habitation	Undetermined	Test for eligibility
23	AZ AA:12:1157 (ASM)	Newly recorded, information not yet available in AZSITE	Undetermined	Undetermined
	92 Architectural properties***	Historic buildings	Not eligible	No treatment required
	*north of Ina Road, contributing; south of Ina Road, non-contributing			
	** recommended eligible, Criterion D			
	*** all in indirect APE ½-mile corridor centered on I-10			

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PROGRAMMATIC AGREEMENT

AMONG

THE FEDERAL HIGHWAY ADMINISTRATION,
THE ARIZONA DEPARTMENT OF TRANSPORTATION,
THE ARIZONA STATE HISTORIC PRESERVATION OFFICER,
AND THE ADVISORY COUNCIL ON HISTORIC PRESERVATION

REGARDING THE

INTERSTATE 10 TANGERINE ROAD TO JUNCTION I-10/I-19 PROJECTS

WHEREAS, the Federal Highway Administration (FHWA) proposes to improve Interstate 10 between Tangerine Road and the junction of Interstates 10 and 19 in Tucson, Pima County, Arizona as a multiphase construction project (Project) to be completed as a sequential series of limited segments, and

WHEREAS, FHWA, as the lead agency responsible for compliance under Section 106 of the National Historic Preservation Act (16 USC 470f) for the project, as authorized by 43 CFR 2800, and the Arizona Department of Transportation (ADOT), as agent for FHWA, have participated in consultation, and

WHEREAS, FHWA has determined that the Project may have an effect on properties included in or eligible for inclusion in the National Register of Historic Places, and has consulted with the Arizona State Historic Preservation Officer (SHPO) and the Advisory Council on Historic Preservation (Council) pursuant to 36 CFR 800.13 regarding implementation of Section 106 of the National Historic Preservation Act, and

WHEREAS, this Agreement addresses all phases and segments of the Project,

NOW, THEREFORE, FHWA, ADOT, SHPO, and Council agree that the Project shall be administered in accordance with the following stipulations in order to satisfy Section 106 responsibilities for all aspects of the Project.

STIPULATIONS

FHWA shall ensure that the following measures will be carried out.

I. INVENTORY, EVALUATION, AND EFFECT DETERMINATION

A. FHWA, represented by ADOT, will assure the completion of a historic properties inventory of the proposed highway right-of-way. FHWA will ensure that this inventory shall be conducted in a manner consistent with the Secretary of Interior's Standards and Guidelines for Identification of Historic Places. FHWA will further ensure that any additional staging or use areas related to this undertaking shall be inventoried in a manner consistent with the right-of-way inventory. Report(s) of the results of any and all inventories shall be submitted to the SHPO for review and comment.

B. FHWA, in consultation with SHPO, shall ensure that determinations of eligibility are made in accordance with 36 CFR 800.4(c) for all historic properties within the Project right-of-way, including any additional staging or use areas. Further, FHWA shall seek comments from all potentially interested Native American groups pursuant to National Register Bulletin 38 in making determinations of eligibility for any identified Traditional Cultural Properties as these are defined in the Bulletin.

C. FHWA shall apply the criteria of Effect and of Adverse Effect in 36 CFR 800.9 to all historic properties within the Project right-of-way, including any additional staging or use areas. If FHWA and SHPO agree that any portion(s) of the undertaking shall have no effect on any listed or eligible properties, FHWA may provide authorization to proceed with construction in such area(s), subject to the conditions of any Monitoring Plan developed for the Project.

D. FHWA will seek public comment on the effects of the undertaking on historic properties in coordination with its procedures for implementing the National Environmental Policy Act (NEPA).

E. FHWA will seek the comments of all interested Native American groups, taking into account the Council's policy statement of September 27, 1988, regarding determinations of effect where human remains are likely to be encountered during data recovery mitigation.

F. FHWA will identify those Native American Tribes having a potential for claiming cultural and/or ancestral affinity within the Project area under the provisions of the Arizona Antiquities Act, ARS 41-844. Further, FHWA will attempt to resolve any disputed claims and, upon resolution of any such disputes, consult with claimants regarding appropriate procedures for the recovery, analysis, treatment and disposition of human remains, associated grave goods, and objects of cultural patrimony in accordance with the provisions of the Arizona Antiquities Act ARS 41-844 and with any implementing regulations.

II. PREPARATION OF A TREATMENT PLAN

A. FHWA, in cooperation with ADOT, and in consultation with SHPO, shall ensure that a Treatment Plan is developed for the mitigation of anticipated effects on historic properties that will result from the Project and any related uses and activities. Further, FHWA, in cooperation with ADOT, and in consultation with SHPO, will ensure the development of location and property specific Data Recovery Plans for each individual phase or segment of the Project that will be considered as Supplements to the Treatment Plan.

B. The Treatment Plan shall be consistent with the Secretary of Interior's Standards and Guidelines (48 FR 44716-44742), and the Council's handbook Treatment of Archaeological Properties.

C. The Treatment Plan shall specify, at a minimum:

1. The historic properties to be affected by the project as a whole and the nature of those effects.

2. A Research Design that will contain the research questions and goals that are applicable to the Project area as a whole and that will be addressed through data recovery, along with an explanation of their relevance and importance. These research questions and goals shall reflect the concept of historic contexts as defined in National Register Bulletin 16 and shall take into consideration any such historic contexts established for the Project area.

3. Fieldwork and analytical methods and strategies applicable to the Project area as a whole, along with an explanation of their relevance to the research questions. Such treatment methods will be developed for each class of historic property identified in the Project inventory.

4. Proposed procedures for dealing with discovery situations.

5. Methods to be used in data management and dissemination of data.

6. Methods and procedures for the recovery, analysis, treatment and disposition of human remains, associated grave goods, and objects of cultural patrimony that reflect any concerns and/or conditions identified as a result of consultations between FHWA and any affected Native American group.

D. Each phase or segment specific Data Recovery Plan shall represent a dependent plan and document supplement to the Treatment Plan providing specific direction for the conduct of Data Recovery within any given Project segment. It shall conform to the general requirements of the Treatment Plan. At a minimum, it shall specify:

1. The historic properties to be affected in the specified Project segment and the nature of those effects.

2. The research questions identified in the Treatment Plan that will be appropriate for the specified Project segment and that will be addressed through data recovery, along with any additional research questions compatible with the Treatment Plan and an explanation of their relevance to the overall research goals as established in the Treatment Plan.

3. The specific fieldwork and analytical strategies identified in the Treatment Plan, as well as any other strategies that will be employed in the specified Project segment.

4. A proposed schedule for submission of progress, summary, and other reports.

5. Qualification of consultants employed to undertake the implementation of the Data Recovery Plan.

III. COMMENT ON THE TREATMENT PLAN AND DATA RECOVERY PLAN(S)

A. Upon receipt of a draft of the Treatment Plan or of any Data Recovery Plan, FHWA will submit such drafts concurrently to SHPO and the Council for review. Both reviewing parties will have 30 days upon receipt to review and provide comments to FHWA. If either party fails to submit comments within 30 days, FHWA shall assume that party's concurrence. If either party has an objection to the Plan, they shall notify FHWA within the 30-day review period. The objection must be specifically identified and the reasons for objection documented. FHWA shall consult with the objecting party(s) to resolve the objection. If the objection cannot be resolved, FHWA shall consult with the Council in accordance with Stipulation VII.

B. If revisions are needed, any party, including SHPO, has 20 days from receipt to review the revisions. If no comments are received within 20 days, concurrence among the parties will be assumed.

C. Once the Treatment Plan is determined adequate by the reviewing parties, FHWA shall issue authorization to proceed with the development of the Data Recovery Plan(s).

D. Once the Data Recovery Plan(s) is determined adequate by the reviewing parties, FHWA shall issue authorization to proceed with the implementation of the Plan.

E. Final drafts of the Treatment Plan and all subsequent and supplemental Data Recovery Plan(s) will be provided to SHPO and the Council.

IV. CONSTRUCTION

A. FHWA, in consultation with SHPO, shall prepare a Monitoring Plan to ensure that historic properties are not affected by construction related activities. This Monitoring Plan shall be incorporated into the Treatment Plan and shall specify the location of all identified properties and the means by which they will be marked and avoided if construction is allowed in nearby portions of the right-of-way. The Monitoring Plan shall also address discovery situations, including methods proposed for recording such discoveries. It shall also address methods for consultation to determine an appropriate course of treatment for discovered properties. Monthly progress reports regarding monitoring activities will be submitted by FHWA to SHPO.

B. FHWA, in consultation with SHPO, may issue authorization to proceed with construction in those portions of the right-of-way that contain historic properties once the agreed upon fieldwork/treatment specified in the Treatment Plan and Data Recovery Plan(s) has been completed, subject to acceptance of the adequacy of the work performed under those Plans. FHWA acceptance will be based on field inspection and review of a Preliminary Report documenting the accomplishment of the Treatment Plan and Data Recovery Plan(s).

FHWA need only consult w/ SHPO no meeting!! on EoF

V. CHANGES IN CONSTRUCTION CORRIDORS AND ANCILLARY AREAS

A. If during the course of construction planning, a reroute of a portion of the proposed right-of-way or a previously unidentified staging or use area is determined to be necessary, FHWA shall ensure that the area of potential effect is inventoried in a manner consistent with the prior right-of-way inventory and the standards identified in Stipulation I. A report of the findings of such inventories and any resultant Data Recovery Plans, as appropriate, shall be submitted to SHPO for review. The Data Recovery Plan(s) for historic properties within the reroute or additional staging or use area will be consistent with the Treatment Plan and, once accepted, will be considered a supplement to the Treatment Plan.

B. Where historic properties will be affected, FHWA shall consult with SHPO on the adequacy of the inventory and on determinations of eligibility and any proposed Data Recovery Plan(s) for any properties identified in such additional areas. SHPO will provide comment within 30 days of receipt. If no such comment is received within 30 days, FHWA shall assume concurrence. If FHWA and SHPO agree to the adequacy of the documentation, FHWA will be allowed to proceed with the implementation of the Data Recovery Plan(s), as appropriate. Objections to any elements of the documentation must be specifically identified and the reasons for objection documented. If the objection cannot be resolved, FHWA shall consult with the Council in accordance with Stipulation VII.

C. If revisions are needed, any party, including SHPO, has 20 days from receipt to review the revisions. If no comments are received within 20 days, concurrence among the parties will be assumed.

D. Where no historic properties will be affected, FHWA shall consult with SHPO on the adequacy of the inventory, on determinations of eligibility and avoidance procedures, if applicable, for any sites not to be affected by the Project. SHPO will provide comment within 20 days of receipt. If no such comment is received within 20 days, FHWA shall assume concurrence. If FHWA and SHPO agree to the adequacy of the documentation, FHWA may proceed with construction or use of the additional area. If FHWA or SHPO objects to any element of the documentation, FHWA shall consult to resolve the objection. Objections must be specifically identified and the reasons for objection documented. If the objection cannot be resolved, FHWA shall consult with the Council in accordance with Stipulation VII.

VI. CURATION

FHWA shall ensure that all records and materials resulting from identification and data recovery efforts are curated in accordance with standards and guidelines generated by the Arizona State Museum and in consideration of any claims or conditions recognized as a result of consultation with affected Native American groups according to the provisions of the Arizona Antiquities Act. All material to be returned to their owners or otherwise repatriated will be treated with dignity and respect and consideration for the specific cultural religious traditions applicable until their analysis is complete and they are returned.

VII. DISPUTE RESOLUTION

Should any party of this agreement or any affected public or Tribal group object within 30 days to any action(s) or plans provided for review pursuant to this Agreement, FHWA shall consult with the objecting party to resolve the objection. If FHWA determines that the objection cannot be resolved, FHWA shall forward all documentation relevant to the dispute to the Council and notify SHPO as to the nature of the dispute. Within 30 days of receipt of all pertinent documentation, The Council shall either:

A. Provide FHWA with recommendations, which FHWA shall take into consideration in reaching a final decision regarding the dispute; or

B. Notify FHWA that it will comment within an additional 30 days in accordance with 36 CFR 800.6(b). Any Council comment provided in response to such a request will be taken into account by FHWA in accordance with 36 CFR 800.6(c)(2) with reference to the subject of the dispute.

Any recommendation or comment provided by the Council will be understood to pertain only to the subject of the dispute; FHWA responsibility to carry out all actions under this Agreement that are not the subject of the dispute will remain unchanged.

VIII. AMENDMENT

Any party to this Agreement may request that it be amended, whereupon the parties will consult to consider such amendment in accordance with 36 CFR 800.13.

IX. TERMINATION

Any party of this Agreement may terminate its participation by providing 30 days' written notice to the other parties, provided that the parties will consult during that period to seek agreement on amendments or other actions that would avoid termination. In the event of termination, FHWA will comply with 36 CFR 800.4 through 800.6.

X. FAILURE TO CARRY OUT THE TERMS OF THE AGREEMENT

In the event that the terms of this Agreement are not carried out, FHWA shall comply with 36 CFR 800.4 through 800.6 with regard to individual actions covered by this Agreement.

XI. SCOPE OF AGREEMENT

This Agreement is limited in Scope to the Interstate 10 Tangerine Road to junction I-10 and I-19 project and its related facilities and is entered into solely for that purpose.

Execution and implementation of this Agreement evidences that FHWA has afforded the Council an opportunity to comment and has, therefore, satisfied their Section 106 responsibilities for all individual actions of this undertaking.

Federal Highway Administration

By: _____ Date: 5 MARCH 1993

Title: DIVISION ADMINISTRATOR

State Historic Preservation Officer

By: _____ Date: 3/27/93

Title: SHPO

Arizona Department of Transportation

By: _____ Date: 3/5/93

Title: State Engineer

Advisory Council on Historic Preservation

By: _____ Date: 4/26/93

Title: Executive Director

654EN

U.S. Department of Transportation
Federal Highway Administration

ARIZONA DIVISION

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March 16, 2015

In Reply Refer To:
010-D(216)S / BR-MRN-0(014)A
TRACS Nos. 010 PM 247 H8479 01D / 0000 PM MRN SB413 01C
Interstate 10, Ina Road Traffic Interchange / Improvements to Ina Road and the Ina Road Bridge
Continuing Section 106 Consultation
Class I Literature Review
"adverse effect"

Dr. David Jacobs, Compliance Specialist
State Historic Preservation Office
Arizona State Parks
1300 West Washington Street
Phoenix, Arizona 85007

Dear Dr. Jacobs:

The Federal Highway Administration (FHWA) and the Arizona Department of Transportation (ADOT) are planning improvements to the Ina Road Traffic Interchange (TI) on Interstate 10 (I-10), and to Ina Road between Silverbell and N. Oldfather roads in the Town of Marana, Pima County, Arizona. The project area is in Sections 35 and 36, Township (T) 12 South (S), Range (R) 12 East (E); Section 31 of T12S, R13E; Sections 1 and 2 of T13S, R12E; and Section 6 of T13S, R13E of the Gila and Salt River Base Line and Meridian. Because this project would employ federal funds, it is considered an undertaking subject to Section 106 review. This project would occur on ADOT-owned right-of-way (ROW), ADOT easement across State Trust land managed by the Arizona State Land Department (ASLD), and land to be acquired by ADOT from Pima County, the Town of Marana, the Union Pacific Railroad (UPRR) (some of which is held in fee and some of which is easement across State Trust land), and private landowners.

Consulting parties for this project are FHWA, ADOT, the Arizona State Historic Preservation Office (SHPO), the Advisory Council on Historic Preservation (Advisory Council), the Arizona State Museum, ASLD, Pima County, the Town of Marana, UPRR, the U.S. Army Corps of Engineers (USACE), the Ak-Chin Indian Community, the Gila River Indian Community, the Hopi Tribe, the Pascua Yaqui Tribe, the Salt River Pima-Maricopa Indian Community, the San Carlos Apache Tribe, the Tohono O'odham Nation (lead for the Four Southern Tribes), the Tonto Apache Tribe, the White Mountain Apache Tribe, and Yavapai-Apache Nation. In earlier consultation for the broader I-10, Ina Road TI to Ruthrauff Road TI project discussed in the next paragraph, the City of Tucson was included, but because none of the combined Ina Road TI and Ina Road improvement project area is in the City of Tucson, that municipality is not included here.

The combined Ina Road TI and Ina Road improvement projects are one aspect of the broader I-10, Ina Road TI to Ruthrauff Road TI improvement project mentioned above (101-D(211)L / 010 PM 247 H7583 01L), which is proceeding under the terms of a 1993 programmatic

agreement (PA) among FHWA, ADOT, SHPO, and the Advisory Council for improvements to portions of I-10 between Tangerine Road to the north and the I-10/I-19 TI to the south. Improvements to Ina Road and the Ina Road Bridge are proceeding under the terms of a 2004 memorandum of agreement (MOA) among USACE, SHPO, FHWA, and the Town of Marana. Given the age of the 1993 PA and the fact that ADOT has assumed responsibility for several aspects of the project covered by the 2004 MOA, a new PA is being developed but has not yet been executed.

Previous consultation for the broader Ina to Ruthrauff project identified the area of potential effects (APE) for both direct and indirect effects and scope of the proposed undertaking as well as the consulting parties, addressed archaeological and architectural resources, and made a finding of "adverse effect" because of anticipated effects to archaeological resources and a historic structure eligible for inclusion in the National Register of Historic Places (NRHP) under Criterion D (Otani for Petty [FHWA] to Jacobs [SHPO] September 14, 2011, SHPO concurrence September 28, 2011; Otani for Petty [FHWA] to Jacobs [SHPO] February 16, 2012, SHPO concurrence March 2, 2012; and Otani for Petty [FHWA] to Jacobs [SHPO] April 23, 2012; SHPO concurrence April 30, 2012).

Previous consultation for the combined Ina Road TI and Ina Road improvement projects addressed two rounds of utility potholing for which FHWA made findings of "no adverse effect" (Cremer for Petty [FHWA] to Jacobs [SHPO] July 16, 2014, SHPO concurrence July 23, 2014; Cremer for Petty [FHWA] to Jacobs [SHPO] October 16, 2014, SHPO concurrence October 24, 2014). At this time, FHWA is continuing consultation for the combined Ina Road TI and Ina Road improvement projects as a whole.

The direct APE is defined as the existing and new ROW on I-10 between milepost (MP) 247.48 and 249.63, and on Ina Road between Silverbell and N. Oldfather roads, including temporary constructions easements if needed. The indirect APE is defined as property parcels and subdivisions immediately adjacent to the project limits in corridors centered on existing I-10 between MP 247.48 and 249.63, and on Ina Road between Silverbell and N. Oldfather roads. These corridors include any historic buildings, structures, or districts (that is, architectural properties) that could be affected by visual, auditory, or atmospheric effects from the undertaking. A map is enclosed to assist with your review.

Most of the direct APE has been inventoried or otherwise investigated for cultural resources as documented in *Class I Literature Review for the Interstate 10 Traffic Interchange at Ina Road and Ina Road Improvements, Town of Marana and Pima County, Arizona* (Vaughn 2015) prepared by EcoPlan Associates, Inc. The Class I report is enclosed for your review and comment. The indirect APE centered on I-10 was surveyed by HDR Engineering, Inc., as reported by Blackwell and Barnes (2012), in which all architectural resources, including subdivisions greater than 40 years in age (those with construction dates of 1971 or older), were assessed for listing on the NRHP. None were found to be eligible (Otani for Petty [FHWA] to Jacobs [SHPO] April 23, 2012, SHPO concurrence April 30, 2012). Thus, no treatment of architectural resources in the indirect APE along I-10 is required. The indirect APE along Ina Road has not yet been inventoried; if eligible architectural properties are identified, treatment options will be explored at a later date.

At this time, however, FHWA finds that, based on the results of the enclosed Class I literature review, the combined Ina Road TI and Ina Road improvement projects will have an "adverse effect" on historic properties. The Class I literature review documents 13 cultural resources

either determined eligible for NRHP listing or of undetermined eligibility within or immediately adjacent to the direct APE for the combined projects. These are tabulated in the enclosed table, which also includes FHWA's treatment recommendations. Briefly, eligibility testing is recommended for archaeological sites of undetermined NRHP eligibility where such testing is possible given the logistic constraints posed by the existing interstate highway and Ina Road. Extent testing is recommended for archaeological sites that may or may not extend within the direct APE where possible. Data recovery and/or monitoring are recommended for archaeological sites determined eligible under Criterion D that extend within the direct APE. Research is recommended to determine the eligibility of Massingale Road followed by documentation if warranted. Documentation also is recommended for the contributing segment of Old State Route 84.

The Southern Pacific Railroad Main Line will not be physically affected, although ADOT plans to acquire some railroad-owned property. The segment of the railroad within the APE is currently immediately proximal to the interstate highway. FHWA concludes that the proposed improvements will not appreciably alter that setting. That is, substantive visual, auditory, or atmospheric effects are not anticipated. Therefore, no treatment is recommended for this structure.

Please review the enclosed map, Class I literature review, table of cultural resources, and the information provided in this letter. If you find the literature review adequate and agree with FHWA's finding of project effect, please sign on the concurrence line.

As noted above, a new PA, with stipulations for the treatment of historic properties that will be affected by the several undertakings proposed along I-10 between Ina and Ruthrauff roads is under development and will be circulated for signature in the near future. Additionally, the results of an architectural assessment of the indirect APE along Ina Road and a treatment plan for this project will be forwarded with continuing consultation. If you have any questions or concerns, please contact ADOT Historic Preservation Specialist Sara Ferland at (602) 712-6371 or email at sferland@azdot.gov.

Sincerely,

Karla S. Petty
Division Administrator

Signature for State Historic Preservation Office Concurrence — Date: 20 MAR 15

010-D(216)S / BR-MRN-0(014)A

Enclosures

cc: Sara Ferland, ADOT

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U.S. Department of Transportation
Federal Highway Administration

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August 31, 2015

In Reply Refer To:

010-D(216)S / BR-MRN-0(014)A
TRACS Nos. 010 PM 247 H8479 01D / 0000 PM MRN SB413 01C
Interstate 10, Ina Road Traffic Interchange / Improvements to Ina Road and the Ina Road Bridge
Continuing Section 106 Consultation
Research Design and Data Recovery Plan
"adverse effect"

Mr. Randy Carlton, Archaeological Projects Specialist
Arizona State Land Department
1616 West Adams Street
Phoenix, Arizona 85007

Dear Mr. Carlton:

The Federal Highway Administration (FHWA) and the Arizona Department of Transportation (ADOT) are planning improvements to the Ina Road Traffic Interchange (TI) on Interstate 10 (I-10) between mileposts (MPs) 247.56 (eastbound) / 247.66 (westbound) and MP 249.62, and to Ina Road between Silverbell Road and approximately 1,000 feet east of Camino de Oeste in the Town of Marana and unincorporated Pima County, Arizona. This project area is slightly reduced from what was described in earlier consultation. The project area is in Sections 35 and 36, Township (T) 12 South (S), Range (R) 12 East (E); Section 31 of T12S, R13E; Sections 1 and 2 of T13S, R12E; and Section 6 of T13S, R13E of the Gila and Salt River Base Line and Meridian. Because this project would employ federal funds, it is considered an undertaking subject to Section 106 review. This project would occur on ADOT-owned right-of-way (ROW) and land to be acquired in fee or as easements (temporary and permanent) by ADOT from Pima County, the Town of Marana, the Union Pacific Railroad (UPRR) (some of which is held in fee and some of which is easement across State Trust land managed by the Arizona State Land Department [ASLD]), and private landowners. Earlier consultation incorrectly indicated that some ADOT easement from ASLD was involved.

Consulting parties for this project are FHWA, ADOT, the Arizona State Historic Preservation Office (SHPO), the Advisory Council on Historic Preservation (Advisory Council), the Arizona State Museum, ASLD, Pima County, the Town of Marana, UPRR, the U.S. Army Corps of Engineers (USACE), the Ak-Chin Indian Community, the Gila River Indian Community, the Hopi Tribe, the Pascua Yaqui Tribe, the Salt River Pima-Maricopa Indian Community, the San Carlos Apache Tribe, the Tohono O'odham Nation (lead for the Four Southern Tribes), the Tonto Apache Tribe, and the Yavapai-Apache Nation. The White Mountain Apache Tribe has declined to participate. In earlier consultation for the broader I-10, Ina Road TI to Ruthrauff Road TI project discussed in the next paragraph, the City of Tucson was included, but because none of the combined Ina Road TI and Ina Road improvement project area is in the City of Tucson, that municipality is not included here.

The combined Ina Road TI and Ina Road improvement projects are one aspect of the broader I-10, Ina Road TI to Ruthrauff Road TI improvement project mentioned above (101-D(211)L / 010 PM 247 H7583 01L), which is proceeding under the terms of a 1993 programmatic agreement (PA) among FHWA, ADOT, SHPO, and the Advisory Council for improvements to portions of I-10 between Tangerine Road to the north and the I-10/I-19 TI to the south. Improvements to Ina Road and the Ina Road Bridge are proceeding under the terms of a 2004 memorandum of agreement (MOA) among USACE, SHPO, FHWA, and the Town of Marana. Given the age of the 1993 PA and the fact that ADOT has assumed responsibility for several aspects of the project covered by the 2004 MOA, a new PA has been developed but has not yet been executed.

The direct area of potential effects (APE) is defined as the existing and new ROW on I-10 between the MPs listed above, and on Ina Road between Silverbell Road and approximately 1,000 feet east of Camino de Oeste, and permanent and temporary construction easements in areas north and south of Ina Road. The indirect APE is defined as property parcels and subdivisions immediately adjacent to the project limits in corridors centered on existing I-10 between the MPs listed above and in the immediate vicinity of the Ina Road and Bridge improvements. These corridors include any historic buildings, structures, or districts (that is, architectural properties) that could be affected by visual, auditory, or atmospheric effects from the undertaking.

Most of the direct APE has been inventoried or otherwise investigated for cultural resources as documented in *Class I Literature Review for the Interstate 10 Traffic Interchange at Ina Road and Ina Road Improvements, Town of Marana and Pima County, Arizona* (Vaughn 2015). Based on the results of the Class I literature review, FHWA found that the combined Ina Road TI and Ina Road improvement projects will have an "adverse effect" on historic properties and recommended a phased course of treatment at each of 13 affected resources (Wilson for Petty [FHWA] to Jacobs [SHPO] March 16, 2015; SHPO concurrence March 20, 2015).

Briefly, eligibility testing was recommended for archaeological sites of undetermined National Register of Historic Places (NRHP) eligibility where such testing is possible given the logistic constraints posed by the existing interstate highway and Ina Road. Extent testing was recommended for archaeological sites that may or may not extend within the direct APE where possible. Data recovery and/or monitoring were recommended for archaeological sites determined eligible under Criterion D that extend into the direct APE. Research was recommended to determine the eligibility of Massingale Road followed by documentation if warranted. Documentation also was recommended for the contributing segment of Old State Route 84.

The indirect APE centered on I-10 was surveyed by HDR Engineering, Inc., as reported by Blackwell and Barnes (2012), in which all architectural resources, including subdivisions greater than 40 years in age (those with construction dates of 1971 or older), were assessed for listing on the NRHP. None were found to be eligible (Otani for Petty [FHWA] to Jacobs [SHPO] April 23, 2012; SHPO concurrence April 30, 2012). Thus, no treatment of architectural resources in the indirect APE along I-10 is required. The indirect APE along Ina Road has not yet been inventoried; if eligible architectural properties are identified, treatment options will be explored at a later date.

In accordance with FHWA's finding of "adverse effect," a *Research Design and Data Recovery Plan for the Interstate 10, Ina Road Traffic Interchange and Improvements to Ina Road and the Ina Road Bridge, Marana, Pima County, Arizona* (Ballenger and others 2015) (the Plan) has been prepared and is enclosed for your review and comment. You will note that the list of affected properties has been altered slightly in consideration of changes to the design. One archaeological site mentioned in the Class I literature review (AZ AA:12:836 [ASM]) is outside of the current project limits, and another brought to ADOT's attention by ASM (AZ AA:12:1157 [ASM]) is also located beyond the current project limits. Two properties not mentioned in the Class I literature review (AZ AA:12:1004 [ASM], a prehistoric habitation, and AZ AA:12:870 [ASM], the Cortaro Farms Canal) are now understood to be within the project limits and are addressed in the Plan.

Please review the enclosed Research Design and Data Recovery Plan and the information provided in this letter. If you find the Plan adequate, please sign on the concurrence line. If you have any questions or concerns, please contact ADOT Historic Preservation Specialist Sara Ferland at 602-712-6371 or at sferland@azdot.gov.

Sincerely,

for Karla S. Petty
Division Administrator

FOR RANDY CARLTON — 9/11/15

Signature for Arizona State Land Department Concurrence — Date
010-D(216)S / BR-MRN-0(014)A

Enclosure

cc:
Mr. Ruben Ojeda, Manager, Right-of-way Section, Arizona State Land Department, 1616 W. Adams St., Phoenix, AZ 85007 (with enclosure)
ecc:
Mr. Randy Carlton, Archaeological Projects Specialist, Arizona State Land Department (rcarlton@azland.gov)

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U.S. Department
of Transportation
Federal Highway Administration

ARIZONA DIVISION

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August 31, 2015

In Reply Refer To:

010-D(216)S / BR-MRN-0(014)A
TRACS Nos. 010 PM 247 H8479 01D / 0000 PM MRN SB413 01C
Interstate 10, Ina Road Traffic Interchange / Improvements to Ina Road and the Ina Road Bridge
Continuing Section 106 Consultation
Research Design and Data Recovery Plan
"adverse effect"

Dr. Patrick D. Lyons, Director
Arizona State Museum
University of Arizona
P.O. Box 210026
Tucson, Arizona 85721-0026

Dear Dr. Lyons:

The Federal Highway Administration (FHWA) and the Arizona Department of Transportation (ADOT) are planning improvements to the Ina Road Traffic Interchange (TI) on Interstate 10 (I-10) between mileposts (MPs) 247.56 (eastbound) / 247.66 (westbound) and MP 249.62, and to Ina Road between Silverbell Road and approximately 1,000 feet east of Camino de Oeste in the Town of Marana and unincorporated Pima County, Arizona. This project area is slightly reduced from what was described in earlier consultation. The project area is in Sections 35 and 36, Township (T) 12 South (S), Range (R) 12 East (E); Section 31 of T12S, R13E; Sections 1 and 2 of T13S, R12E; and Section 6 of T13S, R13E of the Gila and Salt River Base Line and Meridian. Because this project would employ federal funds, it is considered an undertaking subject to Section 106 review. This project would occur on ADOT-owned right-of-way (ROW) and land to be acquired in fee or as easements (temporary and permanent) by ADOT from Pima County, the Town of Marana, the Union Pacific Railroad (UPRR) (some of which is held in fee and some of which is easement across State Trust land managed by the Arizona State Land Department [ASLD]), and private landowners. Earlier consultation incorrectly indicated that some ADOT easement from ASLD was involved.

Consulting parties for this project are FHWA, ADOT, the Arizona State Historic Preservation Office (SHPO), the Advisory Council on Historic Preservation (Advisory Council), the Arizona State Museum, ASLD, Pima County, the Town of Marana, UPRR, the U.S. Army Corps of Engineers (USACE), the Ak-Chin Indian Community, the Gila River Indian Community, the Hopi Tribe, the Pascua Yaqui Tribe, the Salt River Pima-Maricopa Indian Community, the San Carlos Apache Tribe, the Tohono O'odham Nation (lead for the Four Southern Tribes), the Tonto Apache Tribe, and the Yavapai-Apache Nation. The White Mountain Apache Tribe has declined to participate. In earlier consultation for the broader I-10, Ina Road TI to Ruthrauff Road TI project discussed in the next paragraph, the City of Tucson was included, but because none of the combined Ina Road TI and Ina Road improvement project area is in the City of Tucson, that municipality is not included here.

The combined Ina Road TI and Ina Road improvement projects are one aspect of the broader I-10, Ina Road TI to Ruthrauff Road TI improvement project mentioned above (101-D(211)L / 010 PM 247 H7583 01L), which is proceeding under the terms of a 1993 programmatic agreement (PA) among FHWA, ADOT, SHPO, and the Advisory Council for improvements to portions of I-10 between Tangerine Road to the north and the I-10/I-19 TI to the south. Improvements to Ina Road and the Ina Road Bridge are proceeding under the terms of a 2004 memorandum of agreement (MOA) among USACE, SHPO, FHWA, and the Town of Marana. Given the age of the 1993 PA and the fact that ADOT has assumed responsibility for several aspects of the project covered by the 2004 MOA, a new PA has been developed but has not yet been executed.

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Most of the direct APE has been inventoried or otherwise investigated for cultural resources as documented in *Class I Literature Review for the Interstate 10 Traffic Interchange at Ina Road and Ina Road Improvements, Town of Marana and Pima County, Arizona* (Vaughn 2015). Based on the results of the Class I literature review, FHWA found that the combined Ina Road TI and Ina Road improvement projects will have an "adverse effect" on historic properties and recommended a phased course of treatment at each of 13 affected resources (Wilson for Petty [FHWA] to Jacobs [SHPO] March 16, 2015; SHPO concurrence March 20, 2015).

Briefly, eligibility testing was recommended for archaeological sites of undetermined National Register of Historic Places (NRHP) eligibility where such testing is possible given the logistic constraints posed by the existing interstate highway and Ina Road. Extent testing was recommended for archaeological sites that may or may not extend within the direct APE where possible. Data recovery and/or monitoring were recommended for archaeological sites determined eligible under Criterion D that extend into the direct APE. Research was recommended to determine the eligibility of Massingale Road followed by documentation if warranted. Documentation also was recommended for the contributing segment of Old State Route 84.

The indirect APE centered on I-10 was surveyed by HDR Engineering, Inc., as reported by Blackwell and Barnes (2012), in which all architectural resources, including subdivisions greater than 40 years in age (those with construction dates of 1971 or older), were assessed for listing on the NRHP. None were found to be eligible (Otani for Petty [FHWA] to Jacobs [SHPO] April 23, 2012; SHPO concurrence April 30, 2012). Thus, no treatment of architectural resources in the indirect APE along I-10 is required. The indirect APE along Ina Road has not yet been inventoried; if eligible architectural properties are identified, treatment options will be explored at a later date.

In accordance with FHWA's finding of "adverse effect," a *Research Design and Data Recovery Plan for the Interstate 10, Ina Road Traffic Interchange and Improvements to Ina Road and the Ina Road Bridge, Marana, Pima County, Arizona* (Ballenger and others 2015) (the Plan) has been prepared and is enclosed for your review and comment. You will note that the list of affected properties has been altered slightly in consideration of changes to the design. One archaeological site mentioned in the Class I literature review (AZ AA:12:836 [ASM]) is outside of the current project limits, and another brought to ADOT's attention by ASM (AZ AA:12:1157 [ASM]) is also located beyond the current project limits. Two properties not mentioned in the Class I literature review (AZ AA:12:1004 [ASM], a prehistoric habitation, and AZ AA:12:870 [ASM], the Cortaro Farms Canal) are now understood to be within the project limits and are addressed in the Plan.

Please review the enclosed Research Design and Data Recovery Plan and the information provided in this letter. If you find the Plan adequate, please sign on the concurrence line. If you have any questions or concerns, please contact ADOT Historic Preservation Specialist Sara Ferland at 602-712-6371 or at sferland@azdot.gov.

Sincerely,

for Karla S. Petty
Division Administrator

Todd Pitezel, Ph.D. — 5 Oct 2015

Signature for Arizona State Museum Concurrence — Date
010-D(216)S / BR-MRN-0(014)A

Enclosure

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THE HOPI TRIBE

Herman G. Honanie
CHAIRMAN

Alfred Lomahquahu Jr.
VICE-CHAIRMAN

September 8, 2015

Karla S. Petty, Division Administrator
Federal Highway Administration, Arizona Division
4000 North Central Ave., Suite 1500
Phoenix, Arizona 85012-3500

Re: I-10, Ina Road TI; Ina Road and Ina Road Bridge

Dear Ms. Petty,

Thank you for your correspondence dated August 31, 2015, with an enclosed *Research Design and Data Recovery Plan for the Interstate 10, Ina Road Traffic Interchange and Improvements to Ina Road and the Ina Road Bridge, Marana, Pima County, Arizona,* regarding the Federal Highway Administration (FHWA) and Arizona Department of Transportation (ADOT) proposing to improve the Ina Road Traffic Interchange and Ina Road and Ina Road Bridge.

The Hopi Tribe claims cultural affiliation to earlier identifiable cultural groups in Arizona including the Hohokam cultural group in southern Arizona. The Hopi Cultural Preservation Office supports the identification and avoidance of our ancestral sites and Traditional Cultural Properties, and we consider the archaeological sites of our ancestors to be "footprints" and Traditional Cultural Properties. Therefore, we appreciate the FHWA and ADOT's continuing solicitation of our input and your efforts to address our concerns.

In a letter dated October 27, 2014, the Hopi Cultural Preservation Office noted the draft Programmatic Agreement for four projects in the area includes a list of cultural resources including 16 prehistoric sites, described as artifact scatters and habitation sites with burials, for which testing and data recovery are required.

In a letter dated March 23, 2015, we reviewed the project overview and stated we understood data recovery is proposed for three sites, AZ AA:12:111 (ASM), Las Capas, described as an early agricultural habitation site, AZ AA:12:314 (ASM), described as a habitation site with features and burials, and AZ AA:12:503 (ASM), Costello-King Site, described as an early agriculture habitation site with features. Eligibility testing and/or data recovery was proposed for other six sites, AZ AA:12:688, 739, 836, 858, and 859 (ASM),

described as artifact scatters, and AZ AA:12:798 (ASM), described as a one room structure with artifact scatter. Therefore we reiterated that we concurred that this proposal will result in adverse effects to prehistoric cultural resources significant to the Hopi Tribe.

We have now reviewed the enclosed treatment plan and understand AZ AA:12:836 (ASM) is outside the current project limits but another site AZ AA:12:1004, described as a prehistoric habitation with possible cremations will also be adversely effected by project activities. Because of the proposed data recovery at the habitation sites and the previous data recovery projects in the vicinity, this project is likely to disturb numerous human remains.

We request continuing consultation including being provided with copies of the preliminary and draft treatment reports for review and comment. Should you have any questions or need additional information, please contact Terry Morgart at the Hopi Cultural Preservation Office. Thank you again for your consideration.

Respectfully,

Leigh J. Kuwanwisiwma, Director
Hopi Cultural Preservation Office

xc: Arizona State Historic Preservation Office
Sara Ferland, Arizona Department of Transportation

U.S. Department of Transportation
Federal Highway Administration

ARIZONA DIVISION

4000 North Central Avenue
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http://www.fhwa.dot.gov/azdiv/index.htm

August 31, 2015

In Reply Refer To:

010-D(216)S / BR-MRN-0(014)A
TRACS Nos. 010 PM 247 H8479 01D / 0000 PM MRN SB413 01C
Interstate 10, Ina Road Traffic Interchange / Improvements to Ina Road and the Ina Road Bridge
Continuing Section 106 Consultation
Research Design and Data Recovery Plan
"adverse effect"

Ms. Linda Mayro, Cultural Resources Manager
Pima County Public Works
201 North Stone Avenue
Tucson, Arizona 85701-1207

Dear Ms. Mayro:

The Federal Highway Administration (FHWA) and the Arizona Department of Transportation (ADOT) are planning improvements to the Ina Road Traffic Interchange (TI) on Interstate 10 (I-10) between mileposts (MPs) 247.56 (eastbound) / 247.66 (westbound) and MP 249.62, and to Ina Road between Silverbell Road and approximately 1,000 feet east of Camino de Oeste in the Town of Marana and unincorporated Pima County, Arizona. This project area is slightly reduced from what was described in earlier consultation. The project area is in Sections 35 and 36, Township (T) 12 South (S), Range (R) 12 East (E); Section 31 of T12S, R13E; Sections 1 and 2 of T13S, R12E; and Section 6 of T13S, R13E of the Gila and Salt River Base Line and Meridian. Because this project would employ federal funds, it is considered an undertaking subject to Section 106 review. This project would occur on ADOT-owned right-of-way (ROW) and land to be acquired in fee or as easements (temporary and permanent) by ADOT from Pima County, the Town of Marana, the Union Pacific Railroad (UPRR) (some of which is held in fee and some of which is easement across State Trust land managed by the Arizona State Land Department [ASLD]), and private landowners. Earlier consultation incorrectly indicated that some ADOT easement from ASLD was involved.

Consulting parties for this project are FHWA, ADOT, the Arizona State Historic Preservation Office (SHPO), the Advisory Council on Historic Preservation (Advisory Council), the Arizona State Museum, ASLD, Pima County, the Town of Marana, UPRR, the U.S. Army Corps of Engineers (USACE), the Ak-Chin Indian Community, the Gila River Indian Community, the Hopi Tribe, the Pascua Yaqui Tribe, the Salt River Pima-Maricopa Indian Community, the San Carlos Apache Tribe, the Tohono O'odham Nation (lead for the Four Southern Tribes), the Tonto Apache Tribe, and the Yavapai-Apache Nation. The White Mountain Apache Tribe has declined to participate. In earlier consultation for the broader I-10, Ina Road TI to Ruthrauff Road TI project discussed in the next paragraph, the City of Tucson was included, but because none of the combined Ina Road TI and Ina Road improvement project area is in the City of Tucson, that municipality is not included here.

The combined Ina Road TI and Ina Road improvement projects are one aspect of the broader I-10, Ina Road TI to Ruthrauff Road TI improvement project mentioned above (101-D(211)L / 010 PM 247 H7583 01L), which is proceeding under the terms of a 1993 programmatic agreement (PA) among FHWA, ADOT, SHPO, and the Advisory Council for improvements to portions of I-10 between Tangerine Road to the north and the I-10/I-19 TI to the south. Improvements to Ina Road and the Ina Road Bridge are proceeding under the terms of a 2004 memorandum of agreement (MOA) among USACE, SHPO, FHWA, and the Town of Marana. Given the age of the 1993 PA and the fact that ADOT has assumed responsibility for several aspects of the project covered by the 2004 MOA, a new PA has been developed but has not yet been executed.

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Briefly, eligibility testing was recommended for archaeological sites of undetermined National Register of Historic Places (NRHP) eligibility where such testing is possible given the logistic constraints posed by the existing interstate highway and Ina Road. Extent testing was recommended for archaeological sites that may or may not extend within the direct APE where possible. Data recovery and/or monitoring were recommended for archaeological sites determined eligible under Criterion D that extend into the direct APE. Research was recommended to determine the eligibility of Massingale Road followed by documentation if warranted. Documentation also was recommended for the contributing segment of Old State Route 84.

The indirect APE centered on I-10 was surveyed by HDR Engineering, Inc., as reported by Blackwell and Barnes (2012), in which all architectural resources, including subdivisions greater than 40 years in age (those with construction dates of 1971 or older), were assessed for listing on the NRHP. None were found to be eligible (Otani for Petty [FHWA] to Jacobs [SHPO] April 23, 2012; SHPO concurrence April 30, 2012). Thus, no treatment of architectural resources in the indirect APE along I-10 is required. The indirect APE along Ina Road has not yet been inventoried; if eligible architectural properties are identified, treatment options will be explored at a later date.

In accordance with FHWA's finding of "adverse effect," a *Research Design and Data Recovery Plan for the Interstate 10, Ina Road Traffic Interchange and Improvements to Ina Road and the Ina Road Bridge, Marana, Pima County, Arizona* (Ballenger and others 2015) (the Plan) has been prepared and is enclosed for your review and comment. You will note that the list of affected properties has been altered slightly in consideration of changes to the design. One archaeological site mentioned in the Class I literature review (AZ AA:12:836 [ASM]) is outside of the current project limits, and another brought to ADOT's attention by ASM (AZ AA:12:1157 [ASM]) is also located beyond the current project limits. Two properties not mentioned in the Class I literature review (AZ AA:12:1004 [ASM], a prehistoric habitation, and AZ AA:12:870 [ASM], the Cortaro Farms Canal) are now understood to be within the project limits and are addressed in the Plan.

Please review the enclosed Research Design and Data Recovery Plan and the information provided in this letter. If you find the Plan adequate, please sign on the concurrence line. If you have any questions or concerns, please contact ADOT Historic Preservation Specialist Sara Ferland at 602-712-6371 or at sferland@azdot.gov.

Sincerely,

Karla S. Petty
Division Administrator

Signature for Pima County Concurrence
010-D(216)S / BR-MRN-0(014)A

Date 9/21/15

Enclosure

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U.S. Department of Transportation
Federal Highway Administration

ARIZONA DIVISION

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http://www.fhwa.dot.gov/azdiv/index.htm

August 31, 2015

In Reply Refer To:

010-D(216)S / BR-MRN-0(014)A
TRACS Nos. 010 PM 247 H8479 01D / 0000 PM MRN SB413 01C
Interstate 10, Ina Road Traffic Interchange / Improvements to Ina Road and the Ina Road Bridge
Continuing Section 106 Consultation
Research Design and Data Recovery Plan
"adverse effect"

Mr. Terry Rambler, Chairman
San Carlos Apache Tribe
P.O. Box 0
San Carlos, Arizona 85550

Dear Chairman Rambler:

The Federal Highway Administration (FHWA) and the Arizona Department of Transportation (ADOT) are planning improvements to the Ina Road Traffic Interchange (TI) on Interstate 10 (I-10) between mileposts (MPs) 247.56 (eastbound) / 247.66 (westbound) and MP 249.62, and to Ina Road between Silverbell Road and approximately 1,000 feet east of Camino de Oeste in the Town of Marana and unincorporated Pima County, Arizona. This project area is slightly reduced from what was described in earlier consultation. The project area is in Sections 35 and 36, Township (T) 12 South (S), Range (R) 12 East (E); Section 31 of T12S, R13E; Sections 1 and 2 of T13S, R12E; and Section 6 of T13S, R13E of the Gila and Salt River Base Line and Meridian. Because this project would employ federal funds, it is considered an undertaking subject to Section 106 review. This project would occur on ADOT-owned right-of-way (ROW) and land to be acquired in fee or as easements (temporary and permanent) by ADOT from Pima County, the Town of Marana, the Union Pacific Railroad (UPRR) (some of which is held in fee and some of which is easement across State Trust land managed by the Arizona State Land Department [ASLD]), and private landowners. Earlier consultation incorrectly indicated that some ADOT easement from ASLD was involved.

Consulting parties for this project are FHWA, ADOT, the Arizona State Historic Preservation Office (SHPO), the Advisory Council on Historic Preservation (Advisory Council), the Arizona State Museum, ASLD, Pima County, the Town of Marana, UPRR, the U.S. Army Corps of Engineers (USACE), the Ak-Chin Indian Community, the Gila River Indian Community, the Hopi Tribe, the Pascua Yaqui Tribe, the Salt River Pima-Maricopa Indian Community, the San Carlos Apache Tribe, the Tohono O'odham Nation (lead for the Four Southern Tribes), the Tonto Apache Tribe, and the Yavapai-Apache Nation. The White Mountain Apache Tribe has declined to participate. In earlier consultation for the broader I-10, Ina Road TI to Ruthrauff Road TI project discussed in the next paragraph, the City of Tucson was included, but because none of the combined Ina Road TI and Ina Road improvement project area is in the City of Tucson, that municipality is not included here.

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Please review the enclosed Research Design and Data Recovery Plan and the information provided in this letter. If you find the Plan adequate, please sign on the concurrence line. If you have any questions or concerns, please contact ADOT Historic Preservation Specialist Sara Ferland at 602-712-6371 or at sferland@azdot.gov.

Sincerely,

Sara –
We defer to tribes located nearest to project area. Vernelda Grant, THPO (928) 475-5797

Tremaine Wilson

Karla S. Petty
Division Administrator

Signature for San Carlos Apache Tribe Concurrence
010-D(216)S / BR-MRN-0(014)A

9/22/15
Date

cc:
Ms. Vernelda Grant, Tribal Historic Preservation Officer, San Carlos Apache Tribe, P.O. Box 0, San Carlos, AZ 85550 (with enclosure)
TWilson
SFerland (EM02)
TWilson:cdm

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From: Roger Anyon <Roger.Anyon@pima.gov>
Sent: Monday, September 21, 2015 3:46 PM
To: Sara Ferland
Subject: Ina and I-10 data recovery plan

Hi Sara:

Here's Pima County concurrence for the data recovery plan for the Ina and I-10 interchange. Original in the mail to Federal Highways.

I do have a comment on the Plan. As you and EcoPlan are aware, Desert Archaeology has just published their monumental work for the County Wastewater treatment plant within the boundary of Las Capas. One of the methodological issues they grappled with was the fact that many of the features noted during stripping, such as agricultural fields and the small water distribution channels, were not visible in the profiles of backhoe trenches. This indicates to me that trenching will be only partially successful in identifying cultural features. Thus, I recommend that EcoPlan employ a combination of stripping and trenching in Phase I and Phase II data recovery.

I think ir would be beneficial that EcoPlan should request all Desert Archaeology shape files, as it can then known exactly what Desert uncovered and where. I also recommend that EcoPlan work off the same vertical datum as did Desert so the vertical control between the two projects is the same and thus strata can be established and confidently linked between the two projects (note that the Desert work in Las Capas, the Northland work along the Plant Interconnect between Las Capas and Los Pozos, and the Tierra work in Los Pozos all used datums that tie into one another so that all three projects over this five mile stretch of the Santa Cruz Valley can be correlated on the vertical as well as the horizontal). Having EcoPlan vertically know where Desert located field systems is critical, as the ones located adjacent to Ina Road were not much more than a meter deep. I am thinking of Locus E in particular, as it is adjacent to the Ina Road APE. Locus E appeared to be where the irrigation/field system was petering out, but it clearly should extend into the Ina Road APE. Stripping at this location in the Ina APE, by correlating veritcals with the Desert work would be by far the best field strategy at this location within the Ina APE. Note also that Desert has revised the site boundary for Las Capas, and some of the Ina APE shown in the Plan as being outside the site should now be considered inside the site, even though, as we all know, the entire Ina APE is highly likely to contain archaeological deposits.

I do not see any need to modify the Plan as submitted, but I would appreciate these comments being considered by ADOT and EcoPlan before fieldwork begins. Thank you.

Roger Anyon.

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September 16, 2015

Karla Petty, Division Administrator
Federal Highway Administration, U.S. Department of Transportation
4000 North Central Avenue, Suite 1500
Phoenix, AZ 85012-3500

Attention: Tremaine Wilson

RE: HOP-AZ, 010-D(216)S/BR-MRN-0(014)A
TRACS No. 010 PM 247 H8479 01D/0000 PM MRN SB413 01C
Interstate 10, Ina Road Traffic Interchange/ Improvements to Ina Road and Bridge
Continuing Section 106 Consultation, Treatment Plan
SHPO-2009-1851 (127340)

Dear Ms. Petty:

Thank you for submitting for review and comment the document *Research Design and Data Recovery Plan for the Interstate 10, Ina Road Traffic Interchange and Improvements to the Ina Road and the Ina Road Bridge, Marana, Pima County, Arizona*. We have review the submitted treatment plan, and offer the following comments.

The treatment plan adequately addresses the adversely affected historic properties with the proposed project with the exception of the I-10 main line construction monitoring mentioned on page 51. A more detailed protocol needs to be developed separately for the I-10 main line construction monitoring of the native soils buried under the fill of the I-10 main line, given the absence of any data recovery conducted in advance of the original construction of I-10.

We appreciate your continuing cooperation with our office in complying with the requirements of historic preservation, and look forward to reviewing the separate monitoring protocol. Please contact me at (602) 542-7140 or electronically at djacobs@azstateparks.gov if you have any questions or concerns.

Sincerely,

David Jacobs
Compliance Specialist/Archaeologist
State Historic Preservation Office

CC: Sara Ferland, ADOT

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APPENDIX B
Agency Coordination

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U.S. Department of Transportation
Federal Highway Administration

ARIZONA DIVISION

4000 North Central Avenue
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Phone: (602) 379-3646
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http://www.fhwa.dot.gov/azdiv/index.htm

August 31, 2015

In Reply Refer To:

NH-STP-D(220)S and NH-STP-010-D(216)S
TRACS Nos. and 010 PM 247 F0003 01C (Stage A1)
and 010 PM 247 H8479 01C (Stage A2)
I-10, Ina Road Traffic Interchange
AND
STP-MRN-0(206)S and STP-MRN-0(014)T
TRACS Nos. 0000 PM MRN T0013 01C (Stage M1)
and 0000 PM MRN SB413 01C (Stage M2)
Ina Road Bridge Replacement
Section 4(f) Resources

Mr. Chris Cawein, Director
Pima County Natural Resources, Parks and Recreation Department
3500 West River Road
Tucson, Arizona 85741

Dear Mr. Cawein:

The Arizona Department of Transportation (ADOT), in conjunction with the Federal Highway Administration (FHWA), the Regional Transportation Authority, and the Town of Marana, is planning two related projects to improve approximately 2 miles of Interstate 10 (I-10) and 1.6 miles of Ina Road in the Tucson metropolitan area of Pima County, Arizona. The I-10 portion of the proposed project would extend from approximately milepost (MP) 247.6 to the Cañada del Oro Wash at approximately MP 249.6, through Marana and portions of unincorporated Pima County. The Ina Road portion extends from just east of Silverbell Road to just east of Camino de la Cruz in Marana.

The proposed projects have the potential to affect Pima County–owned park and recreation resources protected under Section 4(f) of the Department of Transportation Act of 1966 (Section 4[f]). Previous coordination with your department occurred in 2011 and resulted in your concurrence that the project "would not adversely affect the activities, features, and attributes that qualify the resources for protection under Section 4(f), and that impacts to Mike Jacob Sports Park and other county-owned facilities would be *de minimis*." The 2011 coordination covered a larger project that extended south to the Ruthrauff Road traffic interchange (see enclosed letter dated July 6, 2011). This letter serves as a follow-up to that previous coordination to address project limits and design changes that occurred since the 2011 preliminary design.

This letter updates the evaluation of impacts to the Section 4(f) resources and summarizes ongoing coordination efforts with the Pima County Natural Resources, Parks and Recreation Department (NRPRD), the Pima County Regional Flood Control District (RFCD), and the Town of Marana. The

purpose of this letter is to request your comments on our evaluation of the impacts to those resources and your concurrence on the findings and our proposed method of mitigation for the impacts.

Project Location and Description

The I-10 portion of the project begins at approximately MP 247.6 and extends southeast to MP 249.6. The Ina Road portion begins just east of Silverbell Road and ends just east of Camino de la Cruz. Refer to the enclosed Figure 1 for the project location and Figure 2 for the project vicinity.

The proposed projects would include the following improvements:

- Reconstructing I-10 from MP 248.0 to MP 249.3 to widen the roadway to four through lanes in each direction
- Milling and replacing the I-10 pavement from MP 247.6 to MP 248.0 and from MP 249.3 to MP 249.6
- Reconstructing the traffic interchange at Ina Road to elevate the crossroad over I-10 and the Union Pacific Railroad
- Adding turn lanes at the frontage road–Ina Road intersection
- Widening Ina Road west of I-10 from one lane in each direction to two lanes in each direction and replacing the existing bridge over the Santa Cruz River
- Reconstructing the Ina Road–Camino de Oeste intersection and providing local access via a connecter road

The majority of improvements to the I-10 mainline would take place within the existing ADOT and Town of Marana rights-of-way (ROW). Additional ROW would be required from the Mike Jacob Sports Park to accommodate realignment of the eastbound on-ramp from Ina Road. The anticipated ROW impacts to the Mike Jacob Sports Park have been reduced since 2011. The replacement of the Ina Road bridge over the Santa Cruz River introduces a temporary construction impact to The Loop (Loop) trail in Santa Cruz River Park between Ted Walker Park and Marana's Crossroads at Silverbell Park (Crossroads Park). At the time of the 2011 coordination, this portion of the Loop trail was under construction and known as the Regional Optimization Master Plan (ROMP) trail.

Section 4(f) of the Department of Transportation Act of 1966

Section 4(f) of the Department of Transportation Act of 1966 (49 United States Code § 303) stipulates that FHWA and other Department of Transportation agencies cannot approve the use of land from publicly owned parks, recreational areas, wildlife and waterfowl refuges, or public and private historical sites unless there is no feasible and prudent alternative to the use of that land, and that the proposed action includes all possible planning to minimize harm to the property resulting from such use.

A "use" of a Section 4(f) resource, as defined in 23 Code of Federal Regulations (CFR) § 774.17, occurs:

(1) When land is permanently incorporated into a transportation facility;
(2) When there is a temporary occupancy of land that is adverse in terms of the statute's preservation purpose; or
(3) When there is a constructive use of a Section 4(f) property.

A constructive use of a Section 4(f) resource occurs when the transportation project does not incorporate land from the Section 4(f) resource but the project's proximity impacts are so severe that the protected activities, features, or attributes that qualify a resource for protection under Section 4(f) are substantially

impaired. For example, a constructive use can occur as a result of an increase in noise levels or restrictions in access, or other impacts that could substantially impair aesthetic features or attributes of the resource.

In August 2005, Section 4(f) was revised to simplify the process for approval of projects with *de minimis* impacts to Section 4(f) resources. Under the revised provisions, projects determined to result in a *de minimis* impact are not required to undergo an analysis of avoidance alternatives, and once the project is determined to be *de minimis,* the Section 4(f) evaluation process is complete.

An impact to a park or recreation area may be determined to be *de minimis* if the transportation use of the Section 4(f) resource does not adversely affect the activities, features, and attributes that qualify the resource for protection under Section 4(f). Use of a Section 4(f) resource is allowed when a *de minimis* impact finding can be supported by FHWA with the written concurrence of the officials with jurisdiction over the Section 4(f) property. Further, the public must be provided an opportunity to review and comment on the project impacts to the resource.

Ongoing Coordination Efforts

On May 21, 2015, ADOT meet with NRPRD to discuss I-10 and Ina Road design and construction activities that may impact park facilities. In attendance were the ADOT project managers (Greg Byres and Jody Rodriquez), the ADOT community relations officer (Paki Rico), and the director (Chris Cawein), recreation program manager (Martina Gonzales), recreation superintendent (Joe Barr), and deputy director (Robert Padilla) from NRPRD. Proposed impacts to Mike Jacob Sports Park, Ted Walker Park, and the Loop trail were discussed. Responsibilities for ongoing communication, public notification, and mitigation actions were addressed.

ADOT held a meeting with representatives of the RFCD and the Town of Marana on June 12, 2015, to discuss the proposed design of the Ina Road bridge at the Santa Cruz River, construction staging, and impacts to the Loop trail. Andy Dinauer and John Spiker of the RFCD and Tom Ellis (parks and recreation director) of the Town of Marana were in attendance. ADOT described the planned design, which includes construction of multi-use path connections to the Loop trail on the north and south side of the bridge, and the underpass connections below the bridge designed to provide path users connectivity without having to use the bridge and interface with roadway traffic.

The project team held a public meeting on June 11, 2015, to solicit comments from members of the public regarding the project changes since 2011—including the proposed temporary closure of the Loop trail. Nine comments were received regarding potential impacts to the Loop trail. All comments noted the public safety aspect of the temporary Loop trail closure. Four commenters requested efforts to minimize the duration of the closure and/or consider alternative temporary routes.

Section 4(f) Evaluation of Impacts

Pima County–owned Section 4(f) resources identified in the project area are as follows:
Mike Jacob Sports Park, Pima County's Loop trail, and Ted Walker Park. Refer to the enclosed Pima County Santa Cruz River Park North figure for the locations of the evaluated properties in relation to the project area. These facilities are considered Section 4(f) properties because they are parks or recreation areas on publicly owned land that are open to the public. Each of these properties is discussed individually below.

Mike Jacob Sports Park

Description of Resource

Mike Jacob Sports Park, 9601 N. Casa Grande Highway, is a Pima County–owned park comprising approximately 51 acres west of I-10 between Ina Road and Cañada del Oro Wash. The park abuts the eastbound I-10 frontage road and is accessed directly from the frontage road. Minor changes in the park facilities have occurred since 2011. A BMX track was added west of the go-cart track in the northernmost corner of the park. It is operated by the same vendor that runs the go-cart track adjacent to the eastbound frontage road (Xtreme Fun Spot). Currently available amenities for public use include a parking lot, two concession stands with restrooms, six softball/baseball diamonds, covered pavilions, volleyball courts, and multi-use fields. The former water park feature remains closed, and the equipment has been removed. An undeveloped portion of the park is south of the public parking lot—between the active recreational area and I-10. The master plan for the park, included in the Corazón de los Tres Ríos del Norte concept plan, proposes three additional softball/baseball diamonds and additional parking for this area. Funding is contingent on a planned Pima County bond election scheduled for November 3, 2015. The proposed new park facilities would be set back from the eastbound I-10 frontage road.

Potential Impacts to Resource

Design changes to the eastbound frontage road adjacent to the Mike Jacob Sports Park shortened the frontage road realignment. The 2011 preliminary design at the Mike Jacob Sports Park included a temporary access road from Ina Road to the eastbound frontage road and a frontage road alignment shift that would have required approximately 1.6 acres of the park. The current design has eliminated the temporary access road and reduced the eastbound frontage alignment shift, which has reduced the ROW requirements from the Mike Jacob Sports Park to 1 acre. This "use" represents about 2 percent of the park as a whole. The area required for the new ROW consists of portions of the go-cart facility, parking, and landscaped areas. The proposed ROW would not encroach on the planned ballfields.

The project reevaluation includes an updated noise analysis (*Noise Review, I-10 Ina Road Traffic Interchange*, August 2015). The analysis concluded that the park currently experiences noise levels from I-10 that exceed the ADOT noise abatement criteria, and future noise levels with construction of the I-10 improvements would further increase the noise level at the ROW. The 2011 noise analysis results were provided in the July 2011 Section 4(f) coordination letter. The analysis concluded that the Mike Jacob Sports Park active-use areas would have a 1 decibel change as a result of the I-10 widening. A 1 decibel change is not perceptible to the human ear; therefore, no noise abatement was proposed. The 2015 analysis confirms the recommendation that a noise barrier is not reasonable or prudent.

Measures to Minimize Impacts

All measures to minimize and mitigate harm agreed to during the 2011 coordination remain in place. ADOT is coordinating with Pima County to minimize or mitigate impacts to the resources and would compensate the county for the go-cart track impacts and the lost parking and landscaping. The driveway entrance to the parking lot would be reconstructed at its current location and maintained during construction. Because a relatively small area of the park would be converted to transportation uses, the impacted parking and landscaping would be replaced, the go-cart track can be adjusted, and ADOT has coordinated with the responsible entity (Pima County), the identified impacts would not adversely affect the activities, features, or attributes qualifying the resource for protection under Section 4(f), and the impact would continue to be considered *de minimis*.

The Loop Trail

Description of Resource

The Loop trail is a complex of paved multi-use bike and pedestrian paths linking the major drainage features found in metropolitan Tucson. When fully completed, the Loop trail will include 131 miles of off-roadway paved paths linking the Santa Cruz River Park, Rillito River Park, Pantano River Park, Cañada del Oro Wash, Julian Wash Greenway, and Harrison Greenway. About 100 miles have been completed to date. The remaining links are under construction or are planned for construction (*The Loop,*

2014 Annual Report—The First 100 Miles, Pima County Natural Resources Parks and Recreation Department, June 2015). Approximately 3.5 miles of the Loop trail traverse lands adjacent to the Santa Cruz River connecting Ted Walker Park and Crossroads Park. The Loop trail crosses Ina Road at-grade at the bridge over the Santa Cruz River.

Potential Impacts to Resource

Reconstruction of the Ina Road bridge would be staged over a nearly two-year period, starting in spring 2016 with the eastbound bridge and continuing to late 2018 with the westbound bridge. Due to intense construction activity, including large equipment (cranes, drilling rigs, earth movers), bridge column fabrication, bridge girder laydown areas, existing bridge demolition, and reconstruction of Ina Road approaching the bridge, the immediate project area needs to be closed to pedestrian, bike, and equestrian use for public safety. As the Loop trail is currently configured, pedestrians and bicyclists must cross the Ina Road bridge at-grade to travel from Ted Walker Park to Crossroads Park. The consensus from those at the June 12, 2015, meeting was that it would be an unreasonable risk to the public to keep the at-grade pathway open during construction.

Temporary alternative routing was discussed as a solution to this temporary closure. Due to a lack of infrastructure in the area, the options were limited. Routing Loop trail users to the I-10 frontage road isn't feasible because the frontage road would be reconstructed as part of the I-10 improvements, would handle additional traffic during I-10 reconstruction, and would not provide connectivity back to the Loop trail. Silverbell Road parallels the river on the west, but the roadway is only two lanes, with narrow shoulders. Pima County added a pavement overlay to Silverbell Road between Camino del Cerro and Ina Road in summer 2015, but no widening for bike or pedestrian use was added.

Measures to Minimize Impacts

Closure of the Loop trail is recommended at Ted Walker Park and Crossroads Park, as shown on the Pima County Santa Cruz River Park North figure. Closing the Loop trail at the parks reduces the potential for bike/pedestrian users to reach the Ina Road construction zone and have to turn around due to the closure. Proactive notification through the Loop trail website, the NRPRD website, signage, and to user groups was recommended to provide adequate advance notice to potential users.

Pursuant to 23 CFR 774.13(d), FHWA may determine an exception to the requirement for Section 4(f) approval when the temporary occupancy of land is so minimal as to not constitute a Section 4(f) use, only if all of the following conditions are satisfied:

- Duration must be temporary, i.e., less than the time needed for construction of the project, and there should be no change in ownership of the land;
- Scope of work must be minor, i.e., both the nature and the magnitude of the changes to the Section 4(f) property are minimal;
- There are no anticipated permanent adverse physical impacts, nor will there be interference with the protected activities, features, or attributes of the property, on either a temporary or permanent basis;
- The land being used must be fully restored, i.e., the property must be returned to a condition which is at least as good as that which existed prior to the project; and
- There must be documentation agreement of the official with jurisdiction over the Section 4(f) resource regarding the above conditions.

The closure of the Loop Trail would occur only during the duration of the construction of the Ina Road Bridge and there will be no change in ownership. Changes to the Loop Trail would be minor and positive (providing a new multi-use path under the bridges versus users crossing Ina Road traffic). Also, there would be no permanent adverse physical impacts, and the path connections would be fully restored and enhanced with the project. Pima County NRPRD's signed concurrence to this letter will be the official jurisdiction agreement with FHWA that the conditions mentioned above were met, and

FHWA will then determine the temporary closure of the Loop Trail would not constitute a use of a Section 4(f) property and that a temporary occupancy exception finding is appropriate for this particular Section 4(f) resource (23 CFR 774.13[d]).

Ted Walker Park

Description of Resource
Ted Walker Park, 6775 N. Casa Grande Highway, is a Pima County–owned park comprising approximately 10 acres west of I-10 on the north side of Cañada del Oro Wash. The park is directly accessed from the eastbound frontage road. The park was closed in 2011 during construction of Pima County ROMP improvements. The park provides parking for the Loop trail and a public restroom. No additional amenities are currently available. Potential future development may feature a dog park facility.

Potential Impacts to Resource
No acquisition of ROW is proposed at Ted Walker Park. Project-related activities would take place within the existing ADOT-owned ROW in this area; therefore, construction of the project would have no direct impacts on the park and would not result in "use" of the resource. The Loop trail closure at the park may require temporary fencing or a gate, and signage.

Measures to Minimize Impacts
The proposed project would not result in a "use" of this resource or adversely affect its activities, features, or attributes other than the temporary closure of the Loop trail previous noted; therefore, no measures to minimize impacts are warranted. The project would not affect access to the park during or after construction.

Conclusion

Properties protected under Section 4(f) in the project area would not be adversely affected by the proposed project. Approximately 2 percent of the Mike Jacob Sports Park would be incorporated into a transportation facility, resulting in "use" of the Section 4(f) resource; however, impacts to the park would be limited to the removal of a portion of the go-cart track, parking spaces, and landscaping. ADOT would coordinate with Pima County to financially compensate it for the lost parking areas and landscaping on-site, and would maintain access to the park during construction. Pima County would coordinate with the go-cart lease operator for adjustments to the facility. The project requires temporary use of the Loop trail; however, at completion of the project the Loop trail would be fully restored and improved, thus maintaining continuity of the public resource.

The proposed project would not adversely affect the activities, features, or attributes that qualify the resources for protection under Section 4(f) in the project area. Therefore, project-related impacts to the resources would constitute a *de minimis* use of the Mike Jacobs Sports Park and a temporary occupancy Section 4(f) exception will apply to impacts to the Loop Trail under 23 CFR 774.13(d).

We request your concurrence on the recreational resources that occur in the project area, on the impacts to those resources that would result from the proposed project, and on the proposed methods of mitigating these impacts. We further request your concurrence that **(1)** the proposed project would not adversely affect the activities, features, and attributes that qualify the resources for protection under Section 4(f), **(2)** the impacts to the Mike Jacob Sports Park would be *de minimis,* and **(3)** you agree with FHWA's temporary occupancy Section 4(f) exception finding on the Loop Trail by signing below and returning a copy of this letter.

If you have comments or questions, please contact Paul Langdale of the ADOT Environmental Planning Group at (520) 388-4251 or at plangdale@azdot.gov or Tremaine Wilson, FHWA Environmental Coordinator, at 602-382-8970 or at tremaine.wilson@dot.gov.

Sincerely,

for Karla S. Petty
Division Administrator

Signature for Pima County Concurrence
NH-STP-010-D(220)S, NH-STP-010-D(216)S,
STP-MRN-0(206)S, and STP-MRN-0(014)T

9/9/15
Date

Enclosures

cc:
Mr. Tom Ellis, Town of Marana, 11555 W. Civic Center Drive, Marana, AZ 85653

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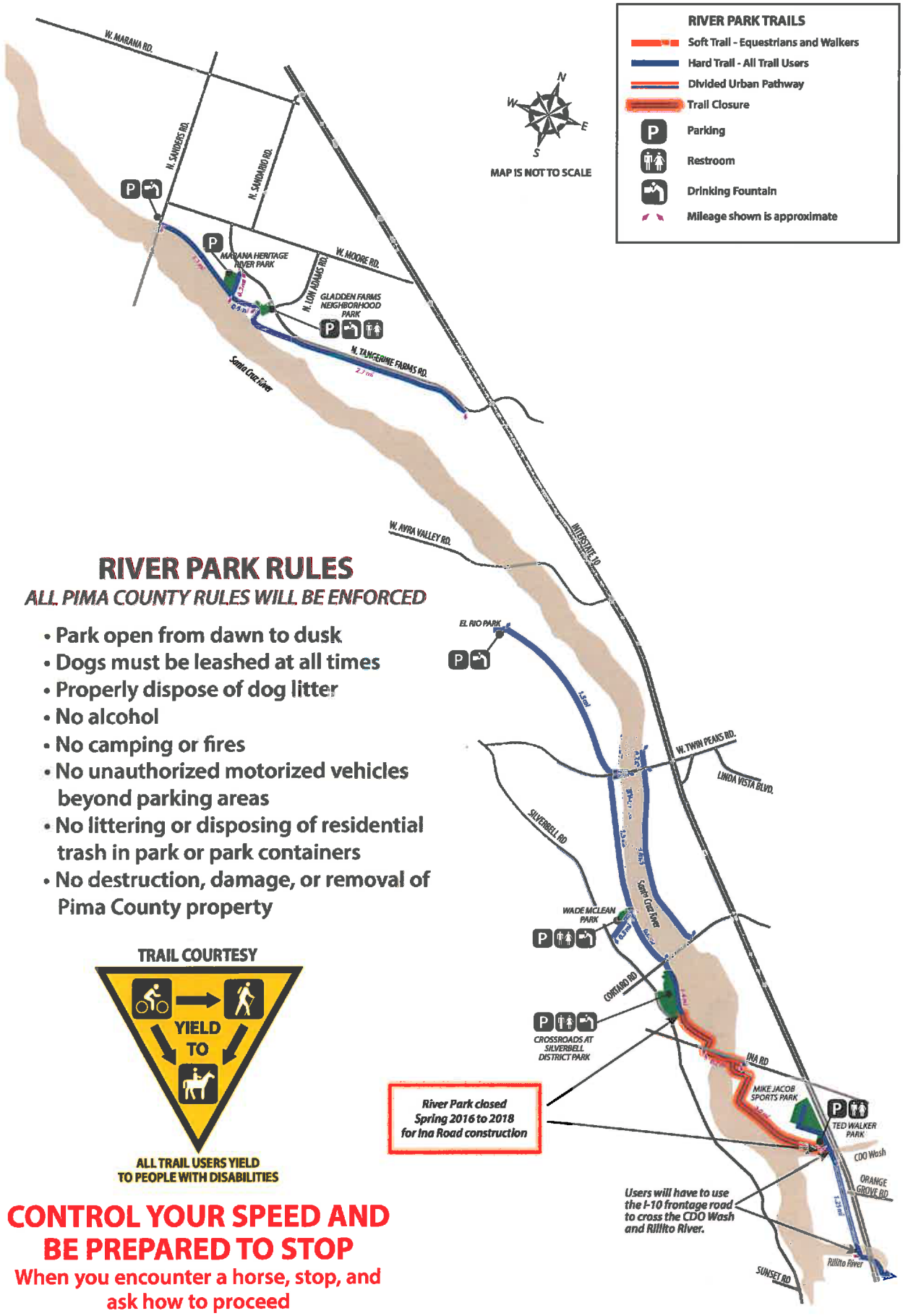
Santa Cruz River Park North

PIMA COUNTY



RIVER PARK RULES

ALL PIMA COUNTY RULES WILL BE ENFORCED

- Park open from dawn to dusk
- Dogs must be leashed at all times
- Properly dispose of dog litter
- No alcohol
- No camping or fires
- No unauthorized motorized vehicles beyond parking areas
- No littering or disposing of residential trash in park or park containers
- No destruction, damage, or removal of Pima County property

TRAIL COURTESY

ALL TRAIL USERS YIELD TO PEOPLE WITH DISABILITIES

CONTROL YOUR SPEED AND BE PREPARED TO STOP

When you encounter a horse, stop, and ask how to proceed

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U.S. Department of Transportation
Federal Highway Administration

ARIZONA DIVISION

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Phoenix, Arizona 85012-3500
(602) 379-3646
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http://www.fhwa.dot.gov/azdiv/index.htm

July 6, 2011

In Reply Refer To:
010-D(211)N
HOP-AZ

010-D(211)N
TRACS No. 010 PM 247 H7583 01L
I-10, Ina Road TI to Ruthrauff Road TI
Section 4(f) Resources

Mr. Rafael Payan, Director
Pima County Natural Resources, Parks and Recreation Department
3500 West River Road
Tucson, Arizona 85741

Dear Mr. Payan:

The Arizona Department of Transportation (ADOT), in conjunction with the Federal Highway Administration (FHWA) and the Regional Transportation Authority, is planning improvements to approximately 6 miles of Interstate 10 (I-10) in the Tucson metropolitan area of Pima County, Arizona. The proposed project would extend from the Ina Road traffic interchange (TI) in Marana, through portions of unincorporated Pima County, to the Ruthrauff Road TI in Tucson.

The proposed project has the potential to affect Pima County-managed park and recreation resources protected under Section 4(f) of the Department of Transportation Act of 1966. This letter includes an evaluation of impacts to these resources and a summary of previous coordination efforts with the Pima County Natural Resources, Parks and Recreation Department (NRPRD). The purpose of this letter is to request your comments on our evaluation of the resources present and impacts to those resources, and to request your concurrence on the findings and our proposed method of mitigation for the impacts.

Project Location and Description

The project begins at I-10 milepost (MP) 247.50 and extends to the southeast to MP 253.43. Refer to Figure 1 for the project's location in the state and Figure 2 for the project vicinity.

The proposed project would include the following improvements to the freeway configuration:

- reconstructing I-10 from Ina Road to Ruthrauff Road to widen the roadway from three lanes in each direction to five lanes in each direction
- reconstructing the TIs at Ina Road, Sunset Road, and Ruthrauff Road to elevate the crossroads over I-10 and the Union Pacific Railroad
- raising the I-10 profile over Orange Grove Road to provide additional vertical clearance

- adding turn lanes at the frontage road and crossroad intersections along the corridor
- replacing the bridges over the Cañada del Oro Wash and the Rillito River to widen the roadway and to increase the freeboard over 100-year storm flows
- implementing local access changes at Ina Road and at Ruthrauff Road/El Camino del Cerro

The majority of improvements to the I-10 main line would take place within the existing ADOT right-of-way (ROW). Additional ROW will be necessary at the Mike Jacob Sports Park to accommodate realignment of the eastbound on-ramp from Ina Road, and private property easements and acquisition will be necessary for the TI reconfigurations at Ina Road, Sunset Road, and Ruthrauff Road.

Section 4(f) of the Department of Transportation Act of 1966

Section 4(f) of the Department of Transportation Act of 1966 (49 United States Code § 303) stipulates that FHWA and other Department of Transportation agencies cannot approve the use of land from publicly owned parks, recreational areas, wildlife and waterfowl refuges, or public and private historical sites unless there is no feasible and prudent alternative to the use of that land, and that the proposed action includes all possible planning to minimize harm to the property resulting from such use.

A "use" of a Section 4(f) resource, as defined in 23 Code of Federal Regulations § 774.17, occurs:
(1) When land is permanently incorporated into a transportation facility;
(2) When there is a temporary occupancy of land that is adverse in terms of the statute's preservation purpose … ; or
(3) When there is a constructive use of a Section 4(f) property …

A constructive use of a Section 4(f) resource occurs when the transportation project does not incorporate land from the Section 4(f) resource, but the project's proximity impacts are so severe that the protected activities, features, or attributes that qualify a resource for protection under Section 4(f) are substantially impaired. For example, a constructive use can occur as a result of an increase in noise levels or restrictions in access, or other impacts that could substantially impair aesthetic features or attributes of the resource.

In August 2005, Section 4(f) was revised to simplify the process and approval of projects with *de minimis* impacts to Section 4(f) resources. Under the revised provisions, projects determined to result in a *de minimis* impact are not required to undergo an analysis of avoidance alternatives, and once the project is determined to be *de minimis*, the Section 4(f) evaluation process is complete.

An impact to a park or recreation area may be determined to be *de minimis* if the transportation use of the Section 4(f) resource does not adversely affect the activities, features, and attributes that qualify the resource for protection under Section 4(f). Use of a Section 4(f) resource is allowed when a *de minimis* impact finding can be supported by FHWA with the written concurrence of the officials with jurisdiction over the Section 4(f) property. Further, the public must be provided an opportunity to review and comment on the project impacts to the resource.

Previous Coordination Efforts

ADOT held a meeting with NRPRD on October 15, 2010, to obtain Pima County's input on the proposed design approach and other issues (such as access) as they relate to NRPRD recreational facilities. During the meeting, ADOT solicited input from NRPRD representatives in attendance regarding existing and proposed uses for recreational facilities within the project area and requested Pima County's agreement regarding the properties identified as Section 4(f) resources. ADOT also presented the potential permanent and temporary impacts to the Section 4(f) resources, and discussed the proposed plans for maintaining access at each affected property during construction. ADOT will continue to coordinate with NRPRD to ensure continued agreement from Pima County regarding project-related impacts to the resources and the proposed mitigation measures.

A public meeting was held on March 10, 2011, during which the project team solicited comments from members of the public regarding project impacts to the recreational facilities. No comments regarding impacts to Section 4(f) properties were received at the meeting or have been received since.

Section 4(f) Evaluation of Impacts

Pima County-managed Section 4(f) resources identified within the project area are as follows: Mike Jacob Sports Park, Ted Walker Park, Cañada del Oro River Park, Rillito River Park, and Pima County's Regional Optimization Master Plan (ROMP) trail. Refer to Figure 3 for the locations of the evaluated properties in relation to the project area. These facilities are considered Section 4(f) properties because they are parks or recreation areas on public lands that are available for public use. These properties have been evaluated for impacts caused by the proposed transportation improvements. This evaluation has determined that the proposed project would not adversely affect the activities, features, and attributes of the properties. Each of these properties is discussed individually below.

Mike Jacob Sports Park
Description of Resource

Mike Jacob Sports Park at 9601 N. Casa Grande Highway is an approximately 51-acre Pima County-owned park located west of I-10, between Ina Road and the Cañada del Oro Wash. The park abuts the eastbound (EB) I-10 frontage road, and is accessed directly from the frontage road. The attributes that qualify Mike Jacob Sports Park for protection under Section 4(f) are the existing and planned park facilities available for public use.

Park facilities currently available for public use are the parking lot, which is accessed directly from the EB I-10 frontage road, and the active recreational area situated west of the parking lot. The parking lot features landscaping along the frontage road ROW that partially blocks the line-of-sight of I-10 traffic. The active recreational area features facilities including two concession stands with restrooms, six baseball diamonds, covered pavilions, volleyball courts, and multiuse fields. Use and access to the active recreational area is managed by Pima County, and although it is available for public use, the facilities are only opened for scheduled events.

The undeveloped portion of the park is located south of the public parking lot—between the active recreational area and I-10—and is currently used to store materials and dirt for use by Pima County. An expansion concept plan for the park included in the Corazón de los Tres Ríos del Norte concept plan proposes three baseball diamonds and additional parking for this area. The proposed facilities would be set back from the EB I-10 frontage road.

A fenced area with structures is at the northernmost corner of the park next to the EB I-10 frontage road, and these structures are currently vacant or used for storage. This part of the park has been previously leased by private companies for different recreational uses, but is currently used only by Pima County. This area is not open to the public, and there are no current plans to develop the area or open it to the public; therefore, it does not contribute to the qualities that designate the property as a Section 4(f) resource.

Potential Impacts to Resource

The proposed project would raise Ina Road over I-10; therefore, the ramps and frontage roads would be realigned to accommodate the new elevation of the crossroad. At the park, the EB I-10 frontage road would be shifted to the southwest and raised as it approaches Ina Road.

The proposed project would require approximately 1.6 acre of ROW from Mike Jacob Sports Park along its entirety adjacent to the EB I-10 frontage road ROW; therefore, approximately 3 percent of the park would be permanently incorporated into a transportation facility, resulting in a "use." As a result, approximately 15 percent of the designated parking spaces would be removed from the parking lot, and landscaping along the ROW would be removed. The new ROW would encroach on the undeveloped area of the park; however, direct impacts to proposed facilities qualifying the resource for protection are not anticipated. The amenities associated with the active recreation area are set back from I-10 and its EB frontage road, and would not be directly affected by the project.

A temporary roadway will be constructed to provide access from Ina Road west of the freeway to the EB I-10 frontage road during the TI reconstruction. Construction of the temporary roadway would encroach on the fenced storage area and would require a temporary construction easement from Pima County. Because the temporary roadway would affect only the fenced storage area, which has no qualities of a Section 4(f) resource, these activities would not result in a "use" of the resource. However, Pima County would be compensated for the loss of structures consistent with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (49 Code of Federal Regulations § 24.102).

The proposed project would bring traffic approximately 25 feet closer to the park; thus, traffic noise levels at features qualifying the property for Section 4(f) protection closest to the roadway were evaluated (in the parking lot near the ROW and near the proposed baseball diamond).[1] Future traffic noise levels near the ROW are predicted to increase by 1 dBA as a result of the project, and future traffic noise levels near the proposed baseball diamond would decrease by

[1] *Final Noise Report: Interstate-10, Ina Road Traffic Interchange (TI) to Ruthrauff Road TI*, dated April 2011

1 dBA as a result of the project.[2] These changes in traffic noise levels would not be perceptible by the human ear; therefore, the future traffic noise levels would sound the same to patrons with or without the proposed project. The area currently experiencing the greatest public use is the active recreational area, which is set back from the freeway and frontage road and would not experience a perceptible increase in noise levels as a result of the project. Based on these considerations, and the nature of the activities at this facility (sports fields), the change in noise would be negligible and is not expected to substantially interfere with the use and enjoyment of the facility; therefore, no constructive use is anticipated.

Measures to Minimize Impacts

The proposed project would result in use of approximately 3 percent of the Section 4(f) property; however, impacts to attributes qualifying the resource for protection are limited to the removal of existing parking spaces and landscaping. ADOT is coordinating with Pima County to minimize or mitigate impacts to the resources by replacing lost parking on-site, reconstructing the driveway entrance to the parking lot, and replacing the affected landscaping, as well as maintaining access to the park during construction. The proposed improvements to I-10 and its frontage roads would not result in noise, visual, or aesthetic impacts to the patrons of Mike Jacob Sports Park because they currently experience traffic noise, visual, and aesthetic impacts associated with a nearby major freeway while enjoying the park's amenities. Because of the relatively small area of the park that would be converted, the existing nature of the resource, and coordination with Pima County, the identified impacts would not adversely affect the activities, features, or attributes qualifying the resource for protection under Section 4(f) and the impact would be *de minimis*.

Ted Walker Park
Description of Resource

Ted Walker Park at 6775 N. Casa Grande Highway is an approximately 10-acre Pima County-owned park located west of I-10, on the northern side of the Cañada del Oro Wash. The park is directly accessed from the EB I-10 frontage road. The park was closed in 2009 during construction of Pima County ROMP improvements (see *ROMP Trail* below) that involved disturbance in the park. The park is currently not actively maintained by Pima County, and it will remain closed to public use until further notice. Park amenities previously available to the public included a soccer field, a baseball field, restrooms, and parking.

Potential Impacts to Resource

No acquisition of ROW is proposed at Ted Walker Park. Project-related activities would take place within the existing ROW in this area; therefore, construction of the project would have no direct impacts on the park, and would not result in "use" of the resource. If the park reopens to the public, the proposed project would reflect existing transportation uses adjacent to the park

[2] The traffic noise analysis conducted for this project predicted traffic noise levels in 2030 would reach 75 dBA at the ROW and 78 dBA at the proposed baseball diamond during peak traffic volume if the project were not built. If the project were built, traffic noise levels are predicted to reach 76 dBA at the ROW and 77 dBA at the proposed baseball diamond during peak traffic volume.

and would not adversely affect the activities, features, or attributes qualifying the resource for protection under Section 4(f).

Measures to Minimize Impacts

The proposed project would not result in a "use" of the resource or adversely affect its activities, features, or attributes; therefore, no measures to minimize impacts are warranted. The project would not affect access to the park.

ROMP Trail
Description of Resource

Consistent with the Pima County ROMP improvements developed in response to new Arizona Department of Environmental Quality environmental requirements, the Pima County Regional Wastewater Reclamation Department recently installed approximately 5 miles of pipeline connecting the Ina Road Water Pollution Control Facility to the Roger Road Water Pollution Control Facility. The pipeline alignment largely follows ADOT ROW along the I-10 EB frontage road—except between Curtis Street and El Camino del Cerro, where it trends farther west along property lines. A maintenance road has been constructed along the pipeline alignment, and NRPRD will develop a trail along the maintenance road to provide north–south linkage until planned facilities in Pima County's Trail Master Plan can be developed in the area. Access to the trail would be at Ted Walker Park, and it would follow the ROMP maintenance road to El Camino del Cerro, where patrons could access the Santa Cruz River trail.

Portions of the ROMP trail would be located in existing ADOT ROW. These portions of the trail would not qualify as resources protected under Section 4(f) because the primary designation of ADOT ROW is for a transportation facility. Areas qualifying for protection under Section 4(f) would be areas outside of ADOT ROW designated for recreational use.

Potential Impacts to Resource

In Ted Walker Park, the trail would be located outside of the proposed project limits. Elsewhere, if the project results in impacts that require the pipeline or access road to be relocated, impacts to the trail would also be mitigated by relocating the trail to maintain continuity along its entirety.

The trail is being developed adjacent to a major transportation corridor, and construction of the project would remain consistent with the existing transportation uses. As proposed, the project is not expected to directly result in "use" of the resource or adversely affect the activities, features, or attributes qualifying the resource for protection under Section 4(f).

Measures to Minimize Impacts

The proposed project would not result in a "use" of the resource or adversely affect its activities, features, or attributes; however, if the project results in impacts to the pipeline or access road, the trail would be relocated to maintain continuity along its entirety.

Cañada del Oro River Park and Rillito River Park
Description of Resources

Cañada del Oro River Park and Rillito River Park are linear parks that follow the Cañada del Oro Wash and Rillito River, respectively. Cañada del Oro River Park provides trail access between Oro Valley and the Santa Cruz River, and Rillito River Park provides trail access between Tucson and the Santa Cruz River. They both feature intermittent paved trails along the banks, ramp access to the washes, and trailheads at certain cross-streets along their entirety. Both parks cross the project area under the I-10 and I-10 frontage road bridges. As Cañada del Oro Wash approaches I-10 from the east, it features a paved trail above the southern bank that enters the wash east of the Union Pacific Railroad bridge. Within the project limits, the Cañada del Oro River Park does not feature a paved trail because it crosses under I-10 in the wash bottom. West of I-10, an unpaved access road/trail resumes above the northern bank of the wash. Within the project limits, the Rillito River features a paved trail above the southern bank. The trail briefly enters the wash under the Union Pacific Railroad bridge east of the project limits, and enters the wash west of the project limits.

The attributes that qualify the river parks for protection under Section 4(f) are the trails and trailhead amenities available for public use. Within the project area, amenities associated with the parks are intermittent trails along the banks and access to the washes.

Potential Impacts to Resources

The proposed project will involve replacing the I-10 main line bridges; however, the existing trail facilities would not be affected by construction. The trail along Cañada del Oro Wash crosses under I-10 in the wash bottom and, therefore, has no permanent facilities to be affected. The paved trail along the southern bank of the Rillito River is expected to remain intact during construction. If removal of the I-10 main line bridges requires the trail to be removed, the trail would be reconstructed consistent with existing conditions. Construction of the project would temporarily require that the existing trails be relocated in the washes. Access to the temporarily relocated trails and through-access under the bridges would be generally maintained for the duration of construction. Bridge demolition or other construction-related activities may require temporary trail closures in the project limits. The closures would occur for a limited duration and through-access for trail patrons would generally be available during construction. The project would not inhibit future development or improvements by Pima County.

As proposed, the project would not result in "use" of the resources or adversely affect the activities, features, or attributes qualifying the resources for protection under Section 4(f).

Measures to Minimize Impacts

The proposed project would not result in permanent impacts to the facilities associated with the trails. Through-access would be generally maintained for the duration of construction by relocating the existing trails in the washes. Trail closures during construction may be required, but would be temporary. The project would not inhibit future development or improvements by Pima County.

Conclusion

Properties protected under Section 4(f) within the project area would not be adversely affected by the proposed project. Approximately 3 percent of the Mike Jacob Sports Park would be incorporated into a transportation facility, resulting in "use" of the Section 4(f) resource; however, impacts to attributes qualifying the park for protection would be limited to the removal of parking spaces and landscaping. ADOT would coordinate with Pima County to replace lost parking areas and landscaping on-site, as well as maintaining access to the park during construction. If the project requires relocation of the ROMP pipeline, the associated access road and trail would also be relocated, thus maintaining continuity of the public resource.

The proposed project would not adversely affect the activities, features, or attributes that qualify the resources for protection under Section 4(f) in the project area. Therefore, project-related impacts to the resources would be *de minimis*.

We request your concurrence on the recreational resources that occur within the project area, on the impacts to those resources that would result from the proposed project, and on the proposed methods of mitigating these impacts. We further request your concurrence that the proposed project would not adversely affect the activities, features, and attributes that qualify the resources for protection under Section 4(f), and that the impacts to the Mike Jacob Sports Park would be *de minimis*, by signing below and returning a copy of this letter.

If you have any comments or questions, please do not hesitate to contact James J. Lemmon of the ADOT Environmental Planning Group at (602) 712-6843 or at jlemmon@azdot.gov.

Sincerely,

Karla S. Petty
Division Administrator

Signature for Pima County Concurrence

07·26·11
Date

010-D(211)N

Enclosures

Project Utility Coordination

Utility Name	Meeting Date		Utility Name	Meeting Date
Comcast	9/15/2015		Tucson Water	3/18/2014
				6/30/2014
Telecom	9/17/2015			3/24/2015
				4/21/2015
TEP	2/13/2014			10/1/2015
	4/10/2014			
	6/12/2014		SW Gas	2/19/2015
	8/14/2014			10/1/2015
	10/23/2014			
	12/11/2014			
	2/12/2015		CMID	2/18/2014
	2/26/2015			4/1/2015
	4/9/2015			
	5/14/2015		CTL	3/4/2015
	7/9/2015			4/9/2015
	10/8/2015			8/15/2015
				9/1/2015
				10/1/2015

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From: tremaine.wilson@dot.gov
To: Paul Langdale
Subject: FW: NH-STP-010-D(216)S and STP-MRN-0(014)T Town of Marana, Ina Road projects
Date: Monday, November 02, 2015 7:33:51 AM

Good morning Paul,

I apologize for not sending you this email last week. Below is EPAs concurrence on the Sole Source Aquifer for the Ina Rd & Marana project.

Thank you,
Tremaine

From: Petty, Karla (FHWA)
Sent: Monday, October 26, 2015 7:04 PM
To: Wilson, Tremaine (FHWA)
Cc: Hansen, Alan (FHWA); Yedlin, Rebecca (FHWA)
Subject: FW: NH-STP-010-D(216)S and STP-MRN-0(014)T Town of Marana, Ina Road projects

Tremaine,

Please see the below message provided by EPA regarding the subject project. Please ensure this is documented in the project file.

Thank you,
Karla

Karla S. Petty
FHWA Arizona -Division Administrator
Office: 602-379-3725
Cell: 602-448-7285

From: Greenberg, Leslie [mailto:Greenberg.Leslie@epa.gov]
Sent: Monday, October 26, 2015 6:35 PM
To: Petty, Karla (FHWA)
Subject: NH-STP-010-D(216)S and STP-MRN-0(014)T Town of Marana, Ina Road projects

Hello Karla S. Petty,

I received information regarding Phase II of the Town of Marana Ina Road projects. Under the provisions of the Safe Drinking Water Act, Section 1424(e), EPA is responsible for the review of projects that receive federal funding and are located in recharge areas that have received a Sole Source Aquifer Designation. Based on the information you provided, it does not appear that the proposed project will adversely affect the sole source aquifer.

Regards,
Leslie Ann Greenberg

Leslie Ann Greenberg
Sole Source Aquifer Project Officer
U.S. EPA, Region 9
Drinking Water Protection Section (WTR-3-2)
Tribal and State Assistance Branch
75 Hawthorne Street, San Francisco, CA 94105
tel. 415 972 3349 FAX 415 947 3549
Greenberg.leslie@epa.gov

From: Christopher P. Henninger
To: Mike Dawson; Jason W. Sutter; Nicole Coronado
Cc: Dan Garcia; Melissa Reuter; Paul Langdale
Subject: RE: Santa Cruz River at Ina Road SWPPP
Date: Thursday, September 17, 2015 8:55:32 AM

Mike,

Based on the identified impairment (ammonia) and the proposed project, I suspect it is unlikely the project would result in additional pollutant load of ammonia to the SCR.

The permit specifies the operator must submit the SWPPP with the NOI and that instead of monitoring, provide the reasons/rationale as to why the project is not anticipated to result in additional pollutant load.

I hope this helps.

Regards,

Christopher M. Henninger, Supervisor
Arizona Department of Environmental Quality
Stormwater and General Permit
602.771.4508

From: Mike Dawson [mailto:mdawson@ecoplanaz.com]
Sent: Wednesday, September 16, 2015 5:52 PM
To: Jason W. Sutter; Nicole Coronado; Christopher P. Henninger
Cc: Dan Garcia; 'Melissa Reuter'; Paul Langdale
Subject: RE: Santa Cruz River at Ina Road SWPPP

Jason/Nicole/Chris;
EcoPlan is preparing for ADOT the SWPPP for a cultural resources testing and data recovery plan. Portions of the testing occur adjacent to Santa Cruz River at Ina Road. As noted below that reach of the river is in on-attaining status due to ammonia from Roger Road WWTP. We have dilemma with ADOT as to whether we need to include a water quality monitoring plan for the Santa Cruz. The SWPPP forms and process seem to suggest yes it is needed, but a phone discussion with Nicole back on September 1, 2015 suggests since the non-attaining element is ammonia there is no way the cultural testing (trenching outside the river) or the construction of a new bridge can alter ammonia levels in anyway, thus no need to monitor.

We need something in writing from ADEQ for direction how to proceed. Your assistance is requested,
Thank You,,

Mike Dawson
President - Arizona Association of Environmental Professionals
Senior Environmental Planner

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DEPARTMENT OF THE ARMY
LOS ANGELES DISTRICT, U.S. ARMY CORPS OF ENGINEERS
3636 N CENTRAL AVENUE, SUITE 900
PHOENIX, ARIZONA 85012-1939

December 30, 2015

Jennifer Christelman
Town of Marana
11555 West Civic Center Drive, Building A1
Marana, Arizona 85653-7007

Modification of Department of the Army Permit

Dear Ms. Christelman:

I have received your November 24, 2015 request to extend and modify your Department of the Army Permit (**Permit**) for two new Ina Road Bridges over the Santa Cruz River. The two new Ina Road Bridges and eight other interrelated flood control improvements were authorized under a single Section 404 of the Clean Water Act permit (SPL-2001-794-RJD). All nine of the interrelated improvements are located between Ina Road and Cortaro Road in Marana, Pima County, Arizona.

Under the provisions of 33 Code of Federal Regulations 325.6(d) I am extending the expiration date of your Permit from December 31, 2015 to June 30, 2016. However, at this time I am not modifying any of the permitted activities as requested. Therefore, none of proposed improvements at the site of the two new Ina Road Bridges are authorized. During the December 31, 2015 through June 30, 2016 period no work in the Santa Cruz River at Ina Road is authorized. However, if you can demonstrate to me how construction of the proposed Ina Road Bridges will comply with all of the Special Conditions ("a" through "h") in your Permit I will issue you a permit modification for the proposed improvements and extend the expiration date for an additional five years . I am granting this short extension to give you sufficient time to address the following Special Condition and project modification concerns:

1) Special Condition "a" (Archaeological Resources) required compliance with an October 27, 2004 Memorandum of Agreement (MOA) to protect archaeological resources. The MOA expired on October 27, 2012. Therefore, I will need a new MOA or an alternative protection agreement to protect the archaeological resources located along Ina Road.

2) Special Condition "b" (Water Quality Certification) required compliance with a December 29, 2003 state water quality certification issued by the Arizona Department of Environmental Quality (ADEQ). On December 16, 2015 I received the recertification of the modified Ina Road Bridge construction from ADEQ. Consequently, I do not require any additional water quality information.

3) Special Condition "c" (Endangered Species) no longer applies because the cactus ferruginous pygmy-owl was delisted as an endangered species. However, I do need

updated endangered species information to determine if the proposed work at Ina Road may affect any proposed/listed species or proposed/designated critical habitat.

4) Special Condition “d” (Compensatory Mitigation) has been completed as it concerns compliance with the referenced Habitat Mitigation and Monitoring Plan (HMMP). However, Special Condition “d” also requires an in-lieu fee proposal and payment of an in-lieu mitigation fee to compensate for adverse impacts to the Santa Cruz River caused by construction of the two new Ina Road Bridges. Using the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region please complete a wetland delineation of the wetlands in the Santa Cruz River at Ina Road. A wetland delineation is needed to accurately determine the temporary and permanent impacts to wetlands and non-wetland waters of the United States caused by modification of the grade control structure, changes to the soil cement banks, and the two new bridges. Using these estimated impacts and the Mitigation Ratio Checklist, the number of in-lieu fee credits that will have to be purchased as compensatory mitigation can be calculated as the final step in the in-lieu fee proposal.

5) Special Condition “e” (Operation and Maintenance) discusses operation and maintenance differences in area permanently impacted versus area temporarily impacted. I will modify this condition to address the proposed changes and do not require any additional information.

6) Special Condition “f” (Habitat Restoration/Enhancement) does not need to be modified. No additional information is required.

7) Special Condition “g” (Restoration of Temporary Disturbance Areas) I will modify this Special Condition as necessary to make it comply with Special Conditions “d” and “e”. No additional information is required.

8) Special Condition “h” (Mitigation for Bats) required that the two new Ina Road Bridges have equal or greater roosting opportunities when to compared to the current Ina Road Bridge. I need you to verify that this condition will be met.

9) I need you to work with my staff to carefully review and possibly revise the 5.17 acres of temporary and 2.24 acres of permanent impact shown in the Figure 3 attached to your November 24, 2015 request, in order to ensure appropriate avoidance and minimization of impacts to waters of the United States.

The terms and conditions of Permit No. SPL-2001-794-RJD, except as changed herein, remain in full force and effect. Thank you for participating in the Regulatory Program. If you have any questions, please contact Robert J. Dummer at 602-230-6952 or via e-mail at robert.j.dummer@usace.army.mil. Please help me to evaluate and improve the regulatory experience for others by completing the customer survey form at http://corpsmapu.usace.army.mil/cm_apex/f?p=regulatory_survey.

Sincerely,

Sallie Diebolt

Digitally signed by DIEBOLT.SARAH.D.1231388229
DN: c=US, o=U.S. Government, ou=DoD, ou=PKI, ou=USA, cn=DIEBOLT.SARAH.D.1231388229
Date: 2015.12.30 10:54:20 -07'00'

Sallie Diebolt
Chief, Arizona Branch
Regulatory Division

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ARIZONA DEPARTMENT
OF
ENVIRONMENTAL QUALITY

Douglas A. Ducey
Governor

Misael Cabrera
Director

December 16, 2015

Reading File: SWGP15-0273
CoE Permit: SPL-2001-794-RJD
ADEQ LTF: 63383

Jennifer Christelman
Town of Marana
11555 W. Civic Center Drive, Bldg. A1
Marana, Arizona 85653

Re: Modification of the CWA 401 Certification for the Town of Marana Silverbell/Ina Road Improvements

Dear Ms. Christelman:

The Arizona Department of Environmental Quality received your letter for CWA 401 Water Quality Certification Modification on December 7, 2015. You submitted this document in accordance with Section 401(a) of the Clean Water Act (CWA) (33 U.S.C. §1251 et seq.) and the Arizona Revised Statutes Section 49-202. The letter requests an extension to the 401 certification issued to the Town of Marana on December 29, 2003.

ADEQ has reviewed all documentation for this project including the original application, maps, drawings, and certification, and has determined the modification will not violate applicable surface water quality standards in the wash. ADEQ approves the project extension which will run concurrent with the extension provided by the US Army Corps of Engineers' CWA Section 404 permit. The Town of Marana is responsible for complying with all 401 certification conditions specified in the State of Arizona's CWA 401 Water Quality Certification and U.S. Army Corps of Engineers Permit.

Failure to comply with the CWA Section 404 permit, ADEQ's CWA 401 Water Quality Certification and/or other applicable water quality permits or requirements may result in non-compliance with Arizona Surface Water Quality Standards (Arizona Administrative Code, Title 18, Chapter 1, Article 11) and may result in an enforcement action pursuant to Arizona Revised Statutes, Title 49, Chapter 2, Article 4.

Thank you for your efforts to comply with Arizona's environmental requirements. Should you have any comments or questions regarding this matter, please do not hesitate to contact me at 602-771-4409 or by email at sherrill.laurie@azdeq.gov.

Sincerely,

Rosi Sherrill

Laurie (Rosi) Sherrill, Project Manager
Stormwater and General Permits Unit

electronic copies: U.S. Army Corps of Engineers, Regulatory Branch, Attn.: Robert Dummer
USEPA, Wetlands Regulatory Office

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U.S. Department of Transportation
Federal Highway Administration

ARIZONA DIVISION

4000 North Central Avenue
Suite 1500
Phoenix, Arizona 85012-3500
Phone: (602) 379-3646
Fax: (602) 382-8998
http://www.fhwa.dot.gov/azdiv/index.htm

November 24, 2015

In Reply Refer To:

STP-MRN-0(014)T
TRACS Nos. 0000 PM MRN T0013 01C (Stage M1)
and 0000 PM MRN SB413 01C (Stage M2)
Ina Road; Bridge over Santa Cruz River & Roadway Improvements—
Silverbell Road to Starcommerce Way
Section 7 Informal Consultation
"may affect but is not likely to adversely affect"

Mr. Steve Spangle, Field Supervisor
US Fish and Wildlife Service
Ecological Services Field Office
2321 West Royal Palm Road, Suite 103
Phoenix, Arizona 85021-4915

Dear Mr. Spangle:

The Arizona Department of Transportation (ADOT), in conjunction with the Federal Highway Administration (FHWA) as the lead federal agency, is planning to reconstruct the Ina Road Traffic Interchange (TI) on Interstate 10 (I-10) and replace the Ina Road Bridge over the Santa Cruz River in the Town of Marana, Pima County, Arizona.

The project is along I-10 from milepost (MP) 247.6 to MP 249.6, and along Ina Road from Silverbell Road east approximately 1.6 miles to Camino de la Cruz. The current project is a combination of two projects: one to reconstruct the Ina Road TI at I-10, with associated improvements east and west along Ina Road and widening of I-10 north and south of the TI, and the other to replace the Ina Road–Santa Cruz River Bridge with associated improvements along Ina Road east and west of the bridge. The following consultation request only concerns the second project, bridge replacement, where impacts to federally protected species occur. No species will be affected as a result of the Ina Road TI reconstruction project.

- The project scope for the portion of the project to replace the Ina Road–Santa Cruz River Bridge will include the following actions:
-

Constructing a new eastbound nine-span American Association of State Highway and Transportation Officials (AASHTO) Type III girder two-lane bridge upstream (south) of the existing Ina Road–Santa Cruz River Bridge. The eastbound bridge will be approximately 630 feet long between the banks of the Santa Cruz River, with 16 piers (eight sets of two) in the Santa Cruz River. There will be nine spans (distance between piers). The spans at each end will be 68 feet 9 inches long, and each of the remaining seven spans will be 70 feet long. The width of the bridge will be 43 feet.

Demolishing the existing bridge and replacing it in place with a new westbound nine-span AASHTO Type III girder two-lane bridge. The replacement bridge will also be approximately

630 feet long between the banks of the Santa Cruz River, with 16 piers (eight sets of two) in the Santa Cruz River. There will be nine spans (distance between piers). The spans at each end will be 68 feet 9 inches long, and each of the remaining seven spans will be 70 feet long. The width of the bridge will be 43 feet.

Constructing approximately 400 feet of bank protection at bridge abutments on both sides of the river. The depth of the toe-down of the bank protection will be approximately 20 feet below the existing bank protection.

Constructing pedestrian ramps and handrails on each bank of the Santa Cruz River. The pedestrian ramps will be at most 14 feet wide, and the top of the new bank protection will be at least 10 feet below the bridges' girders. Rehabilitating the existing grade control structure within the Santa Cruz River with a new concrete cap on top of the existing grade control structure.

The roadway will be widened from the east side of the bridges east to Starcommerce Way, a distance of approximately 2,340 feet, where it will tie into and match the widening of Ina Road at the west end of the Ina Road TI at the I-10 portion of the project.

The roadway will be widened west of the bridges to match the divided four-lane roadway at the newly reconfigured intersection of Ina and Silverbell Roads, a distance of approximately 1,650 feet.

Construction of the bridges over the Santa Cruz River will permanently impact approximately 2.24 acres of riparian vegetation. To accomplish dewatering and diversion of flows along the Santa Cruz River upstream of the existing bridge, vegetation will be removed across the width of the river channel for 300 feet upstream of the existing grade control structure. Temporary disturbance to riparian vegetation from bridge construction is estimated to impact up to an additional 5.17 acres.

The project requires authorization under a Clean Water Act Section 404 permit from the US Army Corps of Engineers. An individual Water Quality Certification Permit (SPL-2001-794-RJD) that includes the Ina Road Bridge replacement has been obtained and is in the process of being transferred from the Town of Marana to ADOT.

Project construction of the Ina Road Santa Cruz River Bridges is expected to start in early 2017 and last approximately 2 years.

Enclosed is the Biological Evaluation (BE) for the project. The BE contains a complete project description and considers the direct, indirect, and cumulative effects of this project on federally listed species. Two species, Southwestern willow flycatcher *(Empidonax traillii extimus)* and yellow-billed cuckoo *(Coccyzus americanus),* are evaluated in detail due to the presence of suitable habitat in the project area. The BE concludes that the project "may affect but is not likely to adversely affect" the Southwestern willow flycatcher and the yellow-billed cuckoo or their habitats. The project area does not coincide with, and therefore will not affect, critical habitat designated for the Southwestern willow flycatcher or proposed critical habitat for the yellow-billed cuckoo.

With the submittal of this letter and BE, the FHWA and ADOT are requesting concurrence that the referenced project "may affect but is not likely to adversely affect" the Southwestern willow flycatcher and the yellow-billed cuckoo. Please contact Sharon Gordon, FHWA area engineer, at 602.382.8972 or Sharon.Gordon@dot.gov; Tremaine Wilson, FHWA environmental coordinator, at 602.382.8970 or Tremaine.Wilson@dot.gov; or Justin White, ADOT Environmental Planning

Group biologist, at 602.399.3233 or JWhite@azdot.gov if you have any questions. Thank you for your cooperation.

Sincerely,

Karla S. Petty
Division Administrator

Enclosure

cc:
Greg Byres, ADOT Urban Project Management
Michael R. Dawson, Environmental Planner, EcoPlan Associates, Inc., 78 W. Cushing St., Tucson, AZ 85701

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United States Department of the Interior
Fish and Wildlife Service
Arizona Ecological Services Office
2321 West Royal Palm Road, Suite 103
Phoenix, Arizona 85021-4951
Telephone: (602) 242-0210 Fax: (602) 242-2513

In reply refer to:
AESO/SE
02EAAZ00-2015-I-0735

December 18, 2015

Ms. Karla S. Petty, Division Administrator
U. S. Department of Transportation
Federal Highway Administration
4000 North Central Avenue, Suite 1500
Phoenix, Arizona 85012-3500

Re: Ina Road Santa Cruz River Bridge Replacement Project
FHWA File # STP-MRN-0(014)T
ADOT File # 0000-PM-MRN-T0013-01C
0000-PM-MRN-SB413-01C

Dear Ms. Petty:

Thank you for your November 24, 2015 request for informal consultation with the U.S. Fish and Wildlife Service (FWS) pursuant to section 7 of the Endangered Species Act of 1973 (16 U.S.C. 1531-1544), as amended (Act), received by us via electronic mail (email) on the same day. We also received the biological evaluation (BE) for the proposed project, dated October 29, 2015, on November 24, 2015. The Federal Highway Administration (FHWA), in cooperation with the Arizona Department of Transportation (ADOT), has requested consultation for potential effects resulting from a bridge replacement project on Ina Road at the Santa Cruz River in the Town of Marana, Pima County, Arizona. The FHWA requests our concurrence that the proposed action "may affect, but is not likely to adversely affect" the endangered southwestern willow flycatcher (*Empidonax trailii extimus*) and threatened western yellow-billed cuckoo (*Coccyzus americanus*). We concur with your determinations and provide our rationales below.

Description of the Proposed Action

A complete description of the proposed action and accompanying maps, photographs, and diagrams are found in the BE and are incorporated herein by reference.

This project has two components: 1) reconstruction of the Ina Road traffic interchange (TI) on Interstate 10 (I-10) and widening of I-10 north and south of the TI; and 2) replacement of the Ina Road Santa Cruz River Bridge and associated improvements along Ina Road east and west of the bridge. No species will be affected by the Ina Road TI component, or proposed improvements to Ina Road east and west of the Santa Cruz River Bridge; therefore, this consultation only concerns effects from the Ina Road Santa Cruz River Bridge replacement.

The bridge replacement project will occur where Ina Road crosses the Santa Cruz River 0.8 mile (mi) west of I-10. The bridge replacement would include the following scope of work:

- Construction of a new eastbound nine-span girder two-lane bridge upstream (south) of the existing Ina Road Santa Cruz River Bridge.
- Demolishing the existing westbound bridge and replacing it in place with a new nine-span girder two-lane bridge.
- Construction of approximately 400 feet (ft) of bank protection at bridge abutments on both sides of the river approximately 20 ft below the existing bank protection.
- Construction of pedestrian ramps and handrails on each bank of the Santa Cruz River.
- Rehabilitation of the existing grade control structure within the Santa Cruz River with a new concrete cap on top of the existing grade control structure.
- Reseeding of disturbed areas with species native to the project area.

Throughout the BE and in this concurrence, the term "project limits" is used to represent the construction footprint (area of disturbance) at the bridge construction sites, and the term "project area" includes surrounding lands outside but adjacent to the project limits.

The new eastbound bridge and the replacement westbound bridge would each be approximately 630 ft in length. The bridges would span the two banks of the Santa Cruz River with 16 piers (eight sets of two), i.e., there would be nine spans in each case. The spans at each end would be 68 ft 9 inches long, and each of the remaining seven spans would be 70 ft long. Both bridges would be 43 ft wide. The pedestrian ramps would be $\leq$14 ft wide and the top of the new bank protection would be $\geq$10 ft below the bridges' girders.

Construction of the Ina Road-Santa Cruz River Bridges would begin in early 2017 and would take approximately two years to complete. To accomplish dewatering and diversion of flows along the Santa Cruz River upstream of the existing bridge, vegetation must be removed across the width of the river channel for 300 ft upstream of the existing grade control structure. Thus, construction activities would permanently impact approximately 2.2 acres (ac) of riparian vegetation. Temporary disturbance to riparian vegetation from bridge construction would impact $\leq$ 5.2 ac.

DETERMINATION OF EFFECTS

Within the project limits, the Santa Cruz River is a perennial stream supported by effluent from the Tres Rios Wastewater Treatment Facility, which operates 0.5 mi southeast of the existing Santa Cruz River Bridge. Groundwater pumping and agricultural and urban development throughout the 20th century have eliminated much of the cottonwood-willow (*Populus-Salix* spp.) gallery forests that once occupied the banks of the Santa Cruz River within the project limits. Developments also led to artificial channelization of the river. The current bridge includes a grade control structure that occupies approximately 0.9 ac of the channelized riverbed. This area currently does not support riparian vegetation. Today, narrow stringers of Fremont cottonwood *(P. fremontii)* and Goodding's willow *(S. gooddingii)*, one to several trees wide, have recolonized both banks of the river upstream of the current bridge location, and are intermixed with velvet mesquite (*Prosopis juliflora*), Mexican paloverde (*Parkinsonia aculeata*), and saltcedar (*Tamarix ramosissima*).

A biologist from the Town of Marana conducted flycatcher surveys in the project area, using FWS survey protocols, from May 23 to July 18, 2014, and from May 22 to July 10, 2015. No flycatchers were detected during these surveys, and there are no records of this species nesting in the project area. A biologist from the Town of Marana also conducted surveys for the cuckoo along approximately 0.6 mi of the Santa Cruz River in the vicinity of the Ina Road Santa Cruz River Bridge from June 20 to August 8, 2013. No cuckoos were detected during these surveys.

We concur with your determinations that the proposed action "may affect, but is not likely to adversely affect" the southwestern willow flycatcher and yellow-billed cuckoo for the reasons described below. Because effects determinations for both taxa are similar, we are grouping the southwestern willow flycatcher and western yellow-billed cuckoo into one rationale:

Southwestern Willow Flycatcher and Western Yellow-billed Cuckoo

- Based on survey information detailed in the BE, and the lack of suitable nesting habitat, it is extremely unlikely that breeding flycatchers or yellow-billed cuckoos occur in the project area; therefore, any potential direct or indirect effects to breeding flycatchers or cuckoos are discountable.
- The project would remove riparian vegetation that may be used by flycatchers and cuckoos during migration; however, there is ample habitat available for use by migrants upstream and downstream of the project limits; any effects to migratory activity would be discountable.

In keeping with our trust responsibility to American Indian Tribes, when we enter into consultation with agencies not in the Departments of Interior or Commerce on a proposed action that may affect Indian lands, Tribal trust resources, or Tribal rights, we encourage you to invite the affected Tribe and Bureau of Indian Affairs to participate in the consultation process and, by copy of this letter, are notifying the Tohono O'odham Nation and Pascua Yaqui Tribe.

Thank you for your continued coordination. No further section 7 consultation is required for this project at this time. Should project plans change, or if information on the distribution or abundance of listed species or critical habitat becomes available, this determination may need to be reconsidered. In all future correspondence on this project, please refer to the consultation number 02EAAZ00-2015-I-0735.

We also encourage you to coordinate the review of this project with the Arizona Game and Fish Department. Should you require further assistance or if you have any questions, please contact Robert Lehman (602) 242-0210 (x217) or Brenda Smith (928) 556-2157.

Sincerely,

for Steven L. Spangle
Field Supervisor

Ms. Karla S. Petty, Division Administrator

cc (electronic)

Assistant Field Supervisor, U.S. Fish and Wildlife Service, Tucson, AZ (Attn: Jean Calhoun)
Fish and Wildlife Biologists, U.S. Fish and Wildlife Service, Phoenix/Tucson, AZ (Attn: Jason Douglas, Susan Sferra, Greg Beatty)
Chief, Habitat Branch, Arizona Game and Fish Department, Phoenix, AZ (Attn: Joyce Francis)
Regional Supervisor, Arizona Game and Fish Department, Region 5 (Attn: Raul Vega)
Environmental Planning Group, Arizona Department of Transportation, Phoenix, AZ (Attn: Joshua Fife, Kris Gade, Justin White)
Environmental Coordinator, Federal Highway Administration (Attn: Tremain Wilson)
Manager, Cultural Affairs, Tohono O'odham Nation, Sells, AZ
Assistant Tribal Attorney General, Pascua Yaqui Tribe, Tucson, AZ
Environmental Specialist, Western Regional Office, Bureau of Indian Affairs, Phoenix, AZ
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Ina Road Bridge
RTA Wildlife Linkages
Project Funding Proposal

1. NAME/ORGANIZATION

Town of Marana

2. PROJECT TITLE

Ina Road Bridge West of Interstate 10 in Pima County, Arizona

3. INTRODUCTION

Proposal Purpose

The purpose of this proposal is to request RTA Wildlife Linkages funding for construction of wildlife linkage structures as part of the Ina Road Bridge replacement project. The project is located in Township 12 South, Range 12 East, portions of Sections 35 and 36, and Township 13 South, Range 12 East, portions of Sections 1 and 2 (Exhibit A). The project will attach two Maberry "Bat Bridge Condos" (Exhibit B) to the existing Cortaro Road Bridge prior to construction on the Ina Road Bridge, and will incorporate nine bat roost structures into the new, east-bound Ina Road Bridge.

Project Background

The existing single bridge structure and associated vehicle capacity of the Ina Road Bridge have been determined to be inadequate, and there are concerns about the integrity of the bridge and grade control structure in relation to periodic flood events. To address these issues, the Town plans a two phase construction project. In the first phase, the plan is to construct a new nine-span, AASHTO Type III Girder, two-lane bridge for east-bound traffic, upstream of the existing Ina Road Bridge. The bridge will be approximately 630 feet in length between the banks of the Santa Cruz River, with sixteen piers (eight sets of two) in the Santa Cruz River. There will be nine spans (distance between piers). The spans at each end will be 68 feet-9 inches long and each of the remaining seven (7) spans will be 70 feet in length. The width of the bridge will be 43 feet. Nine bat structures will be incorporated into the new bridge (Exhibit C).

During the second phase, the existing Ina Road Bridge will be demolished and replaced with a new nine-span, AASHTO Type III Girder, two-lane bridge for west-bound traffic. The dimensions of this bridge will be the same as described above for the first bridge.

In addition to construction of the new bridges and demolition of the old bridge, construction of new approaches and bank protection, and rehabilitation of the grade control structure will be included in this project.

The project area is located over the Santa Cruz River, near the Tucson Mountains, in Pima County, Arizona. The Ina Road Bridge also provides wildlife habitat, and is known to provide important roosting habitat for several bat species, including cave myotis (*Myotis velifer*) and Mexican free-tailed bats (*Tadarida brasiliensis*) during the summer, and for a smaller number of Mexican free-tailed bats during the winter. The Ina Road Bridge also provides crucial stop-over roosts for bats migrating longer distances, which may include Mexican free-tailed bats and cave myotis, and for species which may be moving shorter distances to hibernacula, such as big brown bats and several other species of myotis bats.

There is abundant riparian habitat upstream (south) of the existing Ina Road Bridge, consisting of willows (*Salix* sp.), cottonwood (*Populus fremontii*), non-native salt cedar (*Tamarix* sp.), seep willow (*Baccharis salicifolia*), and other riparian species. Some additional riparian habitat also occurs downstream (north) of the bridge. The water and riparian areas provide an important prey source for foraging insectivorous bats.

Background: Bridges as Important Wildlife Linkages for Bats:

- Bridges provide roosting locations that tie large blocks of foraging habitat together, and in this manner, can act as wildlife linkages for bat species, providing access to life history needs at the local scale and on a daily basis.
- Roost sites facilitating migration are part of the wildlife movement patterns addressed by the RTA Wildlife Linkages Committee. Bridges provide open space or rest stops along migration pathways and provide protection from terrestrial predators.
- Some of the bat species using bridges in Tucson are migratory; thus, migratory roosts provide important stop-over roosting and foraging habitats for migrating bats.
- Bat migration includes both long-distance migration of thousands of miles as bats move between summer maternity areas and wintering areas, as well as shorter movements by species moving between summer maternity areas and winter hibernating roosts. Bats making such movements need migration roosts to provide areas where they can rest and gather resources to support their physiological needs during migration.
- Tucson-area bridges provide important day roosts, maternity roosts, and night roosts for at least eight species of bats (Sandy Wolf, pers. comm. Feb. 2012). The older bridge designs provided crevices for bats to roost; however, as these bridges are being replaced, new designs are being used, like the AASHTO Type III Girder bridges being used for Ina Road, that are flat-bottomed slabs which do not provide suitable crevices for bats' use. As a result, bat roosting habitat is being lost.

- Day roosting bats and maternity colonies often seek out the crevices between box beam girders or expansion joints in bridges.
- Amid widespread urbanization, suitable bat roosting sites are often limited. The AZ Department of Transportation website states that "Bridges frequently offer valuable habitat for bats, typically in the narrow joints between vertical elements such as girders. For this reason, the design team should consider providing alternate habitats for soffit fill bridges (bridges with no exposed girders or other structural elements)." http://www.azdot.gov/highways/Roadway_Engineering/Roadside_Development/PDF/Guidelines/5_Major_Structure_Design_and_Construction.pdf.
- The conservation of bat maternity roosts for both migratory and non-migratory species is essential to the maintenance and recovery of bat populations. Many bat species have just one pup per year and have a lifespan of up to twenty years, so the loss of each bat roost is significant.
- More than 50 percent of American bat species are in severe decline or already appear on the endangered species list (Bat Conservation International website www.batcon.org), and their conservation and recovery is dependent on access to forage and roost resources.

The value of bridges in providing important bat roost habitat is evident by the occupancy of the majority of bridges in the Tucson area by bats, including the Ina Road Bridge. This value has been recognized by the local community as is apparent by the popular bat-viewing evenings held at various bridges around the community.

The benefits of accommodating bats in transportation structures include pest control - some small insectivorous bats can consume up to 2,000 mosquito-sized insects in one night. Bats are also a vital part of the Sonoran Desert Ecosystem; some species pollinate columnar cacti and agave.

The Arizona Game and Fish Department (AZGFD) On-line Review Tool, accessed November 29, 2011, lists "bat colony" under Special Status Species, and includes the California leaf-nosed bat (*Macrotus californicus*) and cave myotis (*Myotis velifer*) as occurring within three miles of the Ina Road Bridge. The Online Review Tool states:

> "…*During the planning stages of your project, please consider the local or regional needs of wildlife in regards to movement, connectivity, and access to habitat needs. Loss of this permeability prevents wildlife from accessing resources, finding mates, reduces gene flow, prevents wildlife from re-colonizing areas where local extirpations may have occurred, and ultimately prevents wildlife from contributing to ecosystem functions, such as pollination, seed dispersal, control of prey numbers, and resistance to invasive species. In many cases, streams and washes provide natural movement corridors for wildlife and should be maintained in their natural state…To minimize impacts to birds and bats, as well as aquatic species, consider conducting maintenance and construction activities outside the breeding/maternity season (breeding seasons*

for birds and bats usually occur spring - summer). If bats are present, maintenance and construction (including paving and milling) activities should be conducted during nighttime hours, if possible, when the fewest number of bats will be roosting. Consider incorporating roosting habitat for bats into bridge designs."

AZGFD (2008) provides the following information for providing bat habitat in bridges:
To Be conducive for use by bats as day roosts, bridges should:

- *Be greater than 10 feet above the ground*
- *Have vertical crevices 0.5 to 1.25 inches wide*
- *Have vertical crevices 12 inches or greater in depth*
- *Be sealed from rainwater and debris from entering from above*
- *Have full sun exposure of the structure*
- *Not be situated over busy roadways passing underneath the structure*

Night roosts are used mostly between 10pm and midnight, but some are used throughout the night for periodic rest between feeding. Bats are attracted to bridges that:

- *Have a large thermal mass that remains warm at night*
- *Have vertical concrete surfaces located between beams that provide protection from wind and remain warm at night*

The Town has coordinated with several bat experts, including AZGFD biologists, U.S. Fish and Wildlife Service biologists, Bat Conservation International, the Arizona Western Bat Resource Group, local contract biologists, and transportation officials, as well as bat biologists in California, to determine how best to create habitat with similar structure, temperature and humidity ranges to those of known bat roosts in Tucson, specifically, the Ina Road Bridge. Although plans for add-on bat roost structures are available and were considered, there were questions regarding the usefulness or effectiveness of such structures in the extreme heat of the Sonoran Desert.

Concrete bridges moderate temperatures, provide temperature consistency, and provide protection from weather. The large thermal mass of bridges protects roosting bats from high temperatures during the day and retains warmth at night.

Proposed Project

The Town worked with Premier Engineering and RS Engineering to create a design that incorporates bat habitat into the new bridge structure, rather than using a retrofitted add-on structure (Exhibit C). This approach was selected in order to provide more thermal mass to moderate temperatures and more closely replicate the existing conditions of the current Ina Road Bridge.

The new Ina Road Bridge consists of AASHTO Type III girders with an 8 inch deck. The deck will be thickened between girders from 8 to 23 inches to accommodate the 14 inch

crevices in the bat structures. The thickened deck has plan view dimensions of 5 feet long by approximately 6 feet wide. The bat boxes provide slots that are 14 inches deep by 48 inches long. The width of the crevices will be varied, with some boxes having ¾-inch slats, some having 1 inch slats, and some having 1 ¼ -inch slats. These boxes are placed in close proximity to the pier supports in order to retain the resulting bending moment within the bending moment capacity of the proposed girders. A total of nine "boxes" would be needed to accommodate approximately 30,000 bats, based on a requirement of approximately 3 cubic inches per bat (Tim Snow pers. comm. Dec. 19, 2011). This should provide sufficient roost space to accommodate the current number of bats using the existing Ina Road Bridge.

Data loggers will be installed in the existing bat roosts in the Ina Road Bridge, to determine relative humidity and temperature in the roosts currently used by bats. This will provide important baseline data for comparison to post-construction conditions. Comparison with baseline conditions is important because it will allow us to determine the effectiveness of the new design in recreating existing bat roost conditions. Such knowledge will allow us to find the most effective way to create bat roosting habitat and provide the opportunity to apply this knowledge to other projects in the future.

In addition to incorporating bat habitat into the east-bound bridge; two bat boxes, with a capacity of approximately 2,000 bats each, will be retrofitted to the Cortaro Rd. Bridge, which is one mile north of the Ina Road Bridge. This will be completed prior to construction activities at the Ina Road Bridge and will provide additional, alternative roosting habitat in proximity to the Ina Road Bridge in the event that noise disturbance and construction activity cause some bats to abandon the Ina Road Bridge during construction. Because roosting sites are limited, it is crucial to provide alternative roosting habitat for the bats that currently use the Ina Road Bridge.

Prior to demolition of the existing Ina Road Bridge, bats must be excluded to avoid mortalities. Exclusion should be performed between October and March, when bat population numbers in the bridge are at their lowest (Scott Richardson, USFWS, pers. comm. May 2011). During the exclusion process, a biologist will conduct nightly monitoring for 7 consecutive nights, immediately prior to demolition, to assure all bats are excluded prior to construction and to limit the potential for reoccupancy. Weekly monitoring will be employed to ensure bats do not becoming entangled in the wire netting or other exclusion material while these are in place, and to ensure new roosting areas on the existing bridge are not being used prior to demolition. Exhibit D includes a detailed proposal by the Arizona Game and Fish Department for monitoring and the exclusion process.

So that we can obtain as much information as possible related to the effectiveness of this project, data loggers will be installed in the new bat habitat once the new Ina Road Bridge is in place. Data loggers will also be installed in the bat boxes placed under

Cortaro Road Bridge in order to determine how closely conditions approximate those of the currently existing bat roosts in the existing Ina Road Bridge.

Post-construction monitoring will aide in determining whether any adjustments need to be made to improve effectiveness of the bat roosting structures. Bat usage will be documented by determining the numbers of each bat species and the time of year the bridge roosts and Maberry Bat Boxes are occupied. This occupancy information can be related to data logger information collected on climate conditions, as well as to the baseline conditions that were collected pre-construction. This will help us determine the effectiveness of this project and provide information that can be applied to future projects.

Ramifications of no action

If funding is not approved for this project, an important bat roosting site for thousands of bats at Ina Road Bridge will be demolished. The Town will not receive the guidance of bat experts on appropriate strategies to maintain important bat habitat when the Ina Road Bridge is demolished and replaced. As more of the older bridges are replaced in the Tucson Basin, the cumulative effect of loss of bat roosting habitat on bat populations could be severe. This project and the follow-up monitoring will provide valuable data for future bridge replacement projects.

Natural bat roosts in caves and mines are increasingly impacted by recreational users and mine closures. As a result, bridges may play an even more important role as roosting habitat in the future (Shawn Lowery, pers. comm. April 2012). Bridges provide important linkages for bats because they provide roosting habitat for migratory bat species as they move long distances during migration, as well as for local movements within the Tucson Basin, and they increase connectivity between foraging habitat by providing roosts in proximity to available forage resources.

4. OBJECTIVES

The objectives of this construction project are to:

- In order to obtain baseline data for comparative purposes, install data loggers in the existing bat habitat in the Ina Road Bridge to determine relative humidity and temperature in the roosts used by bats at Ina Road and monitor bat species composition during each season and numbers currently using the Ina Road Bridge.
- Add two Maberry Bat Boxes © to the Cortaro Road Bridge, which can house up to 2,000 bats each, at least six months prior to commencement of work on the Ina Road Bridge. Data loggers will be installed in the Maberry Bat Boxes to record microclimate conditions. Liquefied bat guano will be sprayed into crevices to encourage bat use.

- Ina Road Bridge demolition should be scheduled between October and March when the least number of bats should be present. Prior to demolition of the existing Ina Road Bridge, bats must be excluded to avoid mortalities.
- The new east-bound Ina Road Bridge deck will be thickened near the piers in an area 5 feet long by approximately 6 feet wide, in order to hold the extra weight of the bat boxes.
- Incorporate nine bat roosts, with adequate capacity to potentially accommodate up to 30,000 bats, in the new the east-bound Ina Road Bridge, which is scheduled to be constructed before the existing bridge is demolished. The bat boxes will have slots that are 14 inches deep by 48 inches long. The width of the crevices within the bat boxes will be varied, with some boxes having ¾-inch slats, some having 1 inch slats, and some having 1 ¼ -inch slats. Spray liquefied bat guano in new crevices to encourage bat use.
- Install data loggers in the bat habitat incorporated in the new Ina Road Bridge to determine effectiveness of the design and for comparative purposes with baseline data.
- Monitor bat species and numbers, along with temperature and relative humidity in the bat roosts at Cortaro Road and Ina Road Bridges for two full years after completion of construction at the Ina Road Bridge. Two years of post-construction monitoring are necessary because there may be a lag effect associated with the discovery and establishment of the new roost sites by bats. If there is indeed a lag effect (i.e., it takes time for bats to establish to 'new' surroundings) surveying for only one season post-construction may lead to false conclusions that the roost sites are not suitable, thereby suggesting adaptive management strategies that may not be necessary.

5. APPROACH

If the funding request is approved, the Town will use this money to pay for the exclusion and monitoring of bats to avoid incidental take; to acquire and install Maberry bat boxes; to complete bat habitat construction in the new bridge; and to conduct pre- and post-construction monitoring.

Incorporation of the bat habitat into the Ina Road Bridge and bat boxes at the Cortaro Road Bridge will comply with recommendations from the U.S. Fish and Wildlife Service and the Arizona Game and Fish Department to mitigate for the loss of important bat habitat in the existing Ina Road Bridge.

The current project funding is not sufficient to fully fund the construction of the new bridges and include the additional wildlife linkage structures (bat roosts). RTA funding would allow this unique approach to bat habitat linkages to be implemented, achieving not only the current linkage objectives, but also providing information that can be used to inform the approach of future projects.

6. FINAL DELIVERABLES

The final deliverables for this project are to install two Maberry Bat Boxes in Cortaro Road Bridge and nine bat roosting structures in the east-bound Ina Road Bridge. A post-construction monitoring report from AZGFD will be provided to this RTA committee, once the first year of post-construction monitoring is completed, and a final report two years following completion of the project. In addition, interim updates can be provided to the RTA, as requested, during the duration of this project.

7. TIME TABLE

The schedule listed in the table below is tentative. The Town of Marana will be responsible for the design phase and, potentially, ADOT will be responsible for the construction phase.

Table 2. Construction Phases

Phase	Schedule
One year prior to Phase 1 – Commence monitoring bats and existing roosts at Ina Road Bridge	Summer 2013
Prior to Phase 1 – Install (2) Maberry Bat Bridge Condos at Cortaro Rd. Bridge	Fall 2013
Phase 1 – Construction of new east-bound bridge north of the existing Ina Rd. Bridge with bat roosts	Late fall of 2015
1 Week prior to initiation of Phase 2 – exclude bats from existing Ina Rd. Bridge	Between Oct. and March of 2016
Phase 2 – Demolition of existing Ina Rd. Bridge	Late fall 2016
Phase 3 – Construction of new west-bound bridge	Fall 2017
Monitor new bat roosts at Ina Rd. and Cortaro Rd. bridges for 2 full years post-construction	2017

8. BUDGET SUMMARY

An intergovernmental agreement will be developed with the RTA to coordinate funding. The Town of Marana is not self-certified to construct the bridge, so Marana will be responsible for Phase I: the design of bat roosts, pre-construction monitoring to determine conditions necessary to emulate in the new bridge, and installation of the Maberry Bat Bridge Condos © to provide alternative habitat for bats that are disturbed by construction of the first Ina Road Bridge prior to demolition of the existing bridge.

The construction of the bridges, Phase II, will involve an agency that is self-certified (yet to be identified), which will include bat exclusion from the existing bridge, monitoring the construction/installation of bat crevices in the new Ina Road Bridge.

The Town of Marana will also be responsible for Phase III, the post-construction monitoring of the new bat habitat at the Cortaro and Ina Road Bridges, which will provide information on whether the constructed bat habitat is being used and if not, what can be done to make the roosts more effective as bat habitat (i.e. adaptive management).

Table 3. Costs for Bat Exclusion, Bat Habitat and Monitoring

Phase I – IGA between Town of Marana and the RTA	
Design of Ina Rd. Bridge bat roosts	$5,500.
(2) Maberry Bat Bridge Condos © at $4,215.00/each	$8,430.
Shipping Costs	$1,000.
Installation of Maberry Bat Bridge Condos with data loggers	$2,401
Bat exit counts and installation of data loggers on existing Ina Rd. Bridge by AZGFD	$13,171.
Subtotal	**$30,502.**
Phase II – IGA with a Self-certified Agency and the RTA	
Exclude bats from Ina Rd. Bridge	$3,217.
Monitor construction/installation of the bat crevices on new Ina Rd. Bridge	$1,824.
Bat roost construction costs for Ina Rd. Bridge	$5,000.
Subtotal	**$10,041.**
Phase III – IGA between Town of Marana and the RTA	
Bat exit counts and collection of data from data loggers for both Ina and Cortaro Rd. Bridge bat roosts for two years after new bat habitat is installed.	$35,411.
Final report available to RTA Wildlife Linkages Committee	$4,607.
Subtotal	**$40,018.**
Total Costs for All Phases	**$80,561.**
In Kind: Town of Marana coordination with design engineers, bat biologists, contract development, etc.	$15,000.
In Kind: AZ Game and Fish Dept. equipment (pre-project investigation of bat use, trapping equipment, ladders, Hobo data loggers, etc.)	$5,200.
Total In-Kind	**$20,200.**

9. PRINCIPAL INVESTIGATORS/ORGANIZATIONAL EXPERIENCE

Evaluation:

Shawn Lowery, Arizona Game and Fish Department, Wildlife Specialist II
Joel Diamond, Arizona Game and Fish Department, Wildlife Specialist II
Michael Ingraldi, Arizona Game and Fish Department, Project Supervisor
Sandy Wolf, Private Consulting Bat Biologist

Project Design:

Premier Engineering
RS Engineering

Project Management:

Janine Spencer, Town of Marana, Environmental Projects Coordinator
Jennifer Christelman, Town of Marana, Environmental Engineering Division Manager

10. LIST OF COOPERATORS

The project is located in the Town of Marana, Pima County. The Town of Marana will be taking the lead on this project for the design and ADOT will take the lead on the construction phase.

Arizona Game and Fish Department, Research Branch
2221 West Greenway Road
Phoenix, AZ 85023

U.S. Fish and Wildlife Service
Tucson Field Office
201 North Bonita, Suite 141
Tucson, AZ 85745

11. REFERENCES

Arizona Department of Transportation website accessed September 25, 2011, at http://www.azdot.gov/highways/Roadway_Engineering/Roadside_Development/PDF/Guidelines/5_Major_Structure_Design_and_Construction.pdf

Arizona Game and Fish Department (AZGFD) On-line Review Tool, accessed November 29, 2011. Arizona's On-line Environmental Review Tool Search ID: 20111129016597. Project Name: Ina Rd. Bridge Replacement. Date: 11/29/2011 3:12:49 PM

Arizona Game and Fish Department (AZGFD) Guidelines for Bridge Construction or Maintenance to Accommodate Fish & Wildlife Movement and Passage. Arizona Game and Fish Department, Habitat Branch. November 2008

Bat Conservation International. Website accessed September 25, 2011 at http://www.batcon.org.

EcoPlan Associates, Inc. 2012. Draft Houghton Road widening at Union Pacific Railroad: bat roosts and mitigation measures. STP-TUC-0(201)A 0000 PM TUC SS624 01C. Tucson, AZ.

Erickson, Gregg A., et al. Bat and Bridges Technical Bulletin (Hitchhiker Guide to Bat Roosts), California Department of Transportation, Sacramento CA. 2002.

Johnston, D., G. Tatarian, and E. Pierson. California bat mitigation techniques, solutions, and effectiveness. 2004. Prepared for California Dept. of Transportation (Caltrans) Office of Biological Studies and Technical Assistance. Proj. No. 2394-01. Sacramento, CA.

Keeley, B. & M. D. Tuttle. 1999. Bats in American Bridges. Bat Conservation International. Accessed March 8, 2012, at: http://www.batcon.org.

Maberry Bat Bridge Condos. Website accessed on October 2, 2011 at: www.maberrybat.com

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Exhibit A – Location Map

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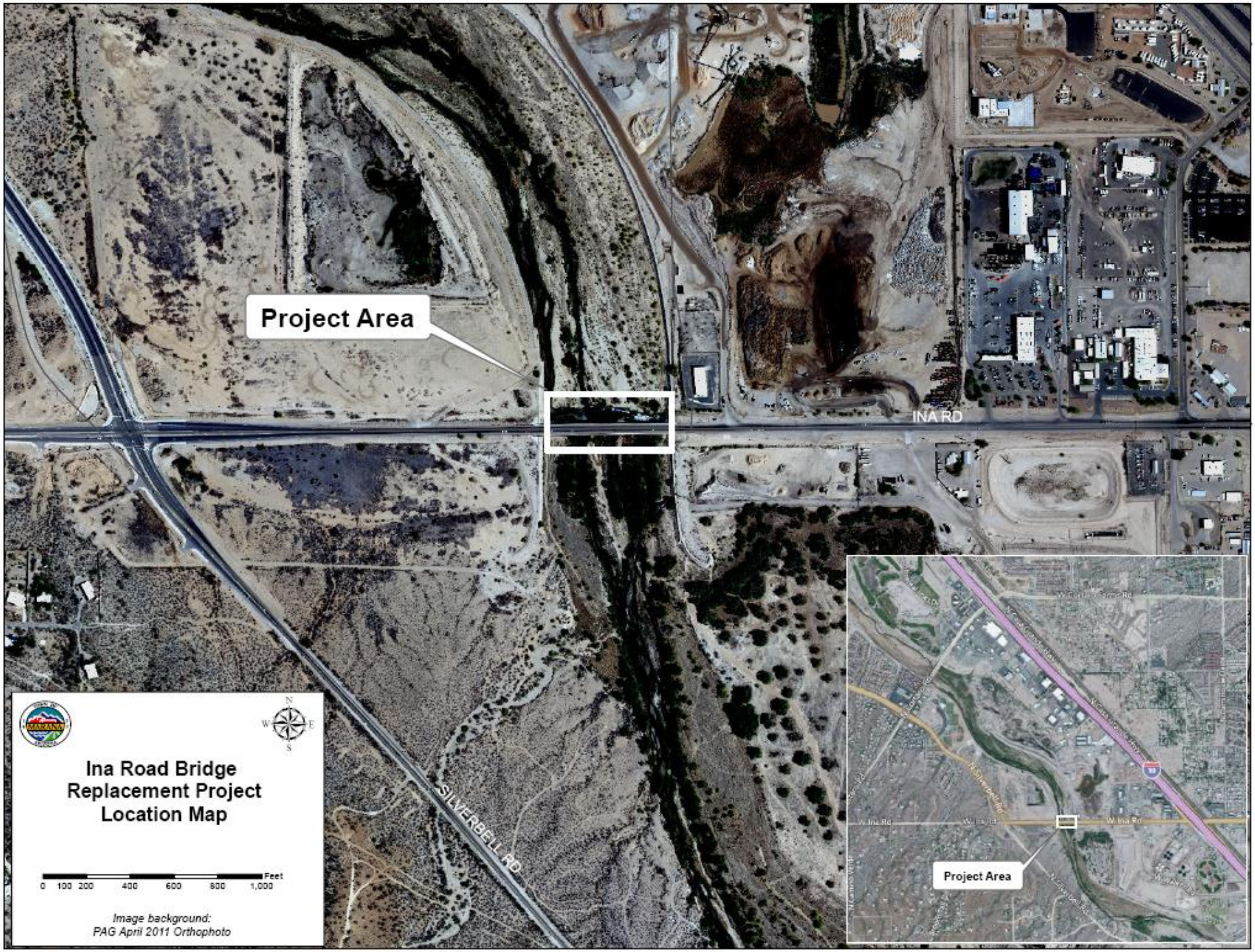
Project Area
INA RD
SILVERBELL RD
Ina Road Bridge
Replacement Project
Location Map
Feet
0 100 200 400 600 800 1,000
Image background:
PAG April 2011 Orthophoto
Project Area

In
W

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Exhibit B – Maberry Bat Bridge Condos©

http://www.maberrybat.com

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"Bridge Condo"
Dimensions: 26 1/2" height x 20 1/4" width x 38" length
Weight: approx. 210 lbs.
Capacity: Designed for 2,000 + bats -- depending on species
Construction: Factory galvanized steel, durable PVC plastic, polypropylene black webbing, stainless steel rivets & stucco (inside), cadmium plated hardware (exterior), stainless available.
Miscellaneous: Roosting area contains 728 feet (both sides of webbing). Louvered vents & attic passageways provide maximum air circulation.

The **"Bridge Condo"** is designed as a hanging unit, (as shown in the photo at right), and features a factory galvanized welded *steel outer shell* with louvered vents, for air circulation. The right side picture is the bottom view of the *inside (PVC) plastic insert.* It shows the numerous compartments with polyproplyene webbing attached with stainless steel rivets. This results in abundant roosting space, (36 chambers), and for the future growth of the colony. It is designed to accommodate approximately 2,000 + bats, depending upon species, and can be utilized under a bridge, other structure or as a free-standing outside unit. Shipping weight: 249 lbs. Price: $4,215.00

The inside is a PVC insert containing seven bat house sections. Insulation is sandwiched on the top and between the outside and inside walls to stabilize temperatures (illustration below).

The picture below illustrates 1 0f 7 sections that complete the inside of the Bridge Condo, showing the large attic and access spaces to various compartments. Attic design and vents allow air flow throughout and provides additional temperature range by occupants.

Exhibit C – Ina Road Bridge Deck Plans
with Bat Roosts Incorporated

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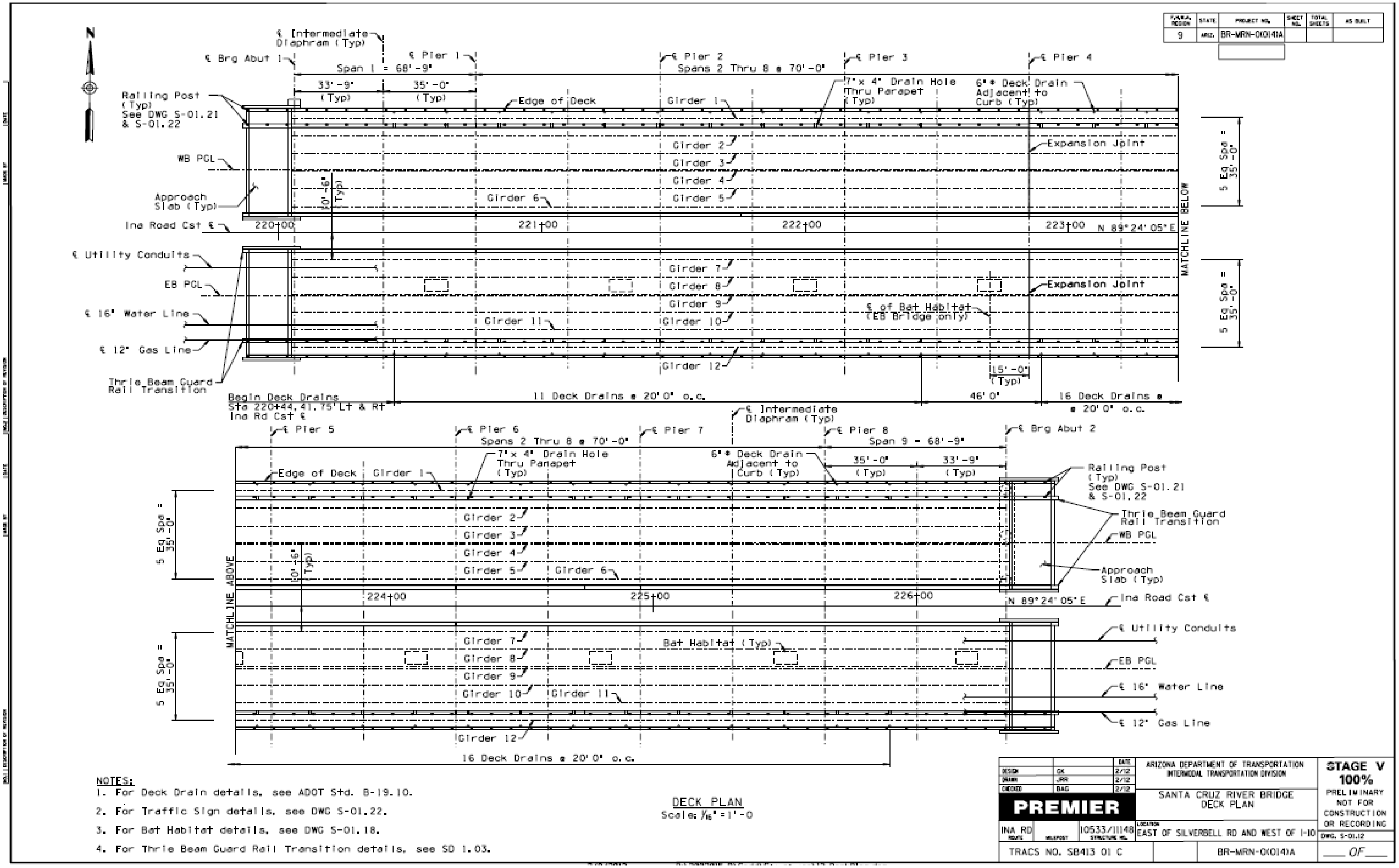
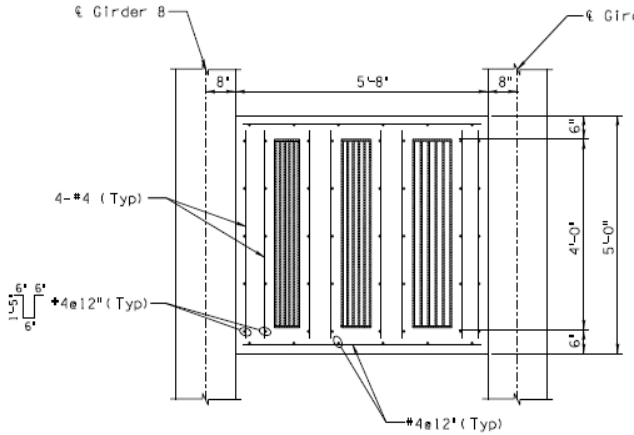
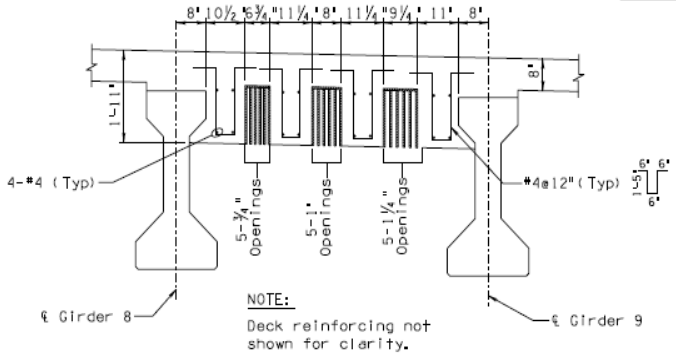

N
℄ Intermediate Diaphram (Typ)
℄ Brg Abut 1
℄ Pier 1
℄ Pier 2
℄ Pier 3
℄ Pier 4
Span 1 = 68'-9"
Spans 2 Thru 8 @ 70'-0"
33'-9" (Typ)
35'-0" (Typ)
Railing Post (Typ) See DWG S-01.21 & S-01.22
Edge of Deck
Girder 1
7"x 4" Drain Hole Thru Parapet (Typ)
6"ø Deck Drain Adjacent to Curb (Typ)
Expansion Joint
WB PGL
Approach Slab (Typ)
Ina Road Cst ℄
220+00
221+00
222+00
223+00
N 89°24' 05" E
℄ Utility Conduits
EB PGL
℄ 16" Water Line
℄ 12" Gas Line
Thrie Beam Guard Rail Transition
℄ of Bat Habitat (EB Bridge only)
5 Eq Spa = 35'-0"
10'-6" (Typ)
MATCHLINE BELOW
Begin Deck Drains Sta 220+44.41.75' Lt & Rt Ina Rd Cst ℄
11 Deck Drains @ 20'0" o.c.
46' 0"
15'-0" (Typ)
16 Deck Drains @ 20'0" o.c.
℄ Pier 5
℄ Pier 6
℄ Pier 7
℄ Pier 8
℄ Brg Abut 2
Span 9 = 68'-9"
224+00
225+00
226+00
MATCHLINE ABOVE
Bat Habitat (Typ)
Girder 2
Girder 3
Girder 4
Girder 5
Girder 6
Girder 7
Girder 8
Girder 9
Girder 10
Girder 11
Girder 12
NOTES:
1. For Deck Drain details, see ADOT Std. B-19.10.
2. For Traffic Sign details, see DWG S-01.22.
3. For Bat Habitat details, see DWG S-01.18.
4. For Thrie Beam Guard Rail Transition details, see SD 1.03.
DECK PLAN
Scale: 1/16" = 1'-0
ARIZONA DEPARTMENT OF TRANSPORTATION
INTERMODAL TRANSPORTATION DIVISION
PREMIER
SANTA CRUZ RIVER BRIDGE
DECK PLAN
STAGE V
100%
PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING
INA RD
10533/11148
EAST OF SILVERBELL RD AND WEST OF I-10
DWG. S-01.12
TRACS NO. SB413 01 C
BR-MRN-0(014)A
9
BR-MRN-0(014)A



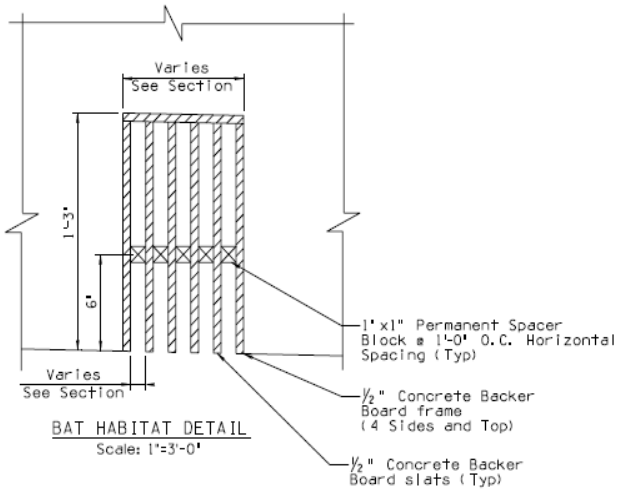
BAT HABITAT PLAN
Scale: 3/4"=1'-0"



BAT HABITAT SECTION
Scale: 3/4"=1'-0"

NOTES:

1. Bat Habitats shall be installed only on the EB Bridge (Structure #10533). See DWG S-01.12 for locations.
2. All concrete backer board shall be ½" thick with no chemical treatments. The concrete backer board shall be water-durable, moisture resistant, and mold resistant.
3. Permanent 1" square blocks of concrete or concrete backer board shall be installed at the location and spacing shown to provide permanent rigidity to the slats. The blocks shall be secured to the slats using stainless steel nails.
4. The frame shall be secured to the concrete using 3" long stainless steel nails. One row of nails at mid-height shall be used on each side of each frame. The nails shall be spaced at 1'-0" maximum horizontal spacing. The nails shall be installed before the concrete is poured.
5. The contractor shall provide temporary support in the open spaces during the concrete pour to prevent collapsing or deforming on the slats. The temporary supports shall be removed after the concrete has cured.
6. An inspector shall be on site during the installation of the Bat Habitats to ensure that they are constructed according to these details and notes.
7. The cost of the concrete for the Bat Habitats shall be measured and paid under the Structural Concrete (Class S) (f'c = 4500 psi) pay item. The reinforcing steel for the Bat Habitats shall be measured and paid under the Reinforcing Steel pay item. All other materials and labor associated with the Bat Habitats shall not be measured and shall be considered incidental to the Structural Concrete (Class S) (f'c = 4500 psi) pay item.



BAT HABITAT DETAIL
Scale: 1"=3'-0"

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	AS BUILT
9	ARIZ.	BR-MRN-0(014)A			

		DATE
DESIGN	GK	2/12
DRAWN	JRR	2/12
CHECKED	BAC	2/12

PREMIER

ARIZONA DEPARTMENT OF TRANSPORTATION
INTERMODAL TRANSPORTATION DIVISION

SANTA CRUZ RIVER BRIDGE
BAT HABITAT DETAILS

STAGE V
100%
PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

ROUTE	MILEPOST	STRUCTURE NO.	LOCATION
INA RD		10533/11148	EAST OF SILVERBELL RD AND WEST OF I-10

DWG. S-01.18

TRACS NO. SB413 01 C | BR-MRN-0(014)A | OF

3/8/2012 P:\2002015-B\Cadd\Structures\18_BathabitatDtls.dgn

Exhibit D – Arizona Game & Fish Department
Proposal for Bat Management

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Bat Management at the Ina Road and Cortaro Farms Road Bridges

Prepared By:
Michael Ingraldi, PhD and Shawn Lowery
Arizona Game and Fish Department

Background and Justification

The Town of Marana is developing plans for the construction of the new Ina Road Bridge with specific design criteria to accommodate bat populations and the installation of 'Maberry Bat Bridge Condos on the Cortaro Farms Bridge as mitigation of habitat loss during the Ina Road Bridge construction activities. The project area is located in the Town of Marana at the Ina Road and Cortaro Farms Road bridge crossings over the Santa Cruz River (Figure 1). The Ina Road bridge structure has historically provided year round roosting habitat for colonial bat species within the area including but not limited to, (Cave myotis (*Myotis velifer*) and Mexican free-tailed bats (*Tadarida brasiliensis*)). The Town has the opportunity to maintain and enhance bat habitat through augmenting construction design features that benefit and attract bat populations. To inform the success of this project, microclimate data is needed to determine what habitat conditions specific species of bats utilize so as to design the most efficient roost structures that facilitate their use. In addition, bats are protected by state statute (A.R.S. Title 17) and all efforts need to be implemented that minimize the taking of bats during bridge construction activities.

If funding is not approved for this project, the Town of Marana and Arizona Department of Transportation (hereafter, ADOT) will not receive expert guidance on the appropriate strategies to maintain and enhance bat habitat along bridges that are scheduled for re-construction. This process includes pre and post-monitoring of these structures to determine the efficacy of these methodologies for the benefit of bat populations and bridge construction in Pima County and the southwest. In addition, the guidelines developed from this pilot project will ensure specifications for the type and location of appropriate bat roost structures that would allow for the safe and continued use of bridges as important wildlife roosting habitat. The lack of funding for projects like this will lead to a potential increase in wildlife mortality (A.R.S. Title 17, Take violations) and loss of habitat in this area.

Objectives
The objectives of this project are:

1) Pre-construction microclimate and bat occupancy monitoring. Determine the bat species composition, abundance and microclimatic (Temp / Relative Humidity (RH)) conditions within the current Ina Road Bridge roosting sites;
2) Install Maberry Bat Bridge Condos on the Cortaro Farms Bridge prior to disturbance to the Ina Road Bridge;
3) Coordinate and implement bat exclusion at the Ina Road Bridge before and during construction to avoid wildlife take;
4) Monitor the construction/installation of the bat crevices on the new Ina Road Bridge, and;
5) Post-construction monitoring of the environmental conditions and bat species use at the Ina Road and Cortaro Farms Bridges to ensure adequate roost habitat criteria are met.

Approach
Objective 1: Prior to the Ina Road bridge demolition, we will monitor the number of bats using the bridge structure as roosting habitat once every 4 weeks for one year prior to bridge reconstruction. We will explore the use of infrared lighting and DVR's to estimate bat numbers, as well as evaluate the option of using visual day time roost count techniques (e.g., daytime visual counts of bridge crevices with the aid of a spot light and binoculars). We will use similar count methodology for two consecutive years post bridge construction. Pre-bridge construction bat numbers and species composition will be compared to post construction bat use numbers and species composition in order to evaluate the success of bat habitat engineered into bridge construction. In addition, we will note the type of roost use (e.g., maternity, bachelor, etc.) by bats.

In addition, to document microclimatic variability driving site occupancy by bats, we will place HOBO temperature and relative humidity data loggers within the current bat habitat on the Ina Road Bridge. These data will provide a baseline range of environmental conditions suitable for roosting bats that we will strive to mimic within the newly constructed bat replacement roosts. Roosting bats have specific environmental conditions that if not met will result in the rejection of potential roost habitat.

Objective 2: We will assist the Town of Marana and ADOT in determining the best placement for the Maberry bat condos on the Cortaro Farms Road Bridge and in determining if modifications to the Maberry bat condos are necessary. With guidance from the Town of Marana and ADOT for anchor placement on the Cortaro Farms Bridge, we will install these bat condos prior to the demolition of the Ina Road Bridge.

Objective 3: Prior to the initiation of the demolition of Ina Road bridge, (i.e., outside of the maternity season; March-September); we will exclude bats from the bridge structure beginning 5 days prior to demolition. During the night, after the bats emerge from their diurnal roosts on the

bridge (about 1 hour after sunset), we will attach ¼ inch wire mesh or spray foam sealant at the entrances to all the observed roost sites. In addition, all potential roosts sites on the bridge structure not observed to have bats will be sealed. All caution will be used to make sure that all bats have emerged from the roost before the application of wire mesh or foam (e.g., we will use flexible fiber optic inspection scopes to aid in identifying bats within hard to observe areas). We will accomplish this with the aid of ladders and an aerial work platform (i.e., mobile cherry picker). We will monitor the return of bats throughout the evening until 1 hour after sunrise to ensure that all the roost sites have been blocked. We will monitor the emergence of any bats we may have missed from the bridge structure for the following two nights and cap any potential identified roost sites.

Objective 4: We will work with the bridge construction contractor to identify the timeline for bat habitat specific construction activities of the Ina Road Bridge. We will meet with the contractor during the construction process to ensure the correct design criteria are met for the development of bridge bat habitat as specified in bridge design. This includes specific placement and interior crevice dimensions of roosting habitat that is accepted by the bat species detected during pre-surveys and historic survey efforts of the Ina Road Bridge.

Objective 5: We will monitor bat use (abundance, species, and type of use) of the boxes year-round from time of installation up to 2 years post-construction of new habitat on the Ina Rd Bridge. We will install, monitor and analyze microclimatic data from the environmental data loggers to ensure that the proper ranges of microclimatic conditions are met within these constructed roosts. We will use a monitoring and adaptive management approach to modify any bat roost structure that fail to provide the proper range of environmental conditions.

Deliverables: A final report will be prepared that addresses each of the goals and objectives listed above. All guidance and design provided will take into account current land use and development plans on adjacent lands bordering the roadway. Reference will be provided to help guide construction design of these bat roost structures, as needed and available. The final report for this project will also include guidelines for applying these bridge construction modifications methodologies as mitigation strategies for bridge design regionally.

Guidelines from this case study will include information on the following variables; (1) current habitat conditions used by bats on the Ina Bridge – crack size and depth, temp, relative humidity, (2) current species composition and numbers by season, (3) description of the exclusion process including modifications for future projects, (4) recommendations for placement of artificial bat structures as retrofits on bridges regionally based on occupation success of Cortaro Farms Bridge (5) monitoring results and rate of occupation of new crevices in the new Ina Bridge bat crevice design.

Time Table

Tasks	Time
1. Exit count monitoring at Ina Road bridge structure and install microclimatic monitors	Commence one year prior to Ina Road Bridge demolition
2. Install Maberry Bat Bridge Condos and attached data loggers	Prior to Ina Road Bridge demolition
3. Exclude bats from Ina Road bridge prior to demolition	1 week prior to Ina Road Bridge demolition
4. Monitor the construction/installation of the bat crevices on the new Ina Road Bridge	During new Ina Road Bridge construction
5. Monitor bat species composition, abundance and microclimatic conditions at newly constructed roost sites on the new Ina Road Bridge and Cortaro Farms bat Condos	2 years post construction
6. Provide annual progress report and presentation to RTA group and provide final report	End of Year 1 and Year 2

Budget Details

Task	Cost
1. Exit count monitoring at Ina Road bridge structure and install microclimatic monitors	13,171
2. Install Maberry Bat Bridge Condos and attach data loggers	2401
3. Exclude bats from Ina Road bridge prior to demolition	3217
4. Monitor the construction/installation of the bat crevices on the new Ina Road Bridge	1824
5. Monitor bat species composition, abundance and microclimatic conditions at newly constructed roost sites on the new Ina Road Bridge and Cortaro Farms bat Condos	35,411
6. Provide annual progress report and presentation to RTA group and provide final report	4607
Total	**$60,631**

Note: AGFD In-Kind Contributions (Use of trapping equipment, ladders, Hobo loggers, 4 DVR's, climbing equipment, etc.) = $5200.

Cooperators:
Town of Marana – Project is located in the Town of Marana which is providing project design and oversight.
Premier Engineering- Providing Engineering services and design criteria for bat roosts on Ina Road Bridge.
RS Engineering - Providing Engineering services.

APPENDIX C
Air Quality

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I-10, Ina Road Traffic Interchange

and

Ina Road; Bridge over Santa Cruz River & Roadway Improvements— Silverbell Road to Starcommerce Way

Project-Level PM Quantitative Hot-Spot Analysis— Project of Air Quality Concern Questionnaire

Prepared for: Federal Highway Administration

December 2015

Official Project Name by Stage	Federal Aid No.	ADOT Project No.
I-10, Ina Road Traffic Interchange (Stage A1)	NH-STP-010-D(216)S	010 PM 248 F0003 01C
I-10, Ina Road Traffic Interchange (Stage A2)	NH-STP-010-D(216)S	010 PM 248 H8479 01C
Ina Road; Bridge over Santa Cruz River & Roadway Improvements—Silverbell Road to Starcommerce Way (Stage M1)	STP-MRN-0(014)T	0000 PM MRN T0013 01C
Ina Road; Bridge over Santa Cruz River & Roadway Improvements—Silverbell Road to Starcommerce Way (Stage M2)	STP-MRN-0(014)T	0000 PM MRN SB413 01C

Project-Level PM Quantitative Hot-Spot Analysis—Project of Air Quality Concern Questionnaire

Project Setting and Description

The Arizona Department of Transportation (ADOT), in conjunction with the Federal Highway Administration (FHWA), proposes to widen Interstate 10 (I-10) from milepost (MP) 247.6 to MP 249.6, reconstruct the I-10 Ina Road Traffic Interchange (TI), and widen Ina Road from Silverbell Road to Starcommerce Way in the Tucson metropolitan area, Pima County, Arizona (Figure 1).

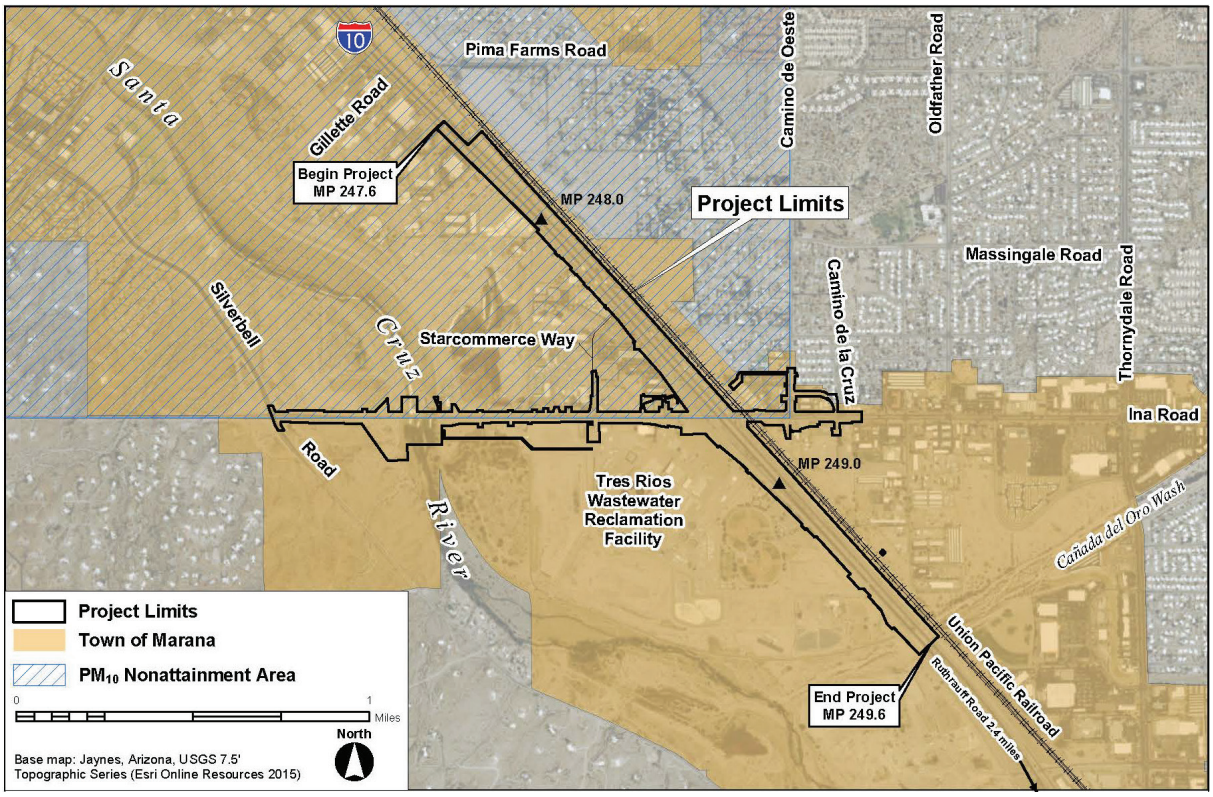

Figure 1. Project vicinity

The widening of I-10 from three lanes in each direction to five lanes in each direction and the reconstruction of the Ina Road TI were previously addressed in the National Environmental Policy Act compliance document for proposed improvements to I-10 between the Ina Road TI and the Ruthrauff Road TI under the FHWA Final Environmental Assessment (EA) for Federal Aid No. 010-D(211)N and ADOT Project No. 010 PM 247 H7583 01L. The FHWA issued a Finding of No Significant Impact and a project-level conformity determination on November 15, 2012.

The project was envisioned to be implemented through multiple phases: Phase I—Ruthrauff TI, Phase II—Ina Road TI, Phase III—Orange Grove Road and Sunset Road TIs, and Phase IV—I-10 mainline widening to 10 through lanes and auxiliary lanes.

Final design began in November 2013 for the Phase II project, which includes the Ina Road TI and related I-10 improvements. Through coordination with the Town of Marana, it was determined that ADOT, the Town of Marana, and the public would benefit from combining the design and construction activities for the Town of Marana Ina Road project with the ADOT I-10 Ina Road TI project. The Town of Marana Ina Road improvements project includes widening Ina Road: Starcommerce Way to Silverbell Road (0.9 mile) from one lane in each direction to two lanes in each direction and replacing the bridge over the Santa Cruz River with two new bridges. Combining the two projects will reduce the overall duration of construction in this area, and the associated traffic delay and air quality impacts. Only minor changes to the configuration of the original I-10 Ina TI project, as reviewed in 2012, are being considered, and the traffic impacts of the Ina Road project were accounted for in the 2012 I-10 conformity determination. However, some construction elements that were to occur along Ina Road as part of the 2012 project approval are being revised. Specifically:

- A bridge at Ina Road and Camino de Oeste will no longer be constructed (only the northwest portion of this bridge would have been in the nonattainment area);
- A new connector road east of I-10 and south of Ina Road will not be constructed (this would have been outside of the nonattainment area); and
- A new signalized intersection will be added at Ina Road and Camino de la Cruz (this is also outside of the nonattainment area).

The project is somewhat unique in that it straddles the nonattainment area boundary, as shown in Figure 1. All activity on I-10 south of Ina Road is outside of the nonattainment area. Likewise, the westbound lanes of Ina Road and the other construction activity north of Ina Road are in the nonattainment area; the eastbound lanes and activity south of the road are in an attainment area.

The I-10 and Ina Road projects are listed in the State Transportation Improvement Plan (STIP) under:

- STIP No. 3.02—I-10, Ina Road Traffic Interchange (STIP 2016–2019, amended June 8, 2015) and
- STIP No. 88.03—Ina Road; Bridge over the Santa Cruz River & Roadway Improvements—Silverbell Road to Starcommerce Way (STIP 2016–2019, December 25, 2014).

The project area is within the Pima Association of Governments (PAG) region. The Arizona Department of Environmental Quality(ADEQ) submitted the *Rillito Moderate Area PM10 Maintenance Plan and Request for Redesignation to Attainment* as a revision to the Final State Implementation Plan for the Rillito PM10 Nonattainment Area in June 2008 to the Environmental Protection Agency (EPA). The request remains pending.

The I-10 Ina Road TI portion of the project was previously found to conform and there are no changes to traffic or truck volumes on I-10 due to addition of the Ina Road (because impacts due to the addition of Ina Road were considered in the 2012 conformity determination), but

because three years have elapsed since the most recent major step to advance the project and with the addition of the Town of Marana Ina Road project to the already-approved I-10 Ina Road TI project is considered "a significant change in design concept and scope," the need for trigging a new project-level conformity determination is applicable, pursuant to 40 Code of Federal Regulation (CFR) 93.104. This Air Quality Questionnaire intends to re-evaluate what was concluded in the 2012 EA, as well as addresses the addition of the Town of Marana project—Ina Road: Silverbell Road to Starcommerce Way. The Town of Marana Ina Road project limits cross into the southernmost boundary of the Rillito PM10 area, as shown in Figure 1.

The 2012 I-10 Ina Road TI project limits were analyzed for PM impacts and the Final EA concluded that a qualitative analysis of PM2.5 is not required because of the attainment status of the project area. The I-10 Ina Road TI project was found to be in conformity for PM10. A very small portion of the project area near the north terminus lies within the nonattainment area for PM10. The 2012 EA noted; it is unlikely that the impacts from the proposed improvements within this limited area will cause or contribute to an exceedance of the PM10 standard. This is based on the following factors:

- Fugitive dust sources are a large contributor to ambient concentrations of PM10.
- The proposed improvements will provide improved access from I-10 to the surrounding area and reduce travel time and congestion on connecting roads in the area.
- Diesel exhaust is not a major contributor to ambient concentrations of PM10.
- The reduction in traffic delays will reduce truck idling time and emissions.

The proposed addition of the Town of Marana project, the widening of Ina Road from Starcommerce Way to Silverbell Road, does not alter any of the 2012 EA conclusions with regard to PM10. The key elements to the original project; reducing travel time on I-10 and reduction in traffic delays remain intact. The capacity improvements on I-10 mainline through addition of travel lanes is consistent with travel demand forecasts and consistent with planning for the I-10 corridor. The elimination of the at-grade Ina Road and Union Pacific Railroad (UPRR) signalized crossing by grade separating Ina Road over the UPRR substantially reduces delays at the I-10 Ina Road TI.

The reconstruction of the I-10 Ina Road TI to eliminate the at-grade crossing of the UPRR was not developed in response to any need for truck travel. The planned I-10 capacity improvements represent a small segment of the regional interstate facility and would not attract or diminish any heavy truck demand in the corridor. Ina Road in the Town of Marana is not a major truck route. There are no warehousing or manufacturing facilities on Ina Road east or west of I-10. There is limited to no opportunity for new business development related to heavy trucking use. Lands adjacent to Ina Road that are east of I-10 are generally developed urban, with a mix of residential and local commercial. Lands adjacent to Ina Road that are west of I-10 are occupied by river floodplain, waste water treatment plant, landfill/recycling operation, and governmental complex. Future development of any trucking oriented business is highly restricted.

Project Assessment

The following questionnaire is used to compare the proposed project to a list of project types in 40 CFR 93.123(b) requiring a quantitative analysis of local particulate emissions (hot-spots) in nonattainment or maintenance areas, which include:

i) New highway projects that have a significant number of diesel vehicles, and expanded highway projects that have a significant increase in the number of diesel vehicles;
ii) Projects affecting intersections that are at Level-of-Service (LOS) D, E, or F with a significant number of diesel vehicles, or those that will change to LOS D, E, or F because of an increase in traffic volumes from a significant number of diesel vehicles related to the project;
iii) New bus and rail terminals and transfer points that have a significant number of diesel vehicles congregating at a single location;
iv) Expanded bus and rail terminals and transfer points that significantly increase the number of diesel vehicles congregating at a single location; and
v) Projects in or affecting locations, areas, or categories of sites which are identified in the PM10 or PM2.5 applicable implementation plan or implementation plan submission, as appropriate, as sites of violation or possible violation.

If the project matches one of the listed project types in 40 CFR 123(b)(1) above, it is considered a project of local air quality concern and the hot-spot demonstration must be based on quantitative analysis methods in accordance to 40 CFR 93.116(a) and the consultation requirements of 40 CFR 93.105(c)(1)(i). If the project does not require a PM hot-spot analysis, a qualitative assessment will be developed that demonstrates that the project will not contribute to any new localized violations, increase the frequency or severity of any existing violations, or delay the timely attainment of any NAAQS or any required emission reductions or milestones in a nonattainment or maintenance area.

On March 10, 2006, the EPA published *PM2.5 and PM10 Hot-Spot Analyses in Project-Level Transportation Conformity Determinations for the New PM2.5 and Existing PM10 National Ambient Air Quality Standards; Final Rule* describing the types of projects that would be considered a project of air quality concern and that require a hot-spot analysis (71 Federal Register 12468–12511). Specifically on page 12491, the EPA provides the following clarification: "Some examples of *projects of air quality concern* that would be covered by § 93.123(b)(1)(i) and (ii) are: A project on a new highway or expressway that serves a significant volume of diesel truck traffic, such as facilities with greater than 125,000 annual average daily traffic (AADT) and 8% or more of such AADT is diesel truck traffic;" ... "Expansion of an existing highway or other facility that affects a congested intersection (operated at Level-of-Service D, E, or F) that has a significant increase in the number of diesel trucks." These examples will be used as the baseline for determining if the project is a project of air quality concern.

New Highway Capacity

Is this a new highway project that has a significant number of diesel vehicles?

Example: total traffic volumes ≥125,000 annual average daily traffic (AADT) and truck volumes ≥10,000 diesel trucks per day (8% of total traffic).

NO – This is not a new highway or expressway.

Expanded Highway Capacity

Is this an expanded highway project that has a significant increase in the number of diesel vehicles? *Example: the build scenario of the expanded highway or expressway causes a significant increase in the number of diesel trucks compared with the no-build scenario.*

NO – As documented in the 2012 conformity determination, the reconstruction of the traffic interchange and widening of I-10 from three lanes to five lanes in each direction is not expected to significantly increase the number of diesel truck use of I-10. Traffic projections from the *Interstate 10 Ina Road Traffic Interchange (TI) to Ruthrauff Road TI Design Concept Report* (HDR, Inc., January 2013) indicate current truck traffic on I-10 varies from 24,570 trucks approaching the Cortaro Farms Road TI and 22,616 trucks approaching the Orange Grove Road TI. The future build and no build scenarios forecast show truck traffic to be in the same in year 2040.

The widening of Ina Road from two lanes to four lanes is not expected to significantly increase the number of diesel trucks. The current AADT on Ina Road east of Silverbell Road to I-10 is 13,576 vehicles, with 733 trucks (medium and heavy trucks combined). Traffic counts were taken on October 28, 2015, to obtain the truck percentage (Ina Road Classification Counts, Psomas, October 2015). Ina Road traffic in 2040 is projected to be 19,734 AADT (PAG 2040 Traffic Volumes Forecast). (These are total traffic volumes for Ina Road, counting both the portions inside and outside of the nonattainment area; the volumes for only the portions of Ina Road inside the nonattainment area would be roughly half of these totals.) It is assumed that a similar percentage of truck traffic would occur in the design year 2040 build scenario, resulting in 1065 trucks or an increase of 332 trucks. The increased number of trucks would not result from any trucking inducement due to widening Ina Road between Starcommerce Way and Silverbell, just the natural growth of overall traffic volumes. In the no-build scenario (not widen Ina Road west of Starcommerce Way) traffic would be congested, limiting overall volume increases in 2040, In that scenario truck traffic would not be expected to substantially change from the current.

As noted earlier there is limited opportunity for land-use changes along Ina Road from Silverbell Road to Starcommerce Way due to the Santa Cruz River floodplain and existing uses; industrial (Pima County Waste Water Treatment Plant), commercial uses (Waste Management of Arizona and green recycling), and governmental (Town of Marana Operations Center). No land use that would generate substantive new commercial truck use on Ina Road is expected.

Projects with Congested Intersections

Is this a project that affects a congested intersection (LOS D or greater) that has a significant number of diesel trucks, OR will change LOS to D or greater because of increase traffic volumes for significant number of diesel trucks related to the project?

NO – The only signalized intersection in the non-attainment area is the I-10 Ina Road TI. Signals occur at the on-/off-ramp connections to Ina Road. Current operational LOS for the ramps ranges from A to F (Ina Road at Eastbound Frontage Road operates at LOS F in peak PM hours). The majority of the traffic movements at the TI operates at LOS C or better. During morning and evening peak hours, certain ramp movements operate at LOS D or worse. In the no-build scenario, most mainline and

ramp segments are projected to operate at LOS D-F. In the build scenario, the ramps would operate in the range of LOS A to D.

The table below shows the ramp movements that are subject to back-up or delays on the interstate during peak hours. In the build or proposed project, the truck volume decreases compared to the no-build scenario for the Eastbound (EB) off-ramp and a minimal increase in the Westbound (WB) off-ramp direction.

EB Off-Ramp Volumes	AM Peak Hour			PM Peak Hour		
	Existing	No Build	Proposed	Existing	No Build	Proposed
LOS	C	C	D	C	E	C
Approach Volume (veh/hr)	474	1,014	819	594	1,118	965
Truck Volume (veh/hr)	62	132	106	24	45	39
Change in Truck Volume (veh/hr)			-25			-6

WB Off-Ramp Volumes	AM Peak Hour			PM Peak Hour		
	Existing	No Build	Proposed	Existing	No Build	Proposed
LOS	D	F	B	F	F	B
Approach Volume (veh/hr)	530	736	789	1,300	1,401	1,539
Truck Volume (veh/hr)	58	81	87	52	56	62
Change in Truck Volume (veh/hr)			6			6

The UPRR crossing signal at Ina Road (immediately east of I-10) would be eliminated by the project. With the project, Ina Road becomes grade-separated over the UPRR and I-10. This eliminates lengthy delays on Ina Road and improves I-10 ramp traffic operations.

There are no signalized intersections within the expanded project limits on Ina Road. The Silverbell Road/Ina Road signalized intersection is immediately west of the project limits. The City of Tucson traffic study for Silverbell Road noted current LOS D or better. In the future with improvements to Silverbell Road and Ina Road, the LOS was projected to be B and C (*Traffic Engineering Study – Silverbell Road, Ina Road to Grant Road,* Kittleson and Associates, Inc., November 2009).

The Ina Road / Camino de la Cruz intersection would become signalized with the project improvements. This intersection is outside the nonattainment area. Under the no-build scenario, the intersection would remain stop sign–controlled and operate at LOS F in 2040. Under the build scenario (signalized), all movements would function at LOS D or better in 2040 (*Traffic Analysis on Ina Road at Camino de Oeste and Camino de la Cruz*, Psomas. November 2015).

The project is not expected to substantively affect diesel truck volumes at the intersection. There is no trucking center or heavy commercial center in the Ina Road TI area. There are limited land-use opportunities for heavy trucking-oriented development due to lack of undeveloped lands east of I-10 along Ina Road and land-use limitations west of I-10 noted earlier (floodplain, existing land uses).

New Bus and Rail Terminals

Does the project involve construction of a new bus or intermodal terminal that accommodates a significant number of diesel vehicles?

NO – This project does not involve new bus or rail terminals; therefore, project types iii and iv are not addressed in the project assessment.

Expanded Bus and Rail Terminals

Does the project involve an existing bus or intermodal terminal that has a large vehicle fleet where the number of diesel buses (or trains) increases by 50% or more, as measured by arrivals?

NO – This project does not involve new bus or rail terminals; therefore, project types iii and iv are not addressed in the project assessment.

Projects Affecting PM Sites of Violation or Possible Violation

Does the project affect locations, areas, or categories of sites that are identified in the PM10 or PM2.5 applicable plan or implementation plan submissions, as appropriate, as sites of violation or potential violation?

NO –The nearest PM10 monitoring site is the Cal Portland Cement (Rillito Plant) located near I-10 and Tangerine Road, about 7 miles northwest of the project limits. The site has had violations in the past. This project has no potential to impact the operations of the cement plant. The project is not located within a PM2.5 nonattainment area and is not expected to contribute to potential future violations at the nearest monitor located about 4 miles northwest of the project area at 9597 N. Coachline Blvd.

Project of Air Quality Concern Determination

This project is a re-evaluation of an existing conformity determination to evaluate the air quality impact of; removing a bridge at Ina Road and Camino de Oeste, removing a new connector road east of I-10 and south of Ina Road, and constructing a new signalized intersection at Ina Road and Camino de la Cruz. These modifications to the already-approved I-10 Ina Road TI project include the addition of the Town of Marana Ina Road project extension. This local government project was planned to be constructed independently of the I-10 Ina Road TI improvements project and were previously assumed in the traffic assumptions used for the I-10 project.

The 2040 projected diesel trucks remain consistent with current levels in the build scenario. Intersection operations at the I-10 Ina Road TI in the build scenario are substantially improved over the no-build scenario. As demonstrated in this document, the addition of the Town of Marana Ina Road project and these minor project modifications are not expected to negatively impact LOS D or worse intersections with a significant number of diesel vehicles or increase the number of diesel vehicles attributed to the project.

Therefore, ADOT is presenting this project for interagency consultation per 40 CFR 93.105 as a Project that is Not of Air Quality Concern and thereby will not require a PM10 Hot-Spot Analysis.

Interagency Consultation Results

On November 23, 2015 ADOT provided a copy of this questionnaire to the following consultation parties, the EPA, FHWA, PAG , ADEQ and Pima County Department of Environmental Quality (PDEQ) as the local air agency in Pima County. There were no objections to the project determination and on December 9, 1015 ADOT concluded interagency consultation by notifying interested parties that this project will proceed as a project that does not require a quantitative PM10 hot-spot analysis under 40 CFR 93.123(b).

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From:	Beverly Chenausky
To:	Mike Dawson
Cc:	Paul Langdale
Subject:	FW: Interagency Consultation: Determining Project of Air Quality Concern in PAG Region H8479
Date:	Wednesday, December 09, 2015 2:06:33 PM
Attachments:	image001.jpg H8479 Ina Road Project-Level PM Quantitative Hotspot Analysis FINAL 12-09-15.docx

Mike – Attached is the final document that includes a summary of the results of consultation and minor revisions for your records.
Paul – this information is included in the project folder with supporting emails.

Thanks,
Beverly

From: Beverly Chenausky
Sent: Wednesday, December 09, 2015 2:04 PM
To: Jerry Wamsley; Marina Mejia; Susanne Cotty; Scott Porter
Cc: Clifton Meek; Karina O'Conner; Paul Langdale; Joonwon Joo; Tremaine Wilson; Sharon Gordon
Subject: RE: Interagency Consultation: Determining Project of Air Quality Concern in PAG Region H8479

No opposing responses were received during this consultation period, therefore interagency consultation is complete with the project identified as a project that does not require a quantitative hot-spot analysis as listed under 40 CFR 93.123(b).

Thank you,

Beverly T. Chenausky

From: Beverly Chenausky
Sent: Monday, November 23, 2015 1:06 PM
To: Jerry Wamsley; Marina Mejia; Susanne Cotty; Scott Porter
Cc: Clifton Meek; Karina O'Conner; Paul Langdale; Joonwon Joo; Tremaine Wilson; Sharon Gordon
Subject: RE: Interagency Consultation: Determining Project of Air Quality Concern in PAG Region H8479

Sorry, while converting to PDF document page 1 was inadvertently deleted with the cover page, please refer to the attached pdf document that contains both a cover sheet and Page 1.

From: Beverly Chenausky
Sent: Monday, November 23, 2015 12:48 PM
To: Jerry Wamsley; Marina Mejia; Susanne Cotty; Scott Porter
Cc: Clifton Meek; Karina O'Conner; Paul Langdale; Joonwon Joo; Tremaine Wilson; Sharon Gordon
Subject: Interagency Consultation: Determining Project of Air Quality Concern in PAG Region H8479

To Interested Parties:
ADOT is presenting the following project, **I- 10 Ina Road Traffic Interchange (with minor additions of Ina Road; Bridge over Santa Cruz River & Roadway Improvements— Silverbell Road to Starcommerce Way) ,** for interagency consultation per 40 CFR 93.105 as a potential project that is not a project of Air Quality Concern and thereby will not require a PM10 hot-spot analysis. If

through interagency consultation it is determined that this project will not require a hot-spot analysis, other conformity provisions apply and will be addressed in the air quality analysis that will be submitted to FHWA. ADOT is requesting responses to the attached questionnaire within **10 business days**; a non-response will be interpreted as concurrence that the project is not a project of air quality concern and does not require a hot-spot analysis. If any consulted party believes this project should be treated as a project of air quality concern that requires a Quantitative PM hot-spot analysis, please document the appropriate section under 40 CFR 93.123 (b) that applies to the project and describe why the project should be treated as a project of air quality concern.

Thank you,

Beverly T. Chenausky
Air & Noise Programs
MD EM04, Room 41
1611 W. Jackson St.
Phoenix, AZ 85007
602.712.6269
azdot.gov

APPENDIX D
Noise Analysis

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NOISE RE-EVALUATION

I-10, INA ROAD TRAFFIC INTERCHANGE

PIMA COUNTY, ARIZONA

Arizona Department of Transportation

ADOT Project No. 10 PM 248 H8479 01D
Federal Aid No. NH-010-D(216)T

Prepared for

Prepared by

Sound Solutions
7701 E Cypress Rd
Scottsdale, Arizona 85257
Phone: 480-332-9325
Email: info@noiseexpert.com

December, 2015

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TABLE OF CONTENTS

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1.0 Summary

This noise impact report is a re-evaluation of the 2011 noise study (Final Noise Report, in Support of the Environmental Assessment, I-10, Ina Road Traffic Interchange to Ruthrauff Road TI in Pima County, Arizona, Sept, 2011) evaluating the projected noise impacts from the proposed widening of Interstate 10 (I-10) and the reconfiguration of the Traffic Interchange (TI) at Ina Road.

Noise mitigation measures were evaluated at two locations. It was found that no noise mitigation measures meet the reasonable and feasible requirements.

2.0 Proposed Road Improvement

The Arizona Department of Transportation (ADOT), in conjunction with the Federal Highway Administration (FHWA) and the Regional Transportation Authority (RTA) in Pima County, is proposing to improve I-10. The project is within Pima County and the City of Marana.

This segment of I-10 is categorized as a controlled access highway within level terrain and is within an urban/fringe urban area. I-10 currently passes over Ina Road and with this project, Ina Road will become elevated and pass over I-10, Union Pacific Rail Road (UPRR). The existing eastbound and westbound frontage roads and eastbound and westbound on- and off-ramps to the TI will require reconstruction in order to intersect with the crossroad in its reconstructed (elevated) position. The project is shown in Figure 1.

The changes to the proposed project since the 2011 noise study are:

- The elevation of I-10 and frontage road alignment.
- Ina no longer passes over Camino de Oeste in the current design.
- There will be an extension on Ina Road from Star Commerce Drive to Silverbell Road.

No new traffic forecast has been developed for the project. This re-evaluation relies on the same 2011 traffic volumes.

Ina Road from Star Commerce Way to Silverbell Road has land uses that are primarily commercial and industrial. There is vacant land but no residences along this section. All individual receptors have driveways making noise abatement impractical. Pima Vocational High School is set back off of Ina Road and is located in one of buildings in the “industrial” area at the Pima County Waste Water facility.

No additional noise analysis is warranted for the Starcommerce Way to Silverbell Road segment.

3.0 Noise Impact Criteria

The ADOT NAP is the guideline used to assess the potential negative impacts from the highway traffic noise levels. The ADOT NAP is based on the noise levels approaching the FHWA Noise Abatement Criteria (NAC) impacted noise levels for different land use categories. ADOT defines "approaching" as within 3 dBA of the FHWA NAC for Categories A, B, C, D and E. There are no noise impact thresholds for Categories F or G. Table I shows the FHWA NAC for all land use categories.

TABLE I
FHWA NOISE ABATEMENT CRITERIA [1]

Activity Category	dBA, LAeq1h [2]	Activity Description
A	57 (exterior)	Land on which serenity and quiet are of extraordinary significance and serve an important public need, and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose
B	67 (exterior)	Residential
C	67 (exterior)	Active sports areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings
D	52 (interior)	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio structures, recording studios, schools, and television studios
E	72 (exterior)	Hotels, motels, offices, restaurants/bars, and other developed lands, properties or activities not included in categories A–D or F
F		Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing
G		Undeveloped lands that are not permitted

1 Sources: Federal Highway Administration (2011); 23 Code of Federal Regulations § 772
2 The 1-hour equivalent loudness in A-weighted decibels, which is the logarithmic average of noise over a 1 hour period

Category B land use represents residential areas, and Category C land use includes schools and parks among other uses. The ADOT NAP determines highway traffic noise level impacts and considers mitigation for Category B land uses when the predicted noise level is equal to or greater than the noise impact threshold of 64 dBA.

ADOT also considers an impact threshold for customers with a substantial increase in noise levels due to the operation of their facilities. The ADOT NAP defines a "substantial increase" as 15 dBA greater than existing noise levels. ADOT also indicated that noise levels should be rounded to the nearest integer prior to impact determination and in project reports.

Differences between ADOT NAP 2011 and ADOT NAP 2005
The following are the major differences between the 2011 and 2005 ADOT NAP:

1. To be considered acoustically feasible, a noise abatement measure must achieve at least a 5 dBA reduction at 50% of impacted receptors.
2. The noise reduction design goal for noise barriers should be designed to reduce projected unmitigated noise levels by at least 7 dBA for benefited receptors closest to the transportation facility.
3. The maximum reasonable cost of abatement is $49,000 per benefited receptor with barrier costs calculated at $35 per square foot, $55 per square foot if constructed on a structure.
4. The ADOT 2005 NAP states that to consider noise mitigation, the mitigated noise level needs to be at 64 dBA or lower. The ADOT 2011 NAP does not have that criterion.
5. Non-residential land uses (such as a school) are considered to be more than one noise sensitive receiver. The area of the land is divided by 7,500 ft^2 (the area of a typical lot in Arizona) and multiplied by the land use density factor, to determine the number of noise sensitive receivers.

4.0 Noise Model Approach and Assumptions

For this review, all of the assumptions used in the HDR 2011 Final Noise Study are also used in this re-evaluation. The TNM model requires input data regarding the geometry of roadways in the Study Area, vehicle mix, traffic volumes, and vehicle speeds. The following data were used in the models:

- Vehicle Speeds – as follows
    - I-10 – 70 mph (posted 65 mph)
    - Frontage Road – 45 mph
    - Ina Road – 45 mph
- Traffic Volumes were provided by HDR traffic report which used PAG traffic volumes.
- Vehicle Mix used in the 2011 Noise Study and in this re-evaluation were as follows:
    - I-10 Eastbound 3% medium trucks, 7% heavy trucks and 90% automobiles.
    - I-10 Westbound 3% medium trucks, 6% heavy trucks and 91% automobiles.
- Elevations – topographic information was used for the roads and receivers. Topographic information was provided by Psomas.
- Ground – "Hard soil"
- Receiver heights – 5 feet above the ground

Roadway Geometry & Topographic Data and Ground Type
Roadway geometries used in this analysis were based on the design provided by PSOMAS. PSOMAS provided the topographic data. A hard soil ground type was used to approximate the existing ground between the roadway and receptors.

Traffic Volumes
The ADOT NAP provides guidelines on the traffic volumes for use in the noise model, in which a "worst-case" approach should be used. In general, this should reflect the Level of Service (LOS) C traffic condition, which is the free-flowing traffic volumes for a given travel lane of a roadway configuration at the posted speed limit to capture the peak noise hour and modeled with the traffic moving at 5 miles per hour (mph) above the posted speed limit. Also, if the future traffic volumes are less than the maximum LOS C volumes, then the future traffic volumes will be utilized. If no other traffic information is available, then the peak hourly volume should be 10% of the predicted average daily traffic (ADT) volume.

Future traffic volumes contained in the traffic study for this project were near or slightly higher than LOS C conditions for much of the corridor. Consequently, future traffic volumes contained in the traffic study were used in the analysis for both directions.

Atmospheric Variables
Noise level is affected by temperature and humidity. Temperature gradients may cause refraction effects. For example, in the morning, when the ground is still cool from the night before, but the upper air is warming due to the sun, noise can bounce between the atmospheric gradient and the ground forming regions of higher and lower noise intensity. Noise attenuation is also affected by humidity. Dry air absorbs more acoustical energy than moist air because dry air has a higher density than moist air at a given temperature. For noise modeling purposes, FHWA recommends the default values for the temperature of 68 degrees Fahrenheit and the humidity of 50 percent.

Receptor and Receiver Locations
The ADOT NAP defines a "receptor" as a discrete or representative location of a noise sensitive area(s) for any of the land uses listed in Table 1. The "receiver" is defined as a location used in noise modeling to represent the measured and predicted noise level at a particular point.

The noise-sensitive receptors are located in the backyard or common outdoor areas of residential properties.

Other Variables
Another variable that affects the noise model is the pavement type. This noise analysis uses the average pavement type. Although this project will include the overlay of Asphalt-Rubber Asphaltic Concrete Friction Courses (ARACFC), the benefits of quiet pavement are not included in this analysis pending the decisions of FHWA on the uses for quiet pavement for ADOT roadway projects. A detailed discussion of the TNM 2.5 default model inputs can be found in the FHWA TNM, version 1.0: Technical Manual and Addendum (FHWA PD-96-010). While TNM 2.5 is the standard traffic noise level modeling software for FHWA and ADOT, it has limitations as a noise level prediction model. The predicted noise levels are based on the assumptions described in this report, and the actual traffic count.

5.0 Noise Model Verification

Noise measurements are conducted to verify and calibrate the noise model. Noise measurement locations are selected in each representative area with varying traffic conditions, topography, distance from the noise source and obstructions (FHWA "Measurements of Highway Related Noise"). There is no clearly defined number or location of required noise measurements; however, each distinct part of a project should be verified with at least one noise level measurement.

The 2011 noise study, the two noise measurement locations used were south of the Ina Road TI and Sunset Road TI.

Table 2 shows the measured and predicted noise levels at the two locations. Noise measurements were made on Thursday, October 8, 2015 between 5:00 PM and 6:00 PM. The purpose of the noise level measurements was to document the existing noise level environment in the project area and capture the contribution of traffic noise from I-10.

The equipment used for the noise level measurements were Larson Davis (LD) Models 820 precision integrating sound level meters (SLMs). The SLMs were calibrated in the field before use with an LD Model CAL-200 acoustical calibrator. The SLMs used for noise level measurements comply with the American National Standards Institute (ANSI) S1.4-1971 for a Type 1 SLM. The methodology used for the noise level measurements complied with procedures specified in Section 4 of the FHWA document FHWA-PD-96-046/DOT-VNTC-FHWA-96-5, Measurement of Highway-Related Noise (FHWA, 1996).

Noise measurements were made at Locations A (Best Western Hotel) and Location B (Mike Jacobs Sports Park). Noise measurement forms are located at the back of this report. The measured and predicted noise levels at these locations is shown in Table 2.

Table 2
October 8, 2015 Noise Measurements and Predictions

Site ID	Location Description	Measured Noise Level (Leq)	Predicted Noise Level
A	East side (I-10 side) of the Best Western Hotel	68	70
B	On path from parking lot entrance of Mike Jacobs Sports Park	64	67

The predicted noise levels are above the measured noise levels and within 3 dBA. This verifies the accuracy of the noise model.

6.0 Noise Model Predictions Results

Noise levels were evaluated at 4 locations in the project area. The noise prediction results are shown in Table 4 for the receiver locations shown in the Figure 2.

Near Receiver A (Best Western Hotel), noise predictions were made at the Best Western Hotel, the Travel Lodge and the Red Roof Inn. Hotels are evaluated similarly to multi-family residences (apartments), at usable exterior locations with the number of receivers being the number of impacted units. Predictions at the Best Western were made at the outdoor swimming pool, at the east end of the hotel with a privacy wall around the pool. Predictions at the Red Roof Inn were made at the outdoor swimming pool, near the southwest corner of the hotel. The Travel Lodge does not have usable exterior areas. Noise predictions were made at the mid-points of the north and south sides. The predicted noise levels at all prediction locations was below the 69 dBA limit.

Table 4
Predicted Noise Levels

RECEIVER ID	PROPERTY ADDRESS	EXISTING CONDITION (2010)	UNMITIGATED FUTURE CONDITION (2030)	MITIGATED FUTURE CONDITION (2030)	NOISE LIMIT
		(dBA-LAeq1h)	(dBA-LAeq1h)	(dBA-LAeq1h)	
A	Best Western Hotel	64	68	-	69
B	Mike Jacobs Sports Park	73	76	70	64
1	4646 W Mars St	67	69	63	64
2	Motel 6	66	67	-	69

7.0 Noise Mitigation Measures

The noise levels were predicted to exceed the noise limits in two areas. Two noise walls were evaluated, one per area. The evaluated sound walls are shown in Figure 3. Table 5 shows an evaluation of the proposed barriers.

Table 5
Potentially Recommended Mitigation Summary

Barrier Name	Noise Barrier				Number of Benefited Receptors	Cost per Benefited Receptor
	Height, ft	Length, ft	Area, ft^2	Cost[1]		
Barrier 1 MJS Park	20	2,000	40,000	$1.4M	12	$116,667
Barrier 2 NE	12	3,000	36,000	$1.26M	15	$84,000

1 Based on $35 per square foot for cast-in-place concrete barrier.

Barrier 1 - Mike Jacobs Sports Park
Because the ADOT 2011 NAP does not require that the noise levels with noise mitigation are below 64 dBA, Mike Jacobs Sports Park is now considered benefited by a noise barrier. The park is approximately 500 ft by 800 ft (400,000 ft^2). That is equivalent to 53 receivers. The ball fields are the primary use and are only used when they have events (leagues/ tournaments). The secondary use is the go-cart and BMX dirt track which is a for profit business operated by a vendor under lease with Pima County. The nearest edge of the ball fields are 300 feet from I-10 eastbound frontage road. Home plate and concession building are about 600 feet from the frontage road. Assuming a low intensity use, the factor of 0.5 would apply and result in 26.5 receptors. Of the 26.5 receivers, 12 are impacted (the future noise level is above 64 dBA). Of the 12 impacted receivers, 12 will be benefitted by the barrier (receive at least 5 dBA noise reduction). A 20-foot high barrier is needed to provide the required 7 dBA to at least half of the front row receivers. The barrier should be approximately 2,000 ft long. The calculated cost is $1,400,000. The cost per benefitted receiver is $116,667 which is above the ADOT NAP limit of $49,000. A sound wall for the sports park does not meet the reasonable standard of $49,000 per benefitted receiver or less.

Barrier 2 - Northeast of I-10 and Ina Road
On the east side of I-10, north of Ina Road our calculations agree with the previous noise study that a barrier exceeds the maximum cost per benefitted receiver. The barrier that was evaluated was 12 feet high and 3,000 feet long having a calculated cost of $1,260,000. To reach the criteria of $49,000 per benefited receiver, 26 receivers need to be benefitted. There are 15 benefitted receivers. The revised profile of Ina Road at Comino de Oeste does lower the noise level from Ina Road to residences on the east side of the TI. However, this does not impact the results. A sound wall for the receivers northeast of I-10 and Ina Road does not meet the reasonable standard of $49,000 per benefitted receiver or less.

8.0 Construction Noise

Short-term noise impacts may be experienced during the construction of any part of the proposed improvements within the project Study Area. Properties in the vicinity of the project area would be exposed to noise from construction activities.

Construction noise differs from traffic noise in several ways:

- Construction noise lasts only for the duration of the construction contract, with most construction activities in noise-sensitive areas being conducted during hours that are least disturbing to adjacent and nearby residents.
- Construction activities generally are of a short-term nature, and depend on the nature of construction operations.
- Construction noise also is intermittent and depends on the type of operation, location, and function of the equipment, and the equipment usage cycle. Traffic noise, on the other hand, is present in a more continuous fashion after construction activities are completed.

Adjacent properties in the project area would be exposed to noise from construction activity.

Table 6 shows the noise levels produced by various types of construction equipment. The types of construction equipment used for this project will typically generate noise levels of 80 to 90 dBA at a distance of 15 meters (50 feet) while the equipment is operating. Construction equipment operations can vary from intermittent to fairly continuous, with multiple pieces of equipment operating concurrently.

Table 6
Typical Construction Equipment Noise Levels

Type of Equipment	Noise Level in dBA at 50 Feet
Bulldozer	80
Front Loader	72 - 84
Jack Hammer or Rock Drill	81 - 98
Crane with Headache Ball	75 - 87
Backhoe	72 - 93
Scraper and Grader	80 - 93
Electrical Generator	71 - 82
Concrete Pump	81 - 83
Concrete Vibrator	76
Concrete and Dump Trucks	83 - 90
Air Compressor	74 - 87
Pile Drivers (Peaks)	95 - 106
Pneumatic Tools	81 - 98
Roller (Compactor)	73 - 75
Saws	73 - 82
Source: U.S. EPA Noise from Construction Equipment and Operations	

Locations within about 500 meters (1,650 feet) of a construction site are expected to experience occasional episodes of noise levels greater than 60 dBA. Areas within about 150 meters (500 feet) of a construction site will experience episodes with noise levels greater than 70 dBA. Such episodes of high noise levels will not be continuous throughout the day and will generally be restricted to daytime hours.

The following noise mitigation measures are recommended to reduce impacts from construction noise; however, not all measures may be feasible for the project:

- Re-route truck traffic away from residential streets, if possible. Select streets with fewest homes, if no alternatives are available.
- Locate equipment on the construction lot as far away from noise sensitive receivers as possible.
- Combine noisy operations to occur in the same time period. The total noise will not increase significantly and the duration of the noise impact will be less.
- Avoid nighttime activities. Sensitivity to noise increases during the nighttime hours at residential receivers.
- Use specially quieted equipment when possible, such as quieted and enclosed air compressors, residential or critical grade mufflers on all engines.
- Stationary equipment will be located as far away from sensitive receptors as possible. Loud, disrupting construction activities in noise sensitive areas will be conducted during hours that are least disturbing to adjacent and nearby residents.

8.0 Conclusion

Noise mitigation measures were evaluated at two locations. It was found that no noise mitigation measures meet the reasonable and feasible requirements.

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Acoustical Consulting

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Las Vegas, NV 702-989-2406
info@noiseexpert.com
www.noiseexpert.com

D ate _10/8/15_ Project Number _10 PM 248 H8479 01D___ Project Name _I-10, INA ROAD TRAFFIC INTERCHANGE___

Project Location ___PIMA COUNTY, ARIZONA _____ Measurement Location Number_____B_____

Measurement Location Description____ Mike Jacobs Sports Park _____

Measurement Location (address)_____6901 North Casa Grande Highway_____ Time _5:50 PM_ Duration___20 min___

Day of the Week ___Thursday_____ Wind Speed ___0-3 mph_ Wind Direction __from N_ Clouds _____mosly clear_____

Temperature_78 F__ Humidity ___38___ Weather Condition_____clear and calm_____

Average Noise Level _____64_____ Max Noise Level ____71_____ Min Noise Level _____59_____

Measurement Data						Traffic Count Data									
Sample	Time		Sound Level (dBA)			Auto		Med Truck		Heavy Truck		Bus		Motorcycle	
	Start	Duration	Leq	Lmin	Lmax	SB	front	SB	front	SB	front	SB	front	SB	front
1	5:50	10	65	60	71	190	5	8	0	20	0	0	0	0	0
2	6 00	10	63	59	70	180	9	6	0	25	0	0	0	1	0
3	6:10	10	63	59	69	175	12	7	0	22	0	0	0	0	0

Sample	Background Noise	Unusual Noise Event
1.	I-10, parking lot, train	
2.	I-10, parking lot, train	
3.	I-10, parking lot, people from facility, train	

Observations_____There was some audible noise from the ball park facility but the sound level meter was positioned such that it did not significantly influence the road noise measurements_____
_____
When the train was passing on the opposite side of 1-10, the noise levels were approximately 68 dBA_____
_____
_At about 6 PM people started entering the sports park wich increased frontage road traffic, parking lot noise and people talking___
_____
_____
_____

Photos

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Noise Expert
Acoustical Consulting

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Las Vegas, NV 702-989-2406
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Date _10/8/15_ Project Number _10 PM 248 H8479 01D___ Project Name _I-10, INA ROAD TRAFFIC INTERCHANGE___

Project Location ___PIMA COUNTY, ARIZONA _____ Measurement Location Number_____A_____

Measurement Location Description_____Best Western hotel_____

Measurement Location (address)_____4930 W Ina Rd_____ Time _5:10 PM_ Duration___30 min___

Day of the Week ___Thursday_____ Wind Speed ___0-3 mph_ Wind Direction __from NW_ Clouds _____clear_____

Temperature_80 F__ Humidity ___38___ Weather Condition_____clear and calm_____

Average Noise Level _____68_____ Max Noise Level _____74_____ Min Noise Level _____62_____

Measurement Data						Traffic Count Data									
Sample	Time		Sound Level (dBA)			Auto		Med Truck		Heavy Truck		Bus		Motorcycle	
	Start	Duration	Leq	Lmin	Lmax	SB	front	SB	front	SB	front	SB	front	SB	front
1	5:10	10	67	64	74	165	32	7	0	17	3	0	0	1	0
2	5:20	10	69	62	73	180	29	9	0	22	2	0	0	0	0
3	5:30	10	68	63	73	170	40	5	0	25	2	0	0	1	0

Sample	Background Noise	Unusual Noise Event
1.	I-10, frontage road, birds, train	
2.	I-10, frontage road, birds, train	
3.	I-10, frontage road, birds, train	

Observations_____birds were audible but added a very small amount to the measurements – less than 1 dBA_____
_____
At least one train (on the east side of I-10) passed during each 10 minute measurement period, the noise level increased to approximately 65 dBA when the train was passing_____

Photos

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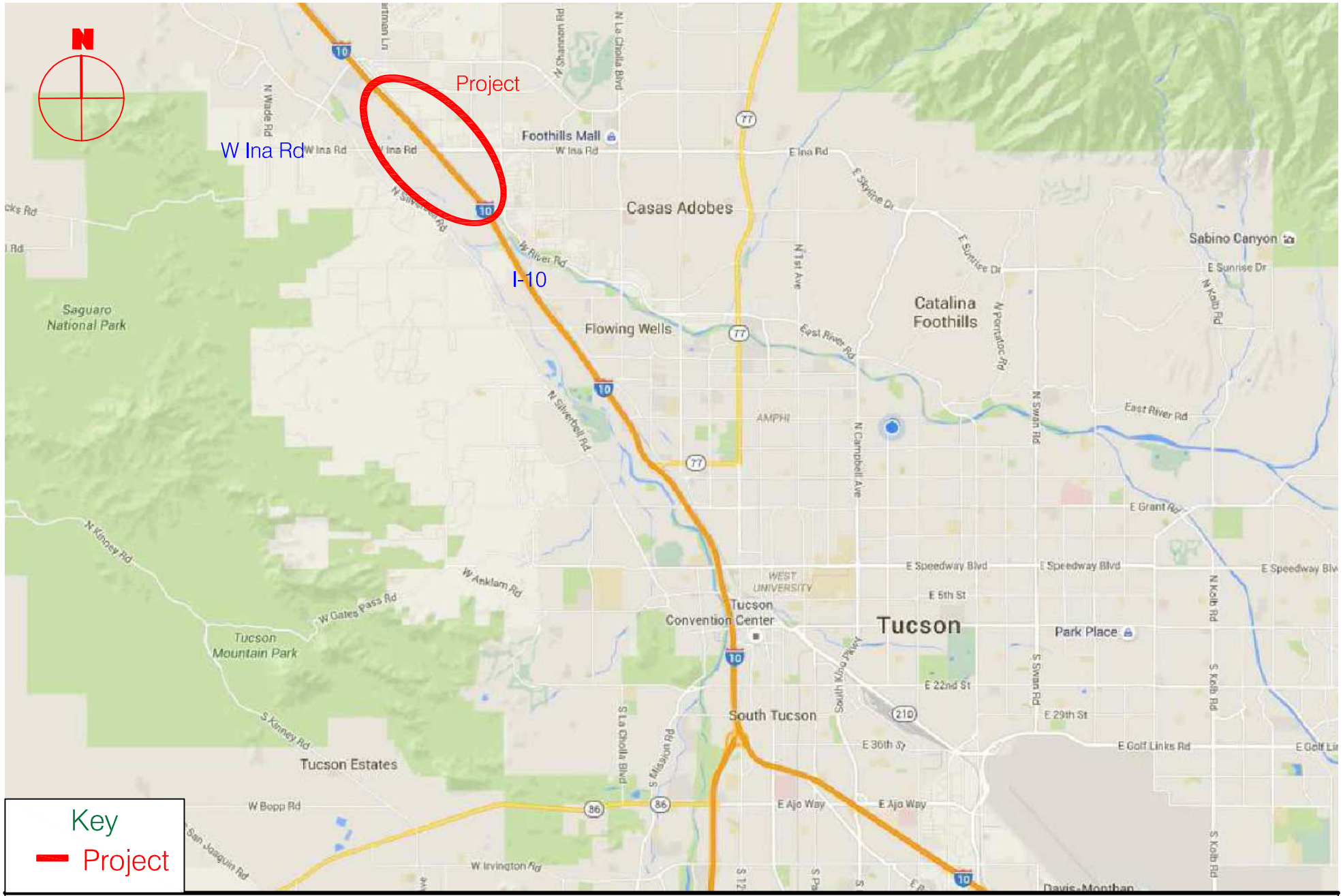

NE Project: 12058 | October 8, 2015 | Beth Holliday

Figure No. 1

NoiseExpert.com

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San Diego, CA 619-449-4843
Las Vegas, NV 702-989-2406
www.noiseexpert.com
beth@noiseexpert.com

I-10, INA Road TI
Tucson, Arizona

DESCRIPTION: Vicnity Map

SCALE: N/A

NE Project: 12058 | October 8, 2015 | Beth Holliday

Figure No. 2

NoiseExpert.com

Phoenix, AZ 480-332-9325
San Diego, CA 619-449-4843
Las Vegas, NV 702-989-2406
www.noiseexpert.com
beth@noiseexpert.com

I-10, INA Road TI
Tucson, Arizona

DESCRIPTION: Prediction & Measurement Locs

SCALE: N/A

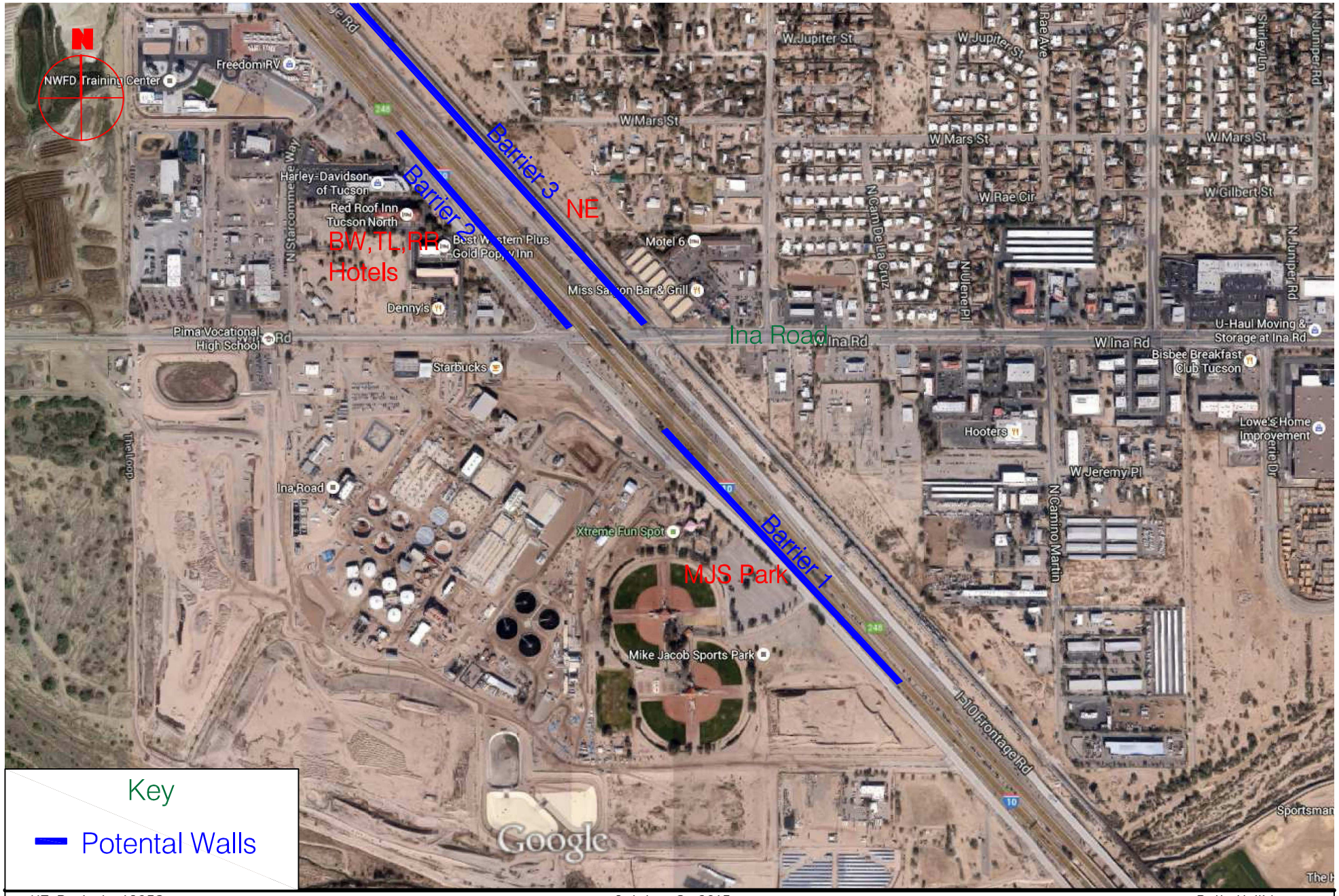

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Figure No. 3

NoiseExpert.com

Phoenix, AZ 480-332-9325
San Diego, CA 619-449-4843
Las Vegas, NV 702-989-2406
www.noiseexpert.com
beth@noiseexpert.com

I-10, INA Road TI
Tucson, Arizona

DESCRIPTION: Potential Sound Walls

SCALE: N/A

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Interstate 10: Ina Road Traffic Interchange
Sound Barrier
Comment Form

Traffic noise studies were recently conducted in the project area. These studies have determined that the section of Interstate 10 and Ina Road adjacent to your property would qualify for a sound barrier wall to reduce traffic noise. The proposed wall would be approximately 700 feet long and 15 feet above the proposed edge of the roadway. The wall would be located between the I-10 mainline and the eastbound Ina Road off-ramp. According to ADOT policy, this wall will not be constructed if the majority of owners whose property has been identified as receiving the sound wall's benefit of reduced future traffic noise do not want it.

Please fill out and sign this form to let us know your preference. Thank you for your time. You will be notified of the result.

I understand the location and height of the proposed wall and I understand the wall will not be constructed if the majority of identified property owners do not want it. I have made the following choice:

_____YES, I want the sound barrier wall built

_X_NO, I do not want the sound barrier wall built

Comments_____

Property Owner Signature(s) R Patel

Date: 11/20/15

Property Owner Name (s)
(Please print clearly)
Ramish Patel

Property Address:
Best Western Plus Gold Poppy Inn
4930 W. Ina Rd, Tucson, AZ 85743

Please return this form by Thursday, Nov. 19 to: prico@azdot.gov

Paki Rico
Senior Community Relations Officer
ADOT Communications
520.388.4233-office/520.343.9492-mobile

Interstate 10: Ina Road Traffic Interchange
Sound Barrier
Comment Form

Traffic noise studies were recently conducted in the project area. These studies have determined that the section of Interstate 10 and Ina Road adjacent to your property would qualify for a sound barrier wall to reduce traffic noise. The proposed wall would be approximately 700 feet long and 15 feet above the proposed edge of the roadway. The wall would be located between the I-10 mainline and the eastbound Ina Road off-ramp. According to ADOT policy, this wall will not be constructed if the majority of owners whose property has been identified as receiving the sound wall's benefit of reduced future traffic noise do not want it.

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_____YES, I want the sound barrier wall built

__X__NO, I do not want the sound barrier wall built

Comments_____

Property Owner Signature(s) Date: 11/20/15

Property Owner Name (s)
(Please print clearly)
Ramish Patel

Property Address:
Travelodge
4910 W. Ina Rd, Tucson, AZ 85743

Please return this form by Thursday, Nov. 19 to: prico@azdot.gov

Paki Rico
Senior Community Relations Officer
ADOT Communications
520.388.4233-office/520.343.9492-mobile

ADOT

Interstate 10: Ina Road Traffic Interchange
Sound Barrier
Comment Form

Traffic noise studies were recently conducted in the project area. These studies have determined that the section of Interstate 10 and Ina Road adjacent to your property would qualify for a sound barrier wall to reduce traffic noise. The proposed wall would be approximately 700 feet long and 15 feet above the proposed edge of the roadway. The wall would be located between the I-10 mainline and the eastbound Ina Road off-ramp. According to ADOT policy, this wall will not be constructed if the majority of owners whose property has been identified as receiving the sound wall's benefit of reduced future traffic noise do not want it.

Please fill out and sign this form to let us know your preference. Thank you for your time. You will be notified of the result.

I understand the location and height of the proposed wall and I understand the wall will not be constructed if the majority of identified property owners do not want it. I have made the following choice:

X YES, I want the sound barrier wall built

_____NO, I do not want the sound barrier wall built

Comments_____

_____

_____

Property Owner Signature(s)

_____ _____

_____ _____

Date: 11-23-15

Property Owner Name (s)
(Please print clearly)

DANIEL SLATTERY _____

_____ _____

Property Address:

4940 W INA ROAD TUCSON, AZ 85743

_____

Please return this form by Thursday, Nov. 19 to: prico@azdot.gov

Paki Rico
Senior Community Relations Officer
ADOT Communications
520.388.4233-office/520.343.9492-mobile

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APPENDIX E
Biological Resources

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Arizona Department of Transportation
Environmental Planning Group
Biological Evaluation

I-10, Ina Road Traffic Interchange (Stage A1)
I-10, Ina Road Traffic Interchange (Stage A2)
NH-STP-010-D(216)S
010 PM 248 F0003 01C (Stage A1)
010 PM 248 H8479 01C (Stage A2)

Ina Road; Bridge over Santa Cruz River & Roadway Improvements—Silverbell Road to Starcommerce Way (Stage M1)
Ina Road; Bridge over Santa Cruz River & Roadway Improvements—Silverbell Road to Starcommerce Way (Stage M2)
STP-MRN-0(014)T
0000 PM MRN T0013 01C (Stage M1)
0000 PM MRN SB413 01C (Stage M2)

Prepared for:
Arizona Department of Transportation
Environmental Planning Group
1611 W. Jackson St., EM02
Phoenix, AZ 85007

Prepared by:
EcoPlan Associates, Inc.
701 W. Southern Ave., Suite 203
Mesa, AZ 85210
EcoPlan No. 13-471

October 29, 2015
Second Submittal

Justin White

Digitally signed by Justin White
DN: cn=Justin White, o=Environmental Planning Group, ou=ADOT, email=jwhite@azdot.gov, c=US
Date: 2015.11.10 14:01:59 -07'00'

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APPENDIX F
Mitigation Measure Attachment

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Western Burrowing Owl Awareness

ADOT Environmental Planning Group
1611 W. Jackson St- Mail Drop EM02
Phoenix, AZ 85007

The purpose of this flyer is to provide ADOT employees and contractors, working on roadside projects, with basic knowledge to reduce the risk of incidental take of Western Burrowing Owls.

Legal Status:

Western Burrowing Owls (*Athene cunicularia*) are protected under the Federal Migratory Bird Treaty Act of 1918. All migratory birds and their parts are fully protected. They are also protected under Arizona State Law in Title 17-101, Title 17-235, and Title 17-236.

What to look for:

- Description– small, ground-dwelling owl.
- Length– 19.5-25.0 cm (7.68-9.85 inches)
- Wingspan– 58.42 cm (23.0 inches)
- Mass– about 150 grams
- Males are typically slightly larger than females.
- Round head, lacks ear tufts.
- Distinct oval facial ruff, framed by a broad, puffy white eyebrow.
- Eyes contain a bright yellow iris.

Where are owls found?

- Dry, open, short grass, treeless plains.
- Dependent on fossorial mammals. (ground squirrels, prairie dogs, badgers, etc.) to construct burrows.
- Human dominated landscapes: golf courses, airports, agricultural fields.

Identifying an active burrow:

- Owls use burrows constructed by ground squirrels, badgers, coyotes and tortoises. They can also use pipes, culverts, and ditches.
- Presence of excrement (whitewash) near entrance to burrow.
- Burrowing owls frequently decorate entrance of burrows with cow or horse manure, feathers, vegetation and trash items.

How to avoid them:

- Scan ahead prior to arriving at a sign location.
- If burrowing owls are observed within the project area, stop and move at least 100 feet beyond the owl or occupied burrow before resuming work.

If you think your work may potentially impact a Burrowing Owl or active burrow, please stop.
Move at least 100 feet from the animal or burrow before resuming work.

If you have any questions or think you have a borrowing owl or active burrow on your work site please contact:
Joshua Fife, Biologist, ADOT Environmental Planning Group, jfife@azdot.gov
Office: (602)712-6819, Mobile: (602) 622-9622, EPG General: (602)712-7767

Source: Arizona Game and Fish Department Animal Abstract: Western Burrowing Owl. Heritage Data Management System

(revised November 25, 2013)

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APPENDIX G
Hazardous Materials

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Phase I Initial Site Assessment
Ina to Ruthrauff Road

Tucson, Pima County, Arizona

010 PM 247.0 H7583 01C

Prepared for:

Environmental Planning Group
Arizona Department of Transportation
1221 S. 2nd Avenue, MD T100
Tucson, AZ 85713

Prepared by:

HDR Engineering, Inc.
3200 E Camelback Road, Suite 350
Phoenix, Arizona 85018

Originally approved by Angela Roach
29 April 2009

April 24, 2009

Ed Green
02 Nov 15

Ed Green

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APPENDIX H
Public Involvement Activities

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Interstate 10: Ina Road Traffic Interchange
Final Design

July 2015

Prepared by
Arizona Department of Transportation
206 S. 17th Ave.
Phoenix, AZ 85007

In cooperation with
U.S. Department of Transportation
Federal Highway Administration

Contents

1.0 Introduction

The Arizona Department of Transportation (ADOT), in conjunction with the Federal Highway Administration (FHWA), is working on a project to reconstruct the Ina Road Traffic Interchange as recommended by the I-10 (Ina Road Traffic Interchange to Ruthrauff Road Traffic Interchange) Design Concept Report (DCR) and Environmental Assessment (EA). I-10 currently passes over Ina Road, and with this project, Ina Road will become elevated and pass over I-10 and the Union Pacific Railroad. Included with the interchange work, will be reconstruction and widening of Ina Road from Silverbell Road just west of I-10 to Camino Martin just east of I-10 and two new bridges over the Santa Cruz River.

2.0 Public Meeting

ADOT and FHWA held a public information meeting for the Interstate 10: Ina Road Traffic Interchange final design project on June 11, 2015. Additional outreach included property owner meetings. This section represents a summary of this outreach.

2.1 Business and Stakeholder Outreach

The design project team met with businesses/property owners and stakeholders in May 2015 to inform them of the proposed design revisions and public meeting as follows:

- Monday, May 11, 2015, at Marana Operations Center, Community Center, 5100 W. Ina Road, Marana, AZ 85743
    - Circle K
    - Garrigan's Auto Repair Shop
    - Chuy's Mesquite Broiler
    - Chickenuevo Original Mexican Grill

- Tuesday, May 12, 2015, at Town of Marana Council Chambers - 11555 W. Civic Center Drive - Marana, Arizona 85653
    - Presentation to Mayor and Council

- Wednesday, May 13, 2015, at Marana Operations Center, Community Center, 5100 W. Ina Road, Marana, AZ 85743
    - Donut Wheel
    - Ina Road Freedom Self Storage

- Thursday, May 21, 2015, at Marana Operations Center, Community Center, 5100 W. Ina Road, Marana, AZ 85743
    - Jack in the Box
    - Motel 6
    - Enterprise
    - Miss Saigon
    - Pima County Natural Resources

2.2 Public Meeting Notification

An invitation was prepared and distributed inviting the public to provide comments. Invitations were mailed May 26, 2015, to property owners, occupants and businesses within the proposed project area. Electronic copies of the invitation were sent to elected officials, emergency service providers and schools the week of June 1, 2015. A copy of the invitation can be found in Appendix A.

2.3 Newspaper Advertisements

A newspaper advertisement providing the date and location of the public meeting was published on May 27, 2015, in the Arizona Daily Star.

A copy of the advertisement can be found in Appendix B.

2.4 Public Meeting

The purpose of the public meeting was to present the proposed design revisions and provide the opportunity for attendees to ask questions and submit comments. A total of 171 people signed in and attended the public meeting. The meeting was held on Thursday, June 11, 2015, from 5:30 to 7:30 p.m. (with a presentation at 5:45 p.m.) at Coyote Trail Elementary School (Multipurpose Room) 8000 N. Silverbell Road, Tucson, AZ 85743.

2.5 Website

The project website was updated to include all informational materials and the public meeting information and project details were provided on the website: azdot.gov/InaTI.

3.0 Public Meeting Format

The public meeting began with registration at the door, where attendees were asked to sign in and were provided with meeting handouts consisting of a fact sheet and a traffic access fliers. The sign-in sheets were created solely for the purpose of updating the mailing list. An open house then began, where attendees were encouraged to walk around the various stations, view the displays, and ask questions of project staff. A formal presentation was provided by the ADOT project design team. After the presentation, attendees were given the opportunity to ask questions as well as revisit the stations. Copies of the meeting handouts can be found in Appendix C.

3.1 Display Boards

Display boards of the architectural treatments were created for each of several topics considered to be of interest to the public.

A copy of the display boards provided at the meeting can be found in Appendix D of this report.

3.2 Presentation

A presentation was given to attendees at 5:45 p.m. The presentation can be found in Appendix E and covered the following topics:

- Project Overview
- Project History
- Proposed Project Improvements
- Project Schedule

4.0 Public Comment Summary

This section presents a summary of the comments received during the comment period. The comments received focused on the proposed revisions to the final design. Comments were classified into the following categories:

- Ina Road widened from Silverbell Road to Starcommerce Way, including demolition of the existing bridge and a new structure over the Santa Cruz River.
- Ina Roadway profile modified on both the east and west sides of I-10 to allow Camino de Oeste to connect to Ina Road, eliminate Camino de Oeste bridge and southern loop and improves business access along Ina Road.
- I-10 widened to accommodate four lanes in each direction but striped for three lanes until widening between the Prince TI and Ina TI is completed.
- The Loop closed for a period of time through the project area.
- General Comments

All comments received were reviewed for the specific issues or recommendations raised by the commenter. During the comment period, comments could be submitted in a variety of ways, by mail, telephone, e-mail, and online. A total of 22 comments were received as of July 10, 2015 and a copy of the comment form is included in Appendix F.

4.1 Summary of Comments

A quantification of comments by issue is provided below in Figure 1 with a summary of issues and responses followed below.

Figure 1: Comments received by topic

Category	Comments Received for this Category*
1) Ina Road is proposed to be widened to two lanes in each direction from Silverbell Road to Starcommerce Way including demolition of the existing bridge and a new structure over the Santa Cruz River.	7 – Supportive: excellent design; good idea; this is needed; great cooperation between TOM and ADOT 3 – Cortaro Road: concern about traffic on Cortaro, need to widen Cortaro; 2 – Silverbell Road: anticipate heavy traffic on Ina west of Silverbell and request transition from 2 lanes to 1 lane be lengthened; concerned about traffic on Silverbell; need to improve Silverbell before putting traffic on it 2 – Development: housing development at Silverbell & Ina; make new bridges 3 lanes wide due to new development at Silverbell & Ina
2) The Ina roadway profile is proposed to be modified on both the east and west sides of I-10. This allows Camino de Oeste to connect to Ina Road, eliminates the Camino de Oeste bridge and southern loop and improves business access along Ina Road.	4 – Supportive: good; should be well received by businesses and residents; grade separation from RR tracks will be a big help moving westbound traffic on Ina but good signal sequencing is also important; likes the straightforward access 1 – not familiar with Camino de Oeste bridge
3) I-10 will be widened to accommodate 4 lanes in each direction but striped for 3 lanes until I-10 widening between the Prince TI and Ina TI is complete.	5 – Supportive: ok, understand this is necessary; makes sense to set priorities on project and avoid rebuilding later 1 – greatly needed but Phoenix projects seem to take majority of funding and do not lessen impact to Tucson with larger projects - would prefer I-10 widening completion occur all at once instead of always being under construction

Category	Comments Received for this Category*
4) During construction, The Loop, the Pima County multi-use path, will be closed for a period of time through the project area.	10 – Concerns: not happy with this; minimize closure time; keep it open; will it be open north of Ina and southeast of Ina?; can temporary detour be constructed because it is widely used and recently improved?; use the loop 3-4 times a week to exercise on bike from Cortaro to A Mountain and/or cut to Rillito near Orange Grove and closing Loop will impact many Tucson residents as it's used extensively and completely shutting it down will leave pedestrians/cyclists no option but to risk hazards of non-friendly Tucson road because Silverbell, south of Ina is deadly! Is it possible to add ped/cycle path lanes to Silverbell to connect from Ina to Camino del Cerro or some other alternative providing access to Loop?; temporary 2-way bike path along Ina & frontage road and bike lanes along Silverbell Road would be helpful; concerned about bright lights; 3 – Supportive: that's fine; ok; obviously necessary

Category	Comments Received for this Category*
General Comments	8 – Silverbell Road: Silverbell cannot handle additional traffic; needs improvements; increase police patrol on Silverbell; makes no sense to put traffic on Silverbell without improving it; improve overall mobility during construction and wait to start the Ina Road project until Silverbell Road has been widened from Ina to Camino del Cerro. Having significant increased traffic capacity on Silverbell will dramatically improve mobility since the project plan will limit I-10 traffic capacity and will require many vehicles to use Camino del Cerro and Silverbell while Ina exits are unavailable. The Ina TI project is not so urgent that we cannot wait for Silverbell widening; Silverbell Road will get tremendous amount of additional traffic 4 – Cortaro Road: Cortaro east of freeway between Hartman and Thornydale is in terrible shape; Cortaro east to Thornydale is only 2 lanes and my not accommodate increase in traffic – County should work with other divisions on this; Cortaro Road from Thornydale to access I-10 is extremely in need of repaving/widening and will most likely deteriorate greatly under increased traffic load when Ina is shut down. During rush hour traffic, road barely supports load with only two lanes. Is it possible to upgrade road before Ina TI project begins? It may be better to direct traffic to Twin Peaks TI to avoid overloading Cortaro TI; Cortaro is likely to become I-10 entrance to access Twin Peaks from Picture Rocks area; Ina at Cortaro is 2-lane road and turning NB traffic to Arizona Pavilions has to stop and wait for oncoming vehicles. Can turn lane/traffic signal be built there before construction begins? 2 – Double left turns: why doesn't the design include double left turn lanes off I-10 going west on Ina? This oversight will not address current/future demands off I-10; the southeast-bound Orange Grove off-ramp on I-10 backs up well past the gore point where it joins with the frontage road. When Ina Road is closed and east-bound traffic on Ina is diverted to Orange Grove, the jam at the Orange Grove off-ramp will get much worse. Re-striping so that the double left-turn lane extends as far as possible would allow more room to hold cars that are turning left onto Orange Grove. Maybe that could be made permanent. The timing of the traffic light should also be investigated to allow for a higher volume of traffic turning left onto Orange Grove during the morning rush hour.

Category	Comments Received for this Category*
	2 – Camino del Cerro: Camino del Cerro will get tremendous amount of additional traffic, concern with increase in volume of traffic and safety concerns with passing (Camino del Cerro and Ina are very short); decrease speed limit from Ina to Camino del Cerro to 40 mph and have regular radar from Pima County, City of Tucson and Town of Marana; 2 –Ina Road: shortsighted…Ina should be 3 lanes instead of 2 and now is the time to think of the future; closing Ina for 2 years will force changes in present traffic patterns for some 4,000 vehicles daily on Picture Rocks Road. 1 – Drainage: concerns about drainage down Dirt Road; 1 – Businesses: they will be seriously inconvenienced and left turn onto east driveways would benefit customer base 1 – Trains: any plans to limit trains from interrupting traffic during rush hour times in the am and pm? With additional traffic loads, resident commute times will drastically increase by trains and additional vehicle traffic. 1 – Sandario/Kinney/Gates Pass: what is being done to mitigate cyclists through here? 1 – Bats: thousands of Mexican freetail bats use Ina bridge as nesting place. Will construction of replacement bridge be times for winter work to avoid displacing bats? 1 – Picture Rocks: there is no public transportation and area residents have been working for several years to extend an Arizona Pavilions route. Public transportation would reduce traffic during construction. Will planners urge RTA to implement public transportation between Picture Rocks and Arizona Pavilions to implement public transportation and connecting busses concurrent with construction? 1 – Prince Road: I commuted through Prince Road TI and was impressed with the way project didn't drastically interfere with traffic. Commute only increased by 10-15 during accident and 5-10 during average commute. Hopefully same planners that worked on Prince TI will work on Ina TI. 1 – Positive: Let's do it!

**Responses may have included more than one issue*

Appendix A – Meeting Invitation

You are invited
Ina Road Traffic Interchange Public Information Meeting

The Arizona Department of Transportation (ADOT), in conjunction with the Federal Highway Administration (FHWA), invite you to attend a public information meeting for the Interstate 10: Ina Road Traffic Interchange Project to provide information about the construction anticipated to begin in 2016.

PUBLIC INFORMATION MEETING

Thursday, June 11, 2015

Open house meeting 5:30-7:30 p.m. – (Presentation at 5:45 p.m.)

Coyote Trail Elementary School (Multipurpose Room)
8000 N. Silverbell Rd., Tucson, AZ 85743

The purpose of this project is to reconstruct the Ina Road Traffic Interchange. I-10 currently passes over Ina Road, and with this project, Ina Road will become elevated and pass over I-10 and the Union Pacific Railroad.

Included with the interchange work, will be reconstruction and widening of Ina Road from Silverbell Road west of I-10 to Camino Martin east of I-10 and a new bridge over the Santa Cruz River. The project team will be available to answer individual and property-specific questions. Maps and displays will be available for viewing.

For additional information, or to submit comments in writing, please contact ADOT Senior Community Relations Officer, Paki Rico at 520.388.4233, email PRico@azdot.gov.

Pursuant to Title VI of the Civil Rights Act of 1964, and the Americans with Disabilities Act (ADA), ADOT does not discriminate on the basis of race, color, national origin, age, gender or disability. Persons that require a reasonable accommodation based on language or disability should contact ADOT Community Relations at 855.712.8530 or projects@azdot.gov. Requests should be made as early as possible to ensure the state has an opportunity to address the accommodation.

Personas que requieren asistencia o una adaptación razonable por habilidad limitada en inglés o discapacidad (ADA y Título VI) deben ponerse en contacto con: 855.712.8530 o projects@azdot.gov. Las solicitudes deben hacerse tan pronto como sea posible para asegurar que el estado tenga la oportunidad de hacer los arreglos necesarios.

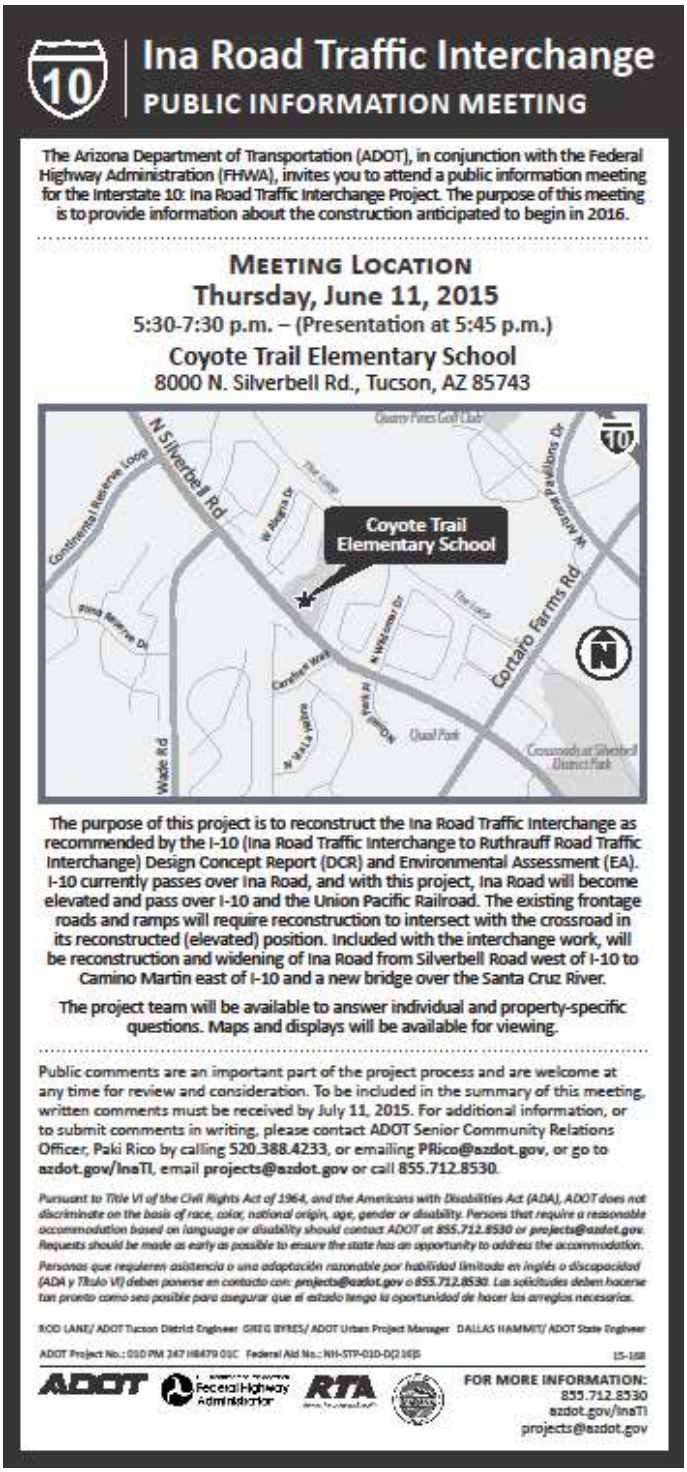
Americans with Disabilities Act: Persons with a disability may request reasonable accommodation by calling 855.712.8530. Requests should be made by June 4, 2015. Any notice in another language other than English are translations of the original text written in English. These translations are not official and are not binding to the state or political subdivision of this state.

TRACS No.: H8479 01D Federal Aid No.: NH-STP-010-D(216)S 15-169

ADOT Federal Highway Administration RTA

FOR MORE INFORMATION:
855.712.8530
azdot.gov/InaTI
projects@azdot.gov

Appendix B – Meeting Advertisement



Ina Road Traffic Interchange
PUBLIC INFORMATION MEETING

The Arizona Department of Transportation (ADOT), in conjunction with the Federal Highway Administration (FHWA), invites you to attend a public information meeting for the Interstate 10: Ina Road Traffic Interchange Project. The purpose of this meeting is to provide information about the construction anticipated to begin in 2016.

MEETING LOCATION
Thursday, June 11, 2015
5:30-7:30 p.m. – (Presentation at 5:45 p.m.)
Coyote Trail Elementary School
8000 N. Silverbell Rd., Tucson, AZ 85743

The purpose of this project is to reconstruct the Ina Road Traffic Interchange as recommended by the I-10 (Ina Road Traffic Interchange to Ruthrauff Road Traffic Interchange) Design Concept Report (DCR) and Environmental Assessment (EA). I-10 currently passes over Ina Road, and with this project, Ina Road will become elevated and pass over I-10 and the Union Pacific Railroad. The existing frontage roads and ramps will require reconstruction to intersect with the crossroad in its reconstructed (elevated) position. Included with the interchange work, will be reconstruction and widening of Ina Road from Silverbell Road west of I-10 to Camino Martin east of I-10 and a new bridge over the Santa Cruz River.

The project team will be available to answer individual and property-specific questions. Maps and displays will be available for viewing.

Public comments are an important part of the project process and are welcome at any time for review and consideration. To be included in the summary of this meeting, written comments must be received by July 11, 2015. For additional information, or to submit comments in writing, please contact ADOT Senior Community Relations Officer, Paki Rico by calling 520.388.4233, or emailing PRico@azdot.gov, or go to azdot.gov/InaTI, email projects@azdot.gov or call 855.712.8530.

Pursuant to Title VI of the Civil Rights Act of 1964, and the Americans with Disabilities Act (ADA), ADOT does not discriminate on the basis of race, color, national origin, age, gender or disability. Persons that require a reasonable accommodation based on language or disability should contact ADOT at 855.712.8530 or projects@azdot.gov. Requests should be made as early as possible to ensure the state has an opportunity to address the accommodation.

Personas que requieren asistencia o una adaptación razonable por habilidad limitada en inglés o discapacidad (ADA y Título VI) deben ponerse en contacto con: projects@azdot.gov o 855.712.8530. Las solicitudes deben hacerse tan pronto como sea posible para asegurar que el estado tenga la oportunidad de hacer los arreglos necesarios.

ROD LANE/ ADOT Tucson District Engineer GREG BYRES/ ADOT Urban Project Manager DALLAS HAMMIT/ ADOT State Engineer

ADOT Project No.: 010 PM 247 H8479 01C Federal Aid No.: NH-STP-010-D(216)S 15-168

ADOT Federal Highway Administration RTA

FOR MORE INFORMATION:
855.712.8530
azdot.gov/InaTI
projects@azdot.gov

Appendix C – Meeting Handouts

Ina Road Traffic Interchange Final Design

PROJECT DESCRIPTION

The purpose of the interchange reconstruction project is to improve traffic operations on I-10 and on the Ina Road traffic interchange. The project consists of widening I-10 to four lanes in each direction and Ina Road to two lanes in each direction from Silverbell Road to Camino Martin.

The project will enhance safety by eliminating the existing at-grade crossing of Ina Road and the Union Pacific Railroad (UPRR) and building an overpass taking Ina Road over I-10. I-10 will be lowered as part of the new Ina Road overpass construction. The project will also construct two structures over the Santa Cruz River. The eastbound and westbound frontage roads will be elevated to intersect with the new vertical alignment of Ina Road. The project also includes concrete box culverts, retaining walls, grading, asphalt concrete, drainage facilities, water and sewer relocations, traffic signals, signing, pavement markings, lighting, landscape and irrigation along the interstate, the frontage roads and Ina Road. There are numerous utility relocations that will take place prior to and during the construction of these improvements.

PROJECT TIMELINE

2009 Design Concept Report (DCR) and Environmental Assessment (EA) began

2013 Concept Report (DCR) and Environmental Assessment (EA) complete

2016 Anticipated Complete Final Design

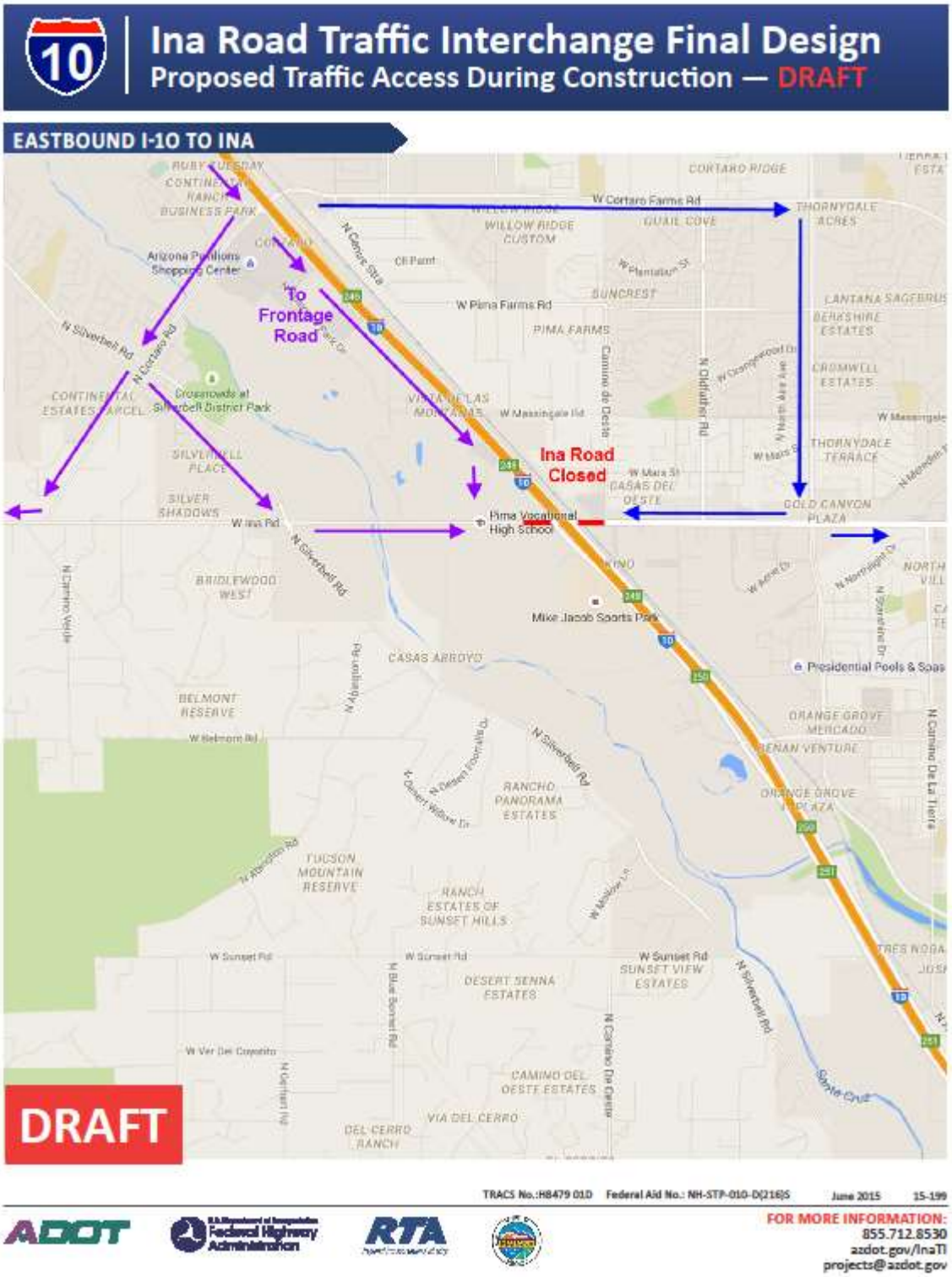
2016-18 Anticipated Duration of Construction

For more information, please contact ADOT Senior Community Relations Officer, Paki Rico: 520.388.4233, PRico@azdot.gov, or go to azdot.gov/InaTI, projects@azdot.gov, or 855.712.8530.

TRACS No.:H8479 01D Federal Aid No.: NH-STP-010-D(216)S March 2015 15-070

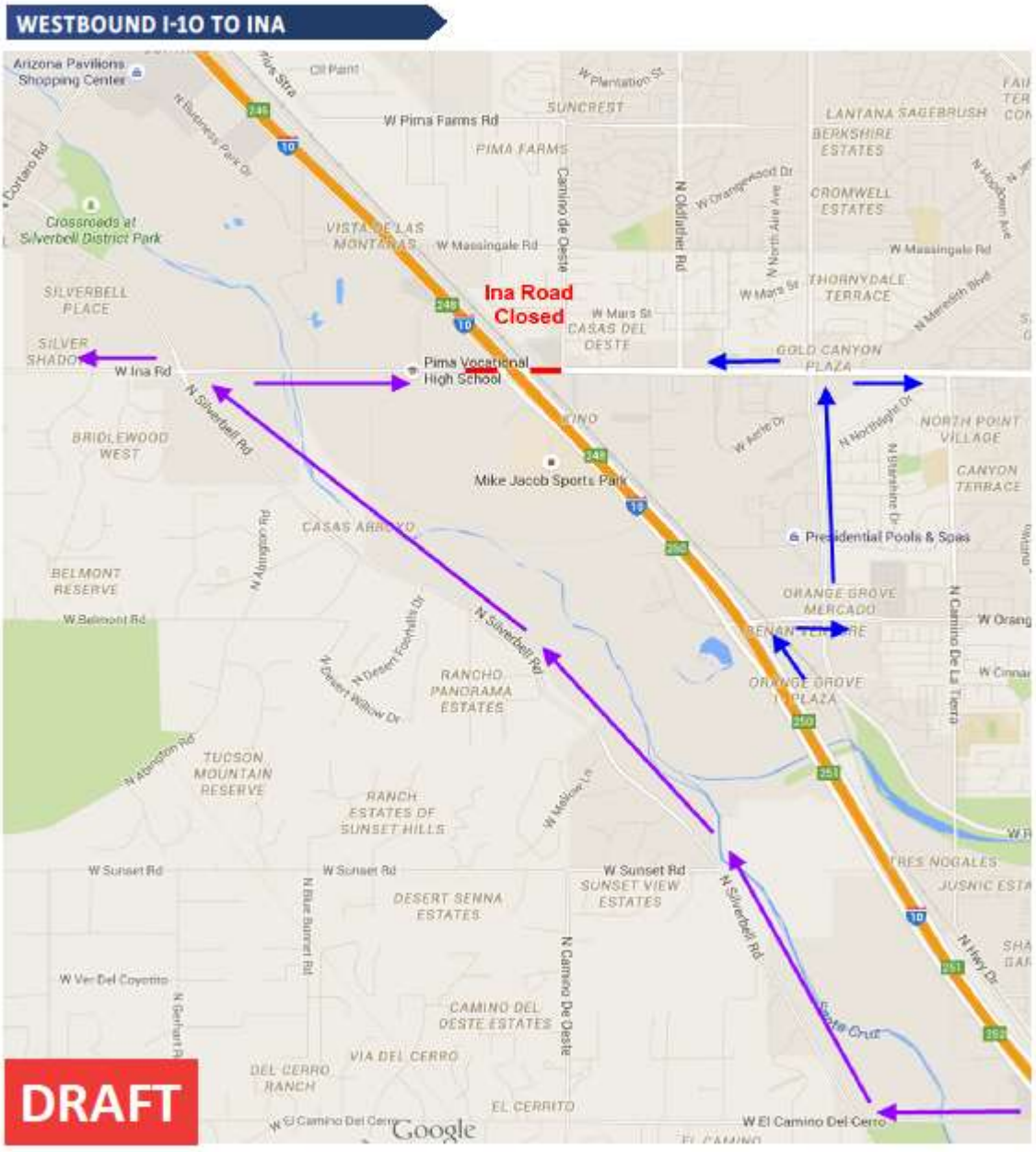
ADOT Federal Highway Administration RTA

FOR MORE INFORMATION:
855.712.8530
azdot.gov/InaTI
projects@azdot.gov


10
Ina Road Traffic Interchange Final Design
Proposed Traffic Access During Construction — DRAFT
EASTBOUND I-10 TO INA
To Frontage Road
Ina Road Closed
W Cortaro Farms Rd
W Pima Farms Rd
W Ina Rd
Pima Vocational High School
Mike Jacob Sports Park
Arizona Pavilions Shopping Center
Crossroads at Silverbell District Park
Presidential Pools & Spas
N Silverbell Rd
N Cortaro Rd
N Camino de Oeste
W Sunset Rd
DRAFT
TRACS No.:H8479 01D Federal Aid No.: NH-STP-010-D(216)S June 2015 15-199
ADOT
Federal Highway Administration
RTA
FOR MORE INFORMATION:
855.712.8530
azdot.gov/InaTI
projects@azdot.gov

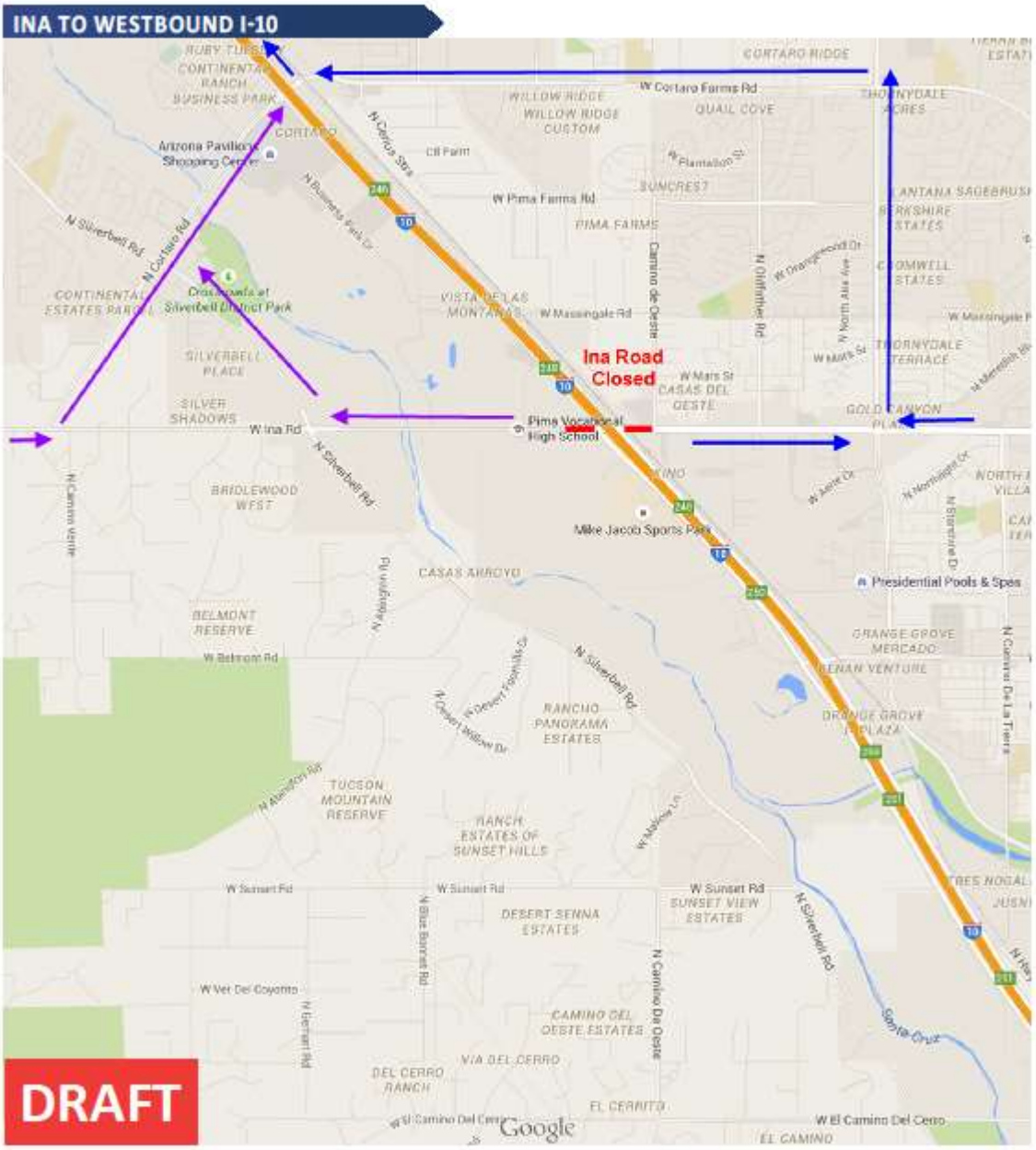
Page 2 Ina Road Traffic Interchange Final Design

Proposed Traffic Access During Construction — **DRAFT**



Page 3 Ina Road Traffic Interchange Final Design

Proposed Traffic Access During Construction — **DRAFT**



Page 4 Ina Road Traffic Interchange Final Design

Proposed Traffic Access During Construction — **DRAFT**

Appendix D – Display Boards

Ina Road Traffic Interchange
Public Information Meeting
Architectual Treatments
June 11, 2015


Barrier


5' x 5' MSE Panel


Pier


View from I-10 East Bound, Looking East at Retaining Wall


Bird's Eye View Looking North East


View from I-10 East Bound, Looking North


View from I-10 Bridge on Ina Road, Looking East

ADOT Federal Highway Administration RTA WHEAT DESIGN GROUP LANDSCAPE ARCHITECTS

Ina Road Traffic Interchange
Public Information Meeting
Architectual Treatments
June 11, 2015

The inspiration for the formliner and decorative metal design speaks to the myriad of angles and facets found in the Sonoran Desert. Diverse in their origin, the angles create dynamic shapes and shadows which can be seen in mountain canyons and outcroppings, our geologic history, and plant morphology.

Architectural Treatments include:

- Formliner for MSE Panels on Retaining Walls
- Roadway and Bridge Barriers
- Bridge Piers
- Decorative Metal on Pedestrian Fence

ADOT Federal Highway Administration RTA WHEAT DESIGN GROUP LANDSCAPE ARCHITECTS

Ina Road Traffic Interchange
Public Information Meeting
Architectual Treatments
June 11, 2015

View from I-10 East Bound, Looking East

Appendix E

Ina Road Traffic Interchange
Public Information Meeting

June 11, 2015

Greg Byres, PE, Senior Urban Project Manager, ADOT
Paki Rico, Senior Community Relations Officer, ADOT
John Hucko, Senior Landscape Architect, ADOT
Kevin Thornton, PE, Project Manager, Psomas

TRACS No.:H8479 01D
Federal Aid No.: NH-STP-010-D(216)S

ADOT 1

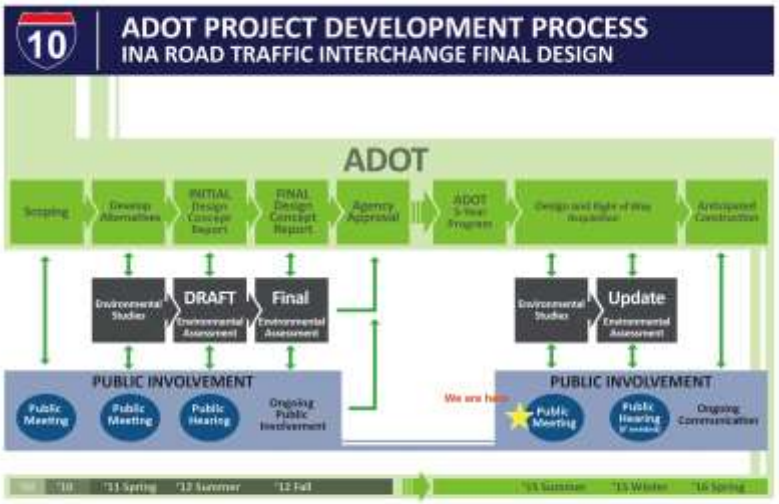
Presentation Topics

- Project Overview
- Project History
- Proposed Project Improvements
- Project Schedule

ADOT 2

General Overview Map

ADOT 2



ADOT 3

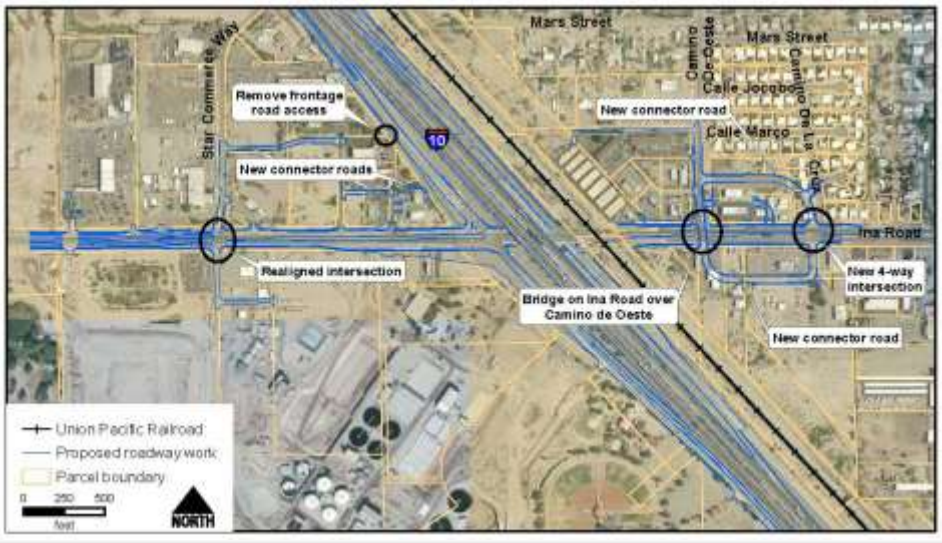
Public Outreach Meetings

Meetings held during project design phase:

- Agency scoping meeting – Oct. 28, 2009
- Public scoping meeting – Nov. 18, 2009
- Property owner meetings – Oct. 4, 2010, Nov. 8, 2010
- Public information meeting – March 10, 2011
- Property owner meetings – Nov. 30, 2011
- Public hearing – June 21, 2012
- Business forums – May 14, 2014
- Marana Council Update – May 12, 2015
- Public Meeting – June 11, 2015

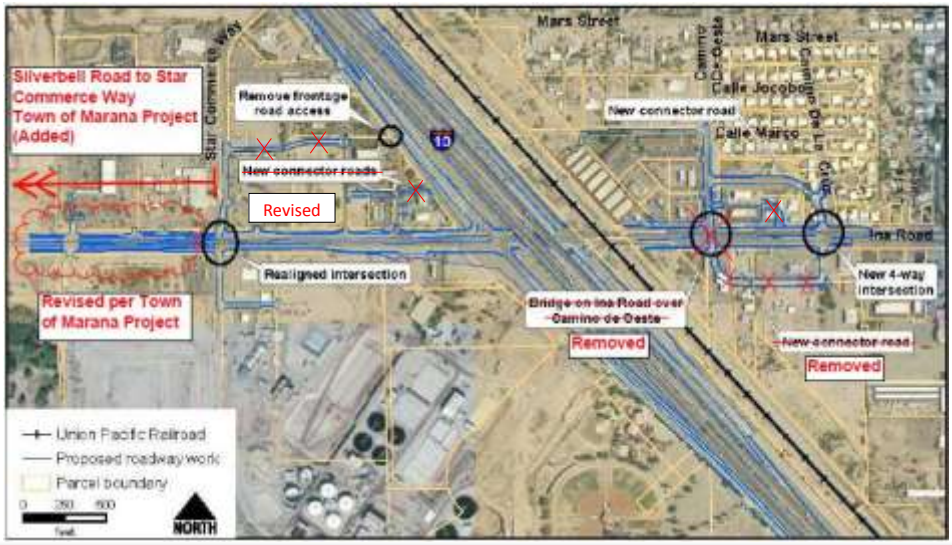
ADOT 3

Proposed Project Area (2012)



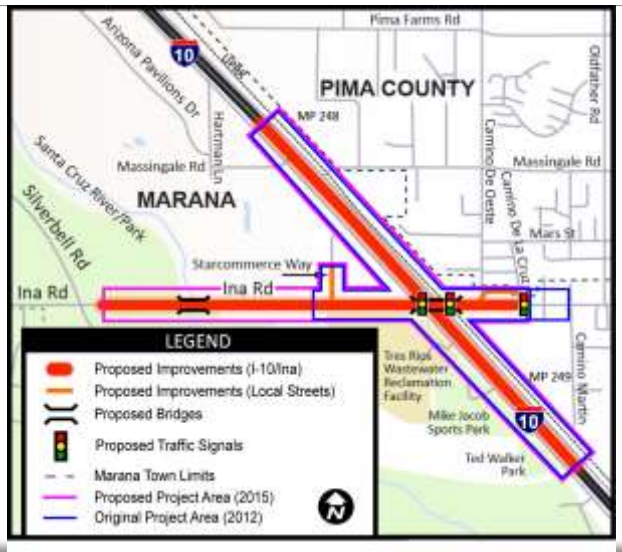
ADOT 4

Proposed Project Area (2015)



ADOT 6

Proposed Environmental Footprint



ADOT 6

Environmental Assessment Re-evaluation

- Prior to construction, Environmental Assessment re-evaluation and 30 day public review comment period will occur fall 2015

ADOT 6

Project Purpose and Need

- In conformance with transportation planning objectives
  - ADOT's 1993 General Plan
  - Regional Transportation Authority's (RTA) 2006 voter approved
  - Regional Transportation Plan
- Meet existing and future (2040) traffic demand and improve operations
- Meet current design standards
- Eliminate vehicle-train conflicts at crossroads and improve emergency response times

ADOT 6

Proposed Revisions

Revisions to the proposed project design since the 2012 Design Concept Report (DCR) and Environmental Assessment (EA) include:

- Ina Road from just east of Silverbell Road to Starcommerce Way
  - Widening to two lanes
  - New bridges over the Santa Cruz River
  - Pedestrian underpasses at the Santa Cruz River Bridges

ADOT 7

Proposed Revisions (cont'd)

Revisions to the proposed project design since the 2012 Design Concept Report (DCR) and Environmental Assessment (EA) include:

- Modification of Ina Road Profile
  - Elimination of south loop
  - Elimination of bridge at Camino de Oeste
  - Changes in slope at approach and departure
  - Reconfigure retaining walls at Camino de Oeste
  - Access to Ina Road at Camino de Oeste
- Improvements to business access
  - Retained access to Ina Road

ADOT 7

Proposed Project Improvements

Proposed project improvements include:

- I-10 widened to accommodate up to 4 lanes in each direction; will be striped for 3 lanes until further corridor widening is complete (not yet programmed)
- Ina Road overpass over I-10 and the Union Pacific Railroad
- Ina Road widened to two lanes in each direction
- Architectural treatments/landscape

ADOT 8

Proposed Project Impacts

Anticipated Construction Timeline

- Anticipated construction will be divided into 4 major phases:
  1. Preparation work (Ina Road open)
  2. Eastbound I-10 Construction (Ina Road closed)
  3. Westbound I-10 Construction (Ina Road closed)
  4. Finishing work (Ina Road open)
- Construction anticipated to begin spring 2016
- Construction anticipated to be complete in 2018

ADOT 8

Proposed Project Impacts (cont'd)

- Ina Road
  - Access across I-10 will be closed for majority of project duration
- Interstate 10
  - Contractor will maintain 3 lanes in each direction along I-10
- Access to businesses will be maintained during construction
- I-10, Ina Traffic Interchange Project Budget – Approximately $86 Million

ADOT 9

Proposed Traffic Access During Construction

Eastbound Interstate 10 to Ina Road

ADOT 9

Proposed Traffic Access During Construction (cont'd)

Westbound Interstate 10 to Ina Road

ADOT 10

Proposed Traffic Access During Construction (cont'd)

Ina Road to Westbound Interstate 10

ADOT 10

Proposed Traffic Access During Construction (cont'd)

Ina Road to Eastbound Interstate 10

ADOT 11

Proposed Aesthetic Improvements

Architectural Treatments

The inspiration for the Architectural Treatments designs speaks to the myriad of angles and facets found in the Sonoran Desert. A simple, repetitive, geometric design was chosen to give the Ina Road traffic interchange a unique look.



ADOT 11

Proposed Aesthetic Improvements (cont'd)

Looking east from I-10 East Bound

ADOT 12

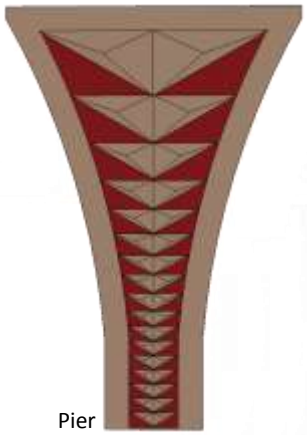
Proposed Aesthetic Improvements (cont'd)

Architectural Treatments include:

- Formliner for Retaining Wall Panels, Barriers, & Bridge Piers
- Decorative Metal on Bridge Pedestrian Fence

5' x 5' MSE Panel

Barrier



Pier

ADOT 12

Proposed Landscape Improvements

Plant Material Selections:


Palo Brea


Velvet Mesquite


Ironwood


Ocotillo


Red Bird of Paradise


Chihuahuan Sage


Baja Fairy Duster


Saguaro


Desert Carpet


Giant Hesperaloe


Santa Rita Prickly Pear

ADOT 13

Contact Information

- **Paki Rico, ADOT Senior Community Relations Officer, 520-388-4233, prico@azdot.gov**
- **ADOT Project Hotline, 855.712.8530, projects@azdot.gov**
- **Visit the project website: azdot.gov/InaTI**

Thank you for your participation!

ADOT 13

GENERAL QUESTIONS?

ADOT 13

Appendix F

I-10: Ina Road Traffic Interchange Final Design Public Meeting

THURSDAY, JUNE 11, 2015 • 5:30 – 7:30 PM
COYOTE TRAIL ELEMENTARY SCHOOL • 8000 N. SILVERBELL ROAD • TUCSON, AZ 85743

COMMENT FORM

YOUR INPUT IS IMPORTANT: Submit comments by July 10, 2015 in order to have them included in the project record. Comments may also be submitted online at azdot.gov/InaTI:

Name _____ Email _____

Address _____

City _____ State _____ Zip _____

Please provide us your feedback on the following changes since the completion of the Final Design Concept report:

1. Ina Road is proposed to be widened to two lanes in each direction from Silverbell Road to Starcommerce Way, including demolition of the existing bridge and a new structure over the Santa Cruz River.

2. The Ina Roadway profile is proposed to be modified on both the east and west sides of I-10. This allows Camino de Oeste to connect to Ina Road, eliminates the Camino de Oeste bridge and southern loop and improves business access along Ina Road.

3. I-10 will be widened to accommodate four through lanes in each direction but striped for three lanes until I-10 widening between the Prince TI and Ina TI is completed.

4. During construction, The Loop, the Pima County multi-use path, will be closed for a period of time through the project area.

15-191

ADOT | U.S. Department of Transportation Federal Highway Administration | MARANA | RTA

FOR MORE INFORMATION:
azdot.gov/InaTI

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I-10: Ina Road Traffic Interchange Final Design Public Meeting

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GENERAL COMMENTS

ADOT | U.S. Department of Transportation Federal Highway Administration | MAKAIVA | RTA

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