PUBLIC PRIVATE PARTNERSHIP (P3)
DESIGN-BUILD-MAINTAIN AGREEMENT

for

202 MA 054 H882701C
SR 202L (SOUTH MOUNTAIN FREEWAY)
I-10 (MARICOPA FREEWAY) – I-10 (PAPAGO FREEWAY)

Between

ARIZONA DEPARTMENT OF TRANSPORTATION

and

[DEVELOPER]

VOLUME II

TECHNICAL PROVISIONS – TP ATTACHMENTS

Dated as of: [_____], 2016

ADDENDUM #1

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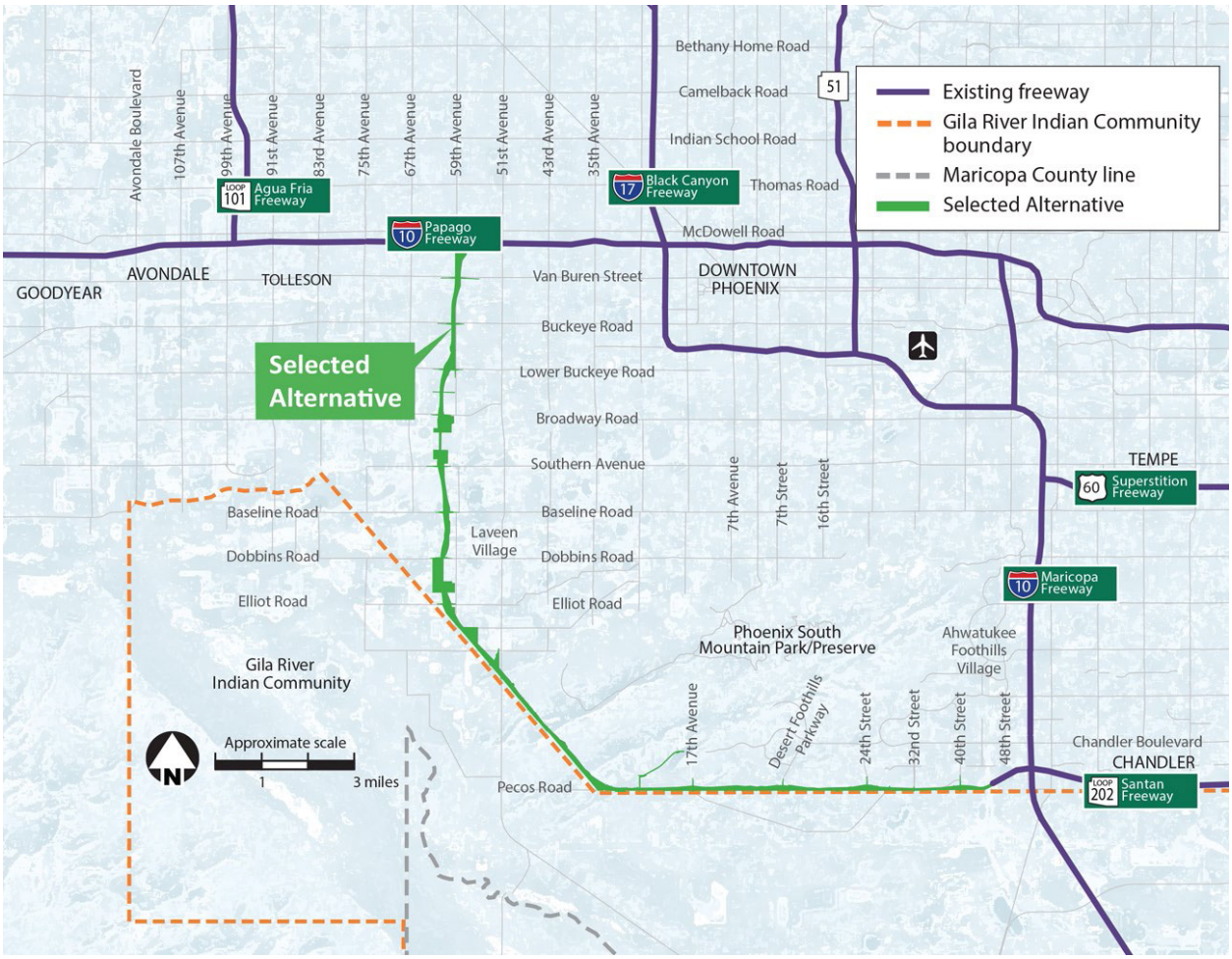
TP ATTACHMENT 110-1 – Project Description

1 PROJECT DESCRIPTION

In general, the South Mountain Freeway Project (Project) is located in the southwestern portion of the Phoenix metropolitan area in Maricopa County. The South Mountain Freeway Project constitutes a section of Loop 202 within the regional freeway and highway system. The Record of Decision (ROD) for the Project identified as the selected alternative the combination of the W59 and E1 Alternatives is shown in Figure 1-1.

Figure 1-1
Vicinity Map



The Project will help address the region's congestion, travel delays, and limited options for moving people and goods safely through the Phoenix metropolitan region by increasing regional mobility and capacity by linking regional freeways in the eastern and western portions of the Phoenix metropolitan area. The connection will further optimize system continuity and the effectiveness of individual network components, which are important to overall transportation operation. The Project will reduce the duration of congested conditions on most adjacent freeways, improve travel times throughout the region, and attract trips from the arterial street network.

The Project is led by the Arizona Department of Transportation (ADOT), in cooperation with the Maricopa Association of Governments (MAG). ADOT has undertaken certain planning and

preliminary concept work concerning the Project development, which is included in the Reference Information Documents (RIDs).

1.01.1.1 Project Status

ADOT has been moving forward with development of the Project for several years, using its own personnel; retaining consultants; and engaging with stakeholders such as MAG, the municipal planning organization for Maricopa County, Cities along the Project corridor, resource agencies, and the public.

On April 26, 2013, a notice of availability for the South Mountain Freeway Draft Environmental Impact Statement (DEIS) was published in the Federal Register. This notice began a 90-day public comment period. During the comment period, a public hearing was held on May 21, 2013, at the Phoenix Convention Center; numerous other community outreach events were also held. The public comment period ended on July 24, 2013.

On September 26, 2014, the study team released the Final Environmental Impact Statement (FEIS) for a 60-day public review period. The FEIS incorporates analysis and conclusions presented in the DEIS for the proposed action, public comments and responses on the DEIS, and new information that became available after public release of the DEIS. Each comment received on the DEIS is accompanied by a response in Volume III of the FEIS. Following the FEIS review period, the study team considered comments received and prepared a ROD which was released to the public on March 13, 2015.

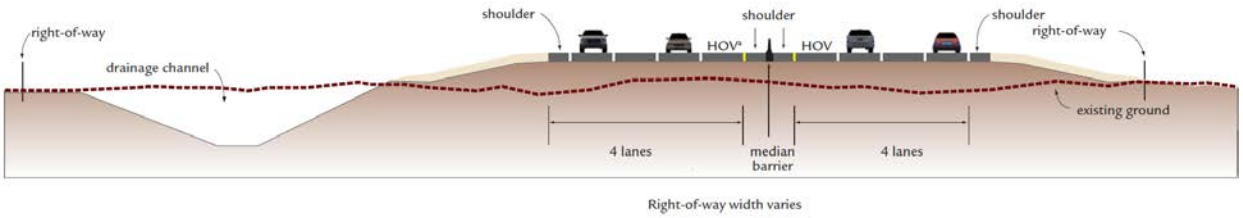
At the same time as the DEIS publication, the study team also submitted the Initial Location/Design Concept Report (L/DCR) to ADOT technical groups and agency stakeholders. The design plans included in the Initial L/DCR represent approximately 15%-level design plans. The Final L/DCR has been finalized and is included in the RIDs.

1.01.1.2 General Project Improvements

The Project will complete the Loop 202 from I-10 (Maricopa Freeway) (milepost MP 54.31) to I-10 (Papago Freeway) (MP 75.91), a distance of approximately 22 miles, in the southwestern quadrant of the Phoenix metropolitan area. It will begin at its eastern terminus with the existing system traffic interchange between I-10 (Maricopa Freeway) and Loop 202 (Santan Freeway). From this point, it will head westward on the Pecos Road alignment for approximately 8 miles before heading northwest for approximately 5 miles to a point near the existing Elliot Road and 59th Avenue intersection. The freeway will head north for approximately 9 miles, crossing the Salt River, and reach its western terminus at a new system traffic interchange with I-10 (Papago Freeway) near 59th Avenue. The new system traffic interchange will include a direct high-occupancy vehicle (DHOV) ramp connection to and from the east on I-10. The design of the system traffic interchange at I-10 is being coordinated with the high-capacity transit corridor planned for I-10.

The roadway typical section consists of eight-lanes with three general purpose lanes and one high-occupancy vehicle (HOV) lane in each direction (see Figure 1-2). The median is closed with a concrete median barrier dividing the directions of travel. Entrance and exit ramps are designed using a parallel-type configuration coupled with auxiliary lanes between service traffic interchanges, as warranted. The freeway mainline design primarily features a rolling profile with the freeway rising above grade to cross over the crossroads.

Figure 1-2
Typical Freeway Section



There are over 50 bridge sites (approximately 77 bridges) along the freeway corridor. Notable bridges include the Salt River Bridge, which is over 3,000 feet long, multiple bridges over the Union Pacific Railroad, and the flyover ramps at I-10 (Papago Freeway). Much of this construction will be over active traffic. There are also five multiuse crossings in the area of the South Mountains.

TP ATTACHMENT 110-2 – ADOT Quality Assurance Requirements for Alternative Acceptance Projects

ARIZONA DEPARTMENT OF TRANSPORTATION

QUALITY ASSURANCE REQUIREMENTS

for

ALTERNATIVE ACCEPTANCE PROJECTS

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1 SCOPE

It is the objective of this document for the Arizona Department of Transportation (ADOT) to define the Quality Assurance requirements for Alternative Acceptance construction projects, in which the Contractor's QC results may be used as a part of the acceptance decision. The Quality Assurance requirements described herein have been developed to provide consistent implementation and supporting documentation in accordance with the Code of Federal Regulations (23 CFR 637 Subpart B) – "Quality Assurance Procedures for Construction" and Federal Highway Administration (FHWA) Technical Advisory T6120.3, which are available at the following links:

- 23 CFR 637B - http://www.ecfr.gov/cgi-bin/text-idx?rgn=div5&node=23:1.0.1.7.25
- TA 6120.3 - http://www.fhwa.dot.gov/construction/t61203.cfm

This document, established by the Arizona Department of Transportation (ADOT), ensures that materials and workmanship incorporated into Alternative Acceptance highway construction projects are in reasonable conformance with the approved plans and specifications, including any approved changes.

This document covers the procedures for an Alternative Acceptance program, including a quality control program, an acceptance program, a verification program, an independent assurance (IA) program and correlation testing. The Quality Acceptance test results performed by an Independent Quality Firm (IQF) may be used as part of an acceptance decision if the Quality Acceptance results are validated by the Owner Verification (OV) testing results performed by ADOT.

The purpose of this document is to provide statewide consistency and a programmatic approach to quality assurance where the IQF's test results are used in the acceptance decision. It clarifies federal requirements relating to Quality Acceptance and statistical analysis procedures. The content of this program is developed for Alternative Acceptance projects with no Special Experimental Project 15 (SEP-15) exceptions with respect to quality acceptance. This document is to be included (or referenced) in the contract, and other key preconstruction project documents with approvals by ADOT and FHWA.

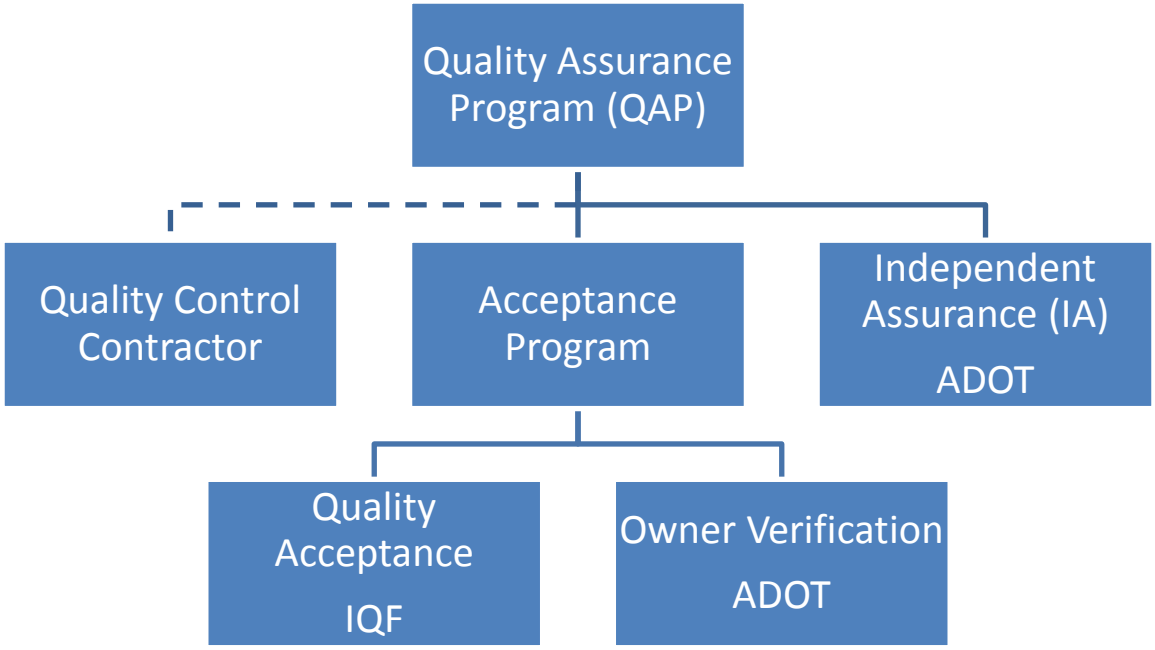
The use of IQF test results as part of the acceptance decision should be carefully evaluated for each project, because a robust ADOT owner verification program is instrumental to its success.

This document is comprised of several components, and the relationships between the parties and functions are shown in Figure 1.

The Alternative Acceptance process is composed of the following main components:

- Personnel qualifications
- Laboratory qualifications
- Approval of Contractor's Construction Quality Management Plan (CQMP)
- Contractor QC requirements
- IQF Quality Acceptance requirements
- Owner Verification Testing and Inspection Plan (OVTIP)
- Independent Assurance program

Figure 1: Components and Relationships in this QAP



2 LIST OF ABBREVIATIONS

ADOT	Arizona Department of Transportation
CFR	Code of Federal Regulations
CQMP	Construction Quality Management Plan
IA	Independent Assurance
IQF	Independent Quality Firm
NCR	Non-Conformance Record
OV	Owner Verification
OVTIP	Owner Verification Testing and Inspection Program
QC	Quality Control
RFP	Request for Proposals
TP	Technical Provisions

3 GLOSSARY OF TERMS

The following Glossary of Terms is in addition to the Glossary of Terms to be found in **Section III of ADOT's Materials Quality Assurance Program**.

Alternative Acceptance - Projects where the Contractor's QC results may be used as a part of the acceptance decision.

Construction Quality Management Plan – A plan developed by the Contractor which consists of both QC and Quality Acceptance activities with respect to performance of the work. The CQMP is provides procedures that clearly describe how the Contractor's staff will address various quality requirements.

Contractor - The entity identified in the Agreement to perform work under the applicable project, together with its successors and assigns.

Correlation Testing – Testing performed to check or establish variability of testing procedures and equipment between testing laboratories.

Dispute Resolution – Testing to resolve differences in material test results or statistical sample populations between the IQF and ADOT

Independent Assurance - All activities that are included in an unbiased and independent evaluation program for all the sampling and testing procedures used in the Acceptance Program.

Independent Quality Firm (IQF) - The independent Quality Firm required as part of the Contractor's team who will perform Quality Acceptance.

Owner Verification - Sampling and testing performed to validate the quality of the product. The sampling and testing are to be performed by qualified testing personnel employed by ADOT or its designated agent, excluding the Contractor.

Owner Verification Testing and Inspection Program - Describes the commitments of the owner for oversight of the Contractor's work. ADOT staff, or their designee, performs OV inspection and testing and conducts audits to verify the Contractor's compliance with the approved CQMP

Quality Acceptance - All planned and systematic actions performed by the IQF, as defined in the contract for their portion of the acceptance decision.

Quality Control – All Contractor operational techniques and activities that are performed or conducted to fulfill the contract requirements.

Referee Testing – Testing performed by ADOT's central laboratory to resolve disputes over specific test results between the IQF and ADOT.

System Basis – A method of IA which is based on observing and verifying satisfactory performance by the individuals performing acceptance sampling and teting, and the equipment utilized, for a particular period of time.

4 QUALIFICATION OF TESTING PERSONNEL

All field and laboratory personnel performing sampling or testing of construction materials on a construction project with Alternative Acceptance must meet the technician qualification requirements as presented in the Section VII of the ADOT Materials Quality Assurance Program ("Sampling and Testing Personnel Qualification Requirements"). This includes IQF and ADOT

personnel. Contractor technicians may need to meet these qualification requirements if so specified in the RFP.

5 QUALIFICATION OF LABORATORIES

All laboratories engaged in sampling or testing of construction materials on an Alternative Acceptance construction project must meet the laboratory qualification requirements as presented in Section VI of the ADOT Materials Quality Assurance Program ("Laboratory Qualifications").

Laboratories satisfying these requirements are listed in the ADOT "Directory of Approved Materials Testing Laboratories" (https://www.azdot.gov/docs/default-source/business/directory-of-approved-materials-testing-laboratories.pdf?sfvrsn=12), which is updated periodically. If the Contractor or IQF utilizes a laboratory from this directory, the Contractor is responsible for confirming the laboratory still meets the approval requirements, and that such requirements are maintained over the life of the project.

To avoid an appearance of a conflict of interest, any qualified laboratory and any qualified personnel shall perform only one of the following types of testing on the same Alternative Acceptance project:

A. Contractor Quality Control testing;

B. IQF Quality Acceptance testing;

C. ADOT Owner Verification testing;

D. ADOT Independent Assurance testing; or

E. Dispute Resolution testing.

6 CONTRACTOR'S CONSTRUCTION QUALITY MANAGEMENT PLAN (CQMP)

The Contractor's Construction Quality Management Plan (CQMP) shall consist of the quality control (QC) to be performed by the Contractor (see Section 7) and the Quality Acceptance to be performed by the IQF, in conjunction with OVT, with respect to performance of the work (see Section 8). The CQMP shall establish a clear distinction between QC and Quality Acceptance activities and the persons performing each function.

ADOT will be responsible for developing more detailed requirements for the Contractor's CQMP to be included in the Technical Provisions (TPs) of the project's Request for Proposals (RFP).

Contractor shall submit the CQMP to ADOT for review and approval prior to the performance of any work.

7 CONTRACTOR QUALITY CONTROL REQUIREMENTS

The Contractor shall be responsible for the quality of the work. Project quality will be enhanced through the daily efforts of all the workers involved with the work, supported by Contractor's CQMP. The Contractor's QC portion of the CQMP shall include the internal procedures used by the Contractor that will ensure that the work is delivered in accordance with the released-for-construction plans, approved shop drawings, working drawings, and specifications. This involves the active participation of the entire work force in working to achieve "quality" initially and to minimize/eliminate re-work. Contractor's QC shall not be part of the acceptance program.

The Contractor's CQMP shall establish a systematic approach to define the processes, methods, procedures, and documentation for delivery of QC on the Project. These methods and procedures shall clearly define the authority and responsibility for the administration of Contractor's QC plan.

8 INDEPENDENT QUALITY FIRM (IQF) QUALITY ACCEPTANCE REQUIREMENTS

The Quality Acceptance on Alternative Acceptance projects consists of frontline acceptance testing and inspection being performed by the IQF. Owner Verification (OV) and Quality Acceptance together are the basis for the acceptance decision, provided that the IQF-performed Quality Acceptance results be provided they are statistically validated and/or verified by the OV results (See Section 9 for details about OV). Quality acceptance is performed by the IQF, and OV is performed by ADOT or their consultant(s).

The Contractor's Quality Acceptance portion of the CQMP shall include the procedures used by the IQF to ensure that the work is inspected and tested to verify compliance with the released-for-construction plans, approved shop drawings, working drawings, and specifications. Contractor's Quality Acceptance shall be separate from the Contractor's QC program.

Contractor's CQMP shall establish a systematic approach to define the processes, methods, procedures, and documentation for the IQF to deliver Quality Acceptance on the Project. These methods and procedures shall clearly define the authority and responsibility for the administration of IQF's Quality Acceptance plan.

ADOT will be responsible for developing more detailed requirements for the IQF's Quality Acceptance to be included in the Technical Provisions (TPs) of the Project Request for Proposals (RFP).

9 OWNER VERIFICATION TESTING AND INSPECTION PROGRAM (OVTIP)

ADOT has responsibility for verifying that the Project is designed and constructed in compliance with the contract. As such, ADOT or their consultant(s) will perform owner verification testing and inspection to verify the quality of materials used on the construction project. ADOT will also conduct audits to verify the Contractor's compliance with the approved CQMP.

ADOT or its designated agent will develop a comprehensive Owner Verification Testing and Inspection Plan (OVTIP) for each Alternative Acceptance project and submit it to FHWA for their concurrence. ADOT's OVTIP shall include internal procedures used by ADOT to ensure that the IQF's frontline acceptance is performed in accordance with the approved CQMP and to verify Quality Acceptance testing and inspection. ADOT shall complete the development of the OVTIP following acceptance of the Contractor's CQMP.

ADOT's OVTIP shall clearly address, at the minimum, how ADOT's OV staff will address the following requirements:

A. Methods and procedures that clearly define the authority and responsibility for the administration of OVTIP.

B. Procedures for overseeing and inspecting the work for compliance with the Contractor's CQMP for each operation.

C. Procedures to ensure that the education, training, and certification of personnel performing OV activities are achieved and maintained and that all work is performed in accordance with the approved OVTIP.

D. Procedures to oversee the status and disposition of any identified noncompliance with the plans and specifications.

E. Measures to ensure that tools, gauges, instruments, and other measuring and testing devices used in activities affecting quality are properly maintained, controlled, calibrated, certified, and adjusted at specified periods to maintain accuracy within industry standards.

F. A system of planned and periodic audits of Contractor's CQMP to determine adherence to and the effectiveness of the CQMP. Audit results shall be documented, reviewed, and sent to ADOT and the Contractor. Follow-up action, including re-audit of deficient areas following corrective action, shall be taken where indicated.

G. A system of planned and periodic audits to determine adherence to and the effectiveness of the OVTIP. Audit results shall be documented, reviewed, and sent to ADOT. Follow-up action, including re-audit of deficient areas following corrective action, shall be taken where indicated.

H. Procedures for performing periodic inspection of work to verify that the IQF has performed work in compliance with the released-for-construction plans, specifications, and approved working and shop drawings. The procedure should identify a target oversight inspection rate and methods for performing verification inspections for all QC and IQF inspectors.

I. Procedures on how OV material sampling and testing will be performed including the process for generating random test locations, tracking material samples, processing material samples, review and approval of test records, and tracking compliance with material testing frequency.

J. Procedures for reviewing Quality Acceptance and OV test results for compliance with mutually agreed-upon processes and naming conventions to ensure data integrity for accurate statistical analyses.

K. Procedures for ensuring that only tests performed by qualified IQF testing personnel are submitted to ADOT.

L. Procedures for auditing of QC and Quality Acceptance records, documentation, procedures, and processes to verify compliance with the contract and approved CQMP.

M. Procedures for reviewing Portland cement concrete and hot-mix asphaltic concrete mix designs.

N. Target frequency for the independent sampling to be conducted as a part of OV, subject to project-specific recommendations. The target frequency shall include a higher frequency of testing at the beginning of the project.

O. Procedures for ensuring OV testing shall be performed at the frequency stipulated in the OVTIP.

P. Procedures for performing statistical analyses in compliance with procedures outlined in this Appendix E.

10 SAMPLE TYPES AND USES

Sampling is either random or fixed, depending on whether the location was selected randomly (random) or if a specific location was subjectively identified (fixed). Sampling is also either independent or dependent, based on whether the location was independently selected (independent) or whether it is based on the location of another sample (dependent/split). The F- and t- tests described in the "FHWA Reporting" section below are only valid when using random independent samples.

The IQF shall perform additional (fixed) tests when the quality of material is questionable at a location other than the randomly selected location. This fixed test shall constitute an acceptance test, and a failing result shall be addressed in a similar manner to a failing random independent test. Fixed tests shall not count towards meeting minimum IQF testing frequencies and shall not be used in statistical analysis.

Split samples may be used outside of the statistical analysis for owner verification of IQF-performed acceptance tests under ADOT's OVTIP. A comparison process for performing and analyzing split samples between ADOT and IQF is necessary during the initial implementation of the QAP to ensure that ADOT and IQF laboratory and testing procedures are in alignment. These samples will be analyzed by ADOT and the results discussed with the IQF to assure laboratory and technician test results compare favorably. When the allowable variation limits in OVTIP are exceeded, corrective actions for either or both parties will be identified and corrective actions will be incorporated as appropriate. This process will help provide initial alignment of the ADOT and IQF laboratories and testing procedures.

Split samples may also be performed throughout the life of the project as necessary to investigate non- validating material categories and verify or realign testing equipment and personnel.

ADOT will review the IQF's weekly report which continuously tracks and records the quantity of material incorporated into the Project. ADOT shall use the report to verify compliance of both the Quality Acceptance and OV testing frequency.

11 DISPUTE RESOLUTION

Throughout the life of the Project, there may be differences in material test results or statistical sample populations between the IQF and ADOT. It is important to recognize the difference between material quality and statistical validation.

Material quality is measured by whether a test passes or fails and is an indication of whether the material will perform its intended purpose. Engineering judgment may be used to substantiate the use of material failing to meet the specification if the material still meets the intended purpose. Statistical validation is a measure of whether the OV and Quality Acceptance populations are statistically equal. It does not represent the quality of material being incorporated into the Project. Refer to Section 15, "Referee Testing".

12 NON-VALIDATION AND STATUS OF MATERIAL QUALITY

When OV test results do not statistically validate the Quality Acceptance test results, ADOT and IQF jointly investigate the source of non-validation. In addition to the need to investigate the non-validation, the material in question must be immediately evaluated to determine if it can be left in place or has to be removed, reworked, or repaired. If material is to remain incorporated into the Project, the material in question will be evaluated using the process described in this section. The appropriate (IQF or ADOT) party may exercise engineering judgment to determine

whether the material will perform its intended purpose. There are four possible combinations of passing and failing results between the Quality Acceptance and OV test results.

1. Both the Quality Acceptance and OV test results pass specification limits.

Although statistical validation has not occurred, both the IQF and OV test results are passing the established specification limits; thus, material quality in question is considered acceptable.

2. Quality acceptance test results fail and OV test results pass specification limits.

Material may be left in place if the IQF determines that engineering judgment may be used to accept the material or if the material is accepted through the NCR process.

3. Both the Quality Acceptance and OV test results fail the specification limits.

Material may be left in place if the IQF determines that engineering judgment may be used to accept the material or if the material is accepted through the NCR process. The acceptance of material is subject to one of the two scenarios below.

   a. OV test result indicates reasonable conformance with specification requirements, and ADOT exercises engineering judgment to concur with acceptance of material based on the IQF's engineering judgment or through the NCR process.

   b. OV test result does not indicate reasonable conformance with specification requirement, and the IQF must perform an additional fixed test at the OV failed test location. Based on the results of IQF test result and subsequent investigation discussions between ADOT and the Contractor, a determination is made and documented on whether the material may be left in place.

4. Quality acceptance test results pass but OV test results fail specification limits.

Material may be left in place if the IQF determines that engineering judgment may be used to accept the material or if the material is accepted through the NCR process. This is subject to ADOT response in the two scenarios below.

   a. OV test result indicates reasonable conformance with specification requirements, and ADOT exercises engineering judgment to concur with acceptance of material based on the IQF's engineering judgment or through the NCR process.
   b. OV test result does not indicate reasonable conformance with specification requirement, and the IQF must perform an additional fixed test at the OV failed test location. Based on the results of IQF test result and subsequent investigation discussions between ADOT and the Contractor, a determination is made and documented on whether the material may be left in place.

13 FHWA REPORTING

ADOT will submit quarterly reports to FHWA for concurrence with ADOT's compliance with the OVTIP. Approved reports shall be distributed to the IQF after receiving FHWA concurrence. The reporting period for specific pay items or materials is dependent on the pace of construction and the number of tests performed in each analysis category, the time period of the sampling, and the specification and quality requirements. Each report shall cover a period of construction not greater than three months.

The FHWA quarterly report shall address the following areas:

A. Statistical analysis results, to include specification requirements and status of validation process during start-up and completion of an item;

B. Monthly Materials Certification letter from the IQF;

C. Non-validation investigation;

D. Non-conformance log; and

E. Construction certification.

14 STATISTICAL ANALYSIS

F-tests and t- tests will be used to analyze OV and Quality Acceptance data. The F-test is a comparison of variances to determine if the OV and Quality Acceptance population variances are equal. The t-test is a comparison of means to determine if the OV and Quality Acceptance population means are equal. In addition to these two types of analyses, independent verification and observation verification will also be used to validate the Quality Acceptance test results. ADOT will perform a project-specific analysis of risks in order to develop the type of analysis and recommended level of significance for specific tests to be performed during OV by ADOT. This information will be included in the project OVTIP.

15 REFEREE TESTING

While expected to occur very rarely, disputes over specific test results may be resolved in a reliable, unbiased manner by Referee Testing and evaluation performed by ADOT's central laboratory. The decision by ADOT's central laboratory, or its designee, shall be final. ADOT will pay for this testing.

16 INDEPENDENT ASSURANCE (IA) PROGRAM

ADOT, or its designee, shall implement the Independent Assurance (IA) program as designated in the ADOT Materials Quality Assurance Program, Sections V.B ("Independent Assurance Sampling and Testing") and V.C ("Correlation Testing").

ADOT shall utilize the System Basis for implementing the IA program. The IA program does not directly determine the acceptability of materials.

TP ATTACHMENT 408-1 – PERTINENT AGREEMENT REQUIREMENTS

TP Attachment 408-1 – Pertinent Agreement Requirements

TP Attachment 408-1.1 – Project Master Maintenance Agreement *[Under Development]*
TP Attachment 408-1.2 – Local Street Turnback *[Under Development]*

1 TP ATTACHMENT 408–1.1 [UNDER DEVELOPMENT]

City of Phoenix **Project Master Maintenance Agreement** The following table identifies the commitments stated in the pertinent agreements listed above. Developer is responsible for complying with all requirements identified in the following table, except those requirements that are specifically identified as being the obligations of ADOT, City of Phoenix, or Maricopa County Parks and Recreation.		
Agreement Reference Number	**Agreement Term**	**Description of Obligations of ADOT**
	[Under development. ADOT plans to provide by Addendum No. 3.]	

TP ATTACHMENT 408-1.2 [UNDER DEVELOPMENT]

City of Phoenix **Local Street Turnback** The following table identifies the commitments stated in the pertinent agreements listed above. Developer is responsible for complying with all requirements identified in the following table, except those requirements that are specifically identified as being the obligations of ADOT.		
Agreement Reference Number	**Agreement Term**	**Description of Obligations of ADOT**
	[Under development. ADOT plans to provide by Addendum No. 3.]	

TP ATTACHMENT 420-1 – PROJECT ENVIRONMENTAL COMMITMENT REQUIREMENTS

TP Attachment 420-1
South Mountain Freeway Project Record of Decision (ROD)
Developer's Environmental Commitment Requirements

The following table includes the Project-specific environmental commitments as written in the ROD, with minor modifications for clarification purposes. As it relates to these Technical Provisions, references to freeway, project, South Mountain Freeway, proposed action, proposed freeway, and Selected Alternative mean the Project, and references to contractor mean Developer. Developer shall comply with and perform all of the contractor and ADOT requirements, including the ADOT obligations, commitments, and responsibilities, identified in the following table, except to the extent of those requirements that are specifically identified in the third column, entitled "Description of ADOT Responsibilities," which are not delegated to Developer.

ECR Number	Environmental Commitment Record Requirements	Description of ADOT Responsibilities
Land Use		
LNDU-1	ADOT and FHWA will coordinate with public land holding agencies (BLM and ASLD) managing affected public land and the various leaseholders to complete acquisition of parcels needed for the South Mountain Freeway.	ADOT will satisfy this commitment.
Social Conditions		
SOC-1	ADOT will consider methods of reducing the amount of R/W needed, providing alternative access to the local road network to satisfy emergency services access requirements, and using noise barriers, aesthetic treatments of structures, and landscaping to reduce neighborhood intrusions.	ADOT to oversee for compliance.
SOC-2	ADOT will coordinate during the design phase to designate necessary utility corridors for relocations where appropriate.	ADOT to oversee for compliance
SOC-3	ADOT will coordinate with all local agencies and private facility owners to minimize, where possible, the effects of utility relocations and adjustments. Coordination will include, when possible, developing construction schedules to coincide with scheduled maintenance periods and off-peak loads.	ADOT to oversee for compliance
SOC-4	ADOT will coordinate with appropriate City of Phoenix officials during the final design process to consider and identify, if appropriate, enhancements such as a pedestrian overpass to reduce possible pedestrian-related impacts. Such enhancements would be independent of this project and would not change this NEPA document.	ADOT will satisfy this commitment, except to the extent of the Developer obligations set forth elsewhere in the Contract Documents.
SOC-5	ADOT will coordinate with municipalities and affected communities to address and resolve impacts on internal road networks.	ADOT to oversee for compliance

Note: A list of acronyms and abbreviations is provided at the end of the attachment.

TP Attachment 420-1
South Mountain Freeway Project Record of Decision (ROD)
Developer's Environmental Commitment Requirements

The following table includes the Project-specific environmental commitments as written in the ROD, with minor modifications for clarification purposes. As it relates to these Technical Provisions, references to freeway, project, South Mountain Freeway, proposed action, proposed freeway, and Selected Alternative mean the Project, and references to contractor mean Developer. Developer shall comply with and perform all of the contractor and ADOT requirements, including the ADOT obligations, commitments, and responsibilities, identified in the following table, except to the extent of those requirements that are specifically identified in the third column, entitled "Description of ADOT Responsibilities," which are not delegated to Developer.

ECR Number	Environmental Commitment Record Requirements	Description of ADOT Responsibilities
SOC-6	ADOT will develop and implement a public involvement plan for the design and construction phases of the proposed action. Objectives of continued public involvement may include, but will not be limited to, a level of involvement in: • architectural design treatment of structures • measures to minimize harm to Section 4(f) resources • the acquisition and relocation process • modification to the local roadway network • construction activity monitoring	ADOT to oversee for compliance
SOC-7	ADOT will coordinate with all appropriate emergency services, and efforts will be made to minimize effects on response routes and times for all service areas.	ADOT to oversee for compliance
Displacements and Relocations		
DIS-1	An acquisition and relocation assistance program will be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (49 C.F.R. Part 24), which identifies the process, procedures, and entitlements for R/W acquisition and relocation of affected residents or businesses.	See Article 5 of the Agreement for further details related to ADOT's responsibilities.
DIS-2	Relocation assistance will be available to all residential and business relocatees, without discrimination. All replacement housing will be decent, safe, and sanitary. Replacement housing is available in the general area; last-resort housing will, however, be provided if it were found that sufficient, comparable housing were not available within monetary limits of owners and tenants. If necessary, specific relocation plans will be developed to assist displacees, including residents of mobile homes, in finding new locations for their mobile homes. All acquisitions and relocations resulting from the proposed freeway will comply with Title VI of the Civil Rights Act of 1964 and with 49 C.F.R. Part 24.	See Article 5 of the Agreement for further details related to ADOT's responsibilities.

TP Attachment 420-1
South Mountain Freeway Project Record of Decision (ROD)
Developer's Environmental Commitment Requirements

The following table includes the Project-specific environmental commitments as written in the ROD, with minor modifications for clarification purposes. As it relates to these Technical Provisions, references to freeway, project, South Mountain Freeway, proposed action, proposed freeway, and Selected Alternative mean the Project, and references to contractor mean Developer. Developer shall comply with and perform all of the contractor and ADOT requirements, including the ADOT obligations, commitments, and responsibilities, identified in the following table, except to the extent of those requirements that are specifically identified in the third column, entitled "Description of ADOT Responsibilities," which are not delegated to Developer.

ECR Number	Environmental Commitment Record Requirements	Description of ADOT Responsibilities
DIS-3	Private property owners will be compensated at market value for land and may be eligible for additional benefits. As for renters, HUD considers anything under a 6 percent rental vacancy rate as a "tight" rental market. The Rental Supplement is based on a calculation between the current rental plus utilities and the determined available comparable rental unit plus utilities times 42 months (if the amount of the benefit exceeds $7,200 the benefit would fall under the Last Resort Provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended). This payment will be made available to assist with the difference in rent if the cost of replacement housing were to exceed the rental cost at that time (with conditions).	See Article 5 of the Agreement for further details related to ADOT's responsibilities.
DIS-4	ADOT will provide, where possible, alternative access to properties losing access to the local road network. In the event that alternative access could not be provided, ADOT will compensate affected property owners in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended.	See Article 5 of the Agreement for further details related to ADOT's responsibilities.
DIS-5	ADOT will coordinate with the local jurisdictions, MAG, and Valley Metro to identify opportunities to use excess R/W, whenever possible, for future park-and-ride lots and related public facilities.	ADOT will satisfy this commitment, except to the extent of the Developer obligations set forth elsewhere in the Contract Documents.
Economics		
ECON-1	During construction, ADOT will coordinate with local businesses to ensure reasonable access to businesses will be maintained during regular operating hours.	ADOT to oversee for compliance
Air Quality		

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ECR Number	Environmental Commitment Record Requirements	Description of ADOT Responsibilities
AQ-1	Mitigation measures will be followed in accordance with Maricopa County rules 310 and 310.01. Such measures could include, but are not limited to: Site preparation • Minimize land disturbance. • Use watering trucks to minimize dust. • Stabilize the surface of dirt piles if not removed immediately. • Use windbreaks to prevent accidental dust pollution. • Limit vehicular paths and stabilize temporary roads. • To prevent dirt from tracking or washing onto paved roads, stabilized construction entrances will be placed adjacent to paved roads and fencing will be installed to direct vehicles to drive over the track pad immediately before entering a paved surface.	ADOT to oversee for compliance

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ECR Number	Environmental Commitment Record Requirements	Description of ADOT Responsibilities
AQ-2	Mitigation measures must be followed in accordance with Maricopa County rules 310 and 310.01. Such measures could include, but are not limited to: Construction • Use dust suppressants on unpaved traveled paths. • Minimize unnecessary vehicular and machinery activities. • To prevent dirt from tracking or washing onto paved roads, stabilized construction entrances will be placed adjacent to paved roads and fencing will be installed to direct vehicles to drive through the entrance before entering a paved surface. • To the extent practicable, construction equipment that meets EPA's Tier 4 emission standards shall be used. • Where feasible, construction equipment powered by alternative fuels (e.g., biodiesel, compressed natural gas, electricity) shall be used. • ADOT will require training in compliance with Maricopa County rule 310 for contractor's personnel regarding air quality impacts from construction activities, potential health risks, and methods to reduce emissions.	ADOT to oversee for compliance
AQ-3	Mitigation measures must be followed in accordance with Maricopa County rules 310 and 310.01. Such measures could include, but are not limited to: Postconstruction • Revegetate or use decomposed granite or rock mulch on all disturbed land. • Remove dirt piles and unused materials. • Revegetate all vehicular paths created during construction to avoid future off-road vehicular activities. • Include control of access fence to prevent vehicle traffic on unpaved surfaces.	ADOT to oversee for compliance

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ECR Number	Environmental Commitment Record Requirements	Description of ADOT Responsibilities
AQ-4	A Traffic Management Plan will be developed and implemented to help reduce impacts of traffic congestion and associated emissions during construction.	ADOT to oversee for compliance
AQ-5	An approved dust permit will be obtained prior to demolition and construction from the Maricopa County Air Quality Department for all phases of the proposed action. The permit will describe measures to control and regulate air pollutant emissions.	ADOT to oversee for compliance
Noise		
NOI-1	General locations of noise barriers have been identified, but these locations and general noise wall design will be reevaluated as design progresses. Where feasible, noise barriers will be constructed as early as possible in the construction phasing to shield adjacent properties from construction-related noise impacts.	ADOT to oversee for compliance
Water Resources		
WRE-1	The proposed freeway will have properly designed drainage channels to resist erosion, energy-dissipating structures at all culverts where discharge velocity may cause downstream erosion, and sediment-trapping basins strategically located to maximize sediment removal and to function as chemical-spill containment structures.	ADOT to oversee for compliance
WRE-2	Vegetative or mechanical means will be used to minimize erosion from cut and fill slopes.	ADOT to oversee for compliance
WRE-3	Runoff discharge from the roadway to the irrigation district canals and conveyance ditches will be minimized by roadway design and the use of permanent BMPs.	ADOT to oversee for compliance
WRE-4	To reduce the potential impact of contaminants such as oil, grease, soil, and trash, settling basins will be used to collect water and allow materials to settle. The basins could also serve to contain chemical spills resulting from vehicle accidents. Each basin will be designed to contain an initial rainfall runoff volume before allowing discharge. If an accident occurs, and the basins are dry at the time of the accident, the spill volume, in most cases, will be accommodated.	ADOT to oversee for compliance

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ECR Number	Environmental Commitment Record Requirements	Description of ADOT Responsibilities
WRE-5	A construction AZPDES permit, for ground-disturbing activities exceeding 1 acre, will be obtained from ADEQ for the project in accordance with the provisions set forth in Section 402 of the CWA. The AZPDES permit must be consistent with discharge limitations and water quality standards established for the receiving water. The contractor shall coordinate with ADOT before filing a Notice of Intent and a Notice of Termination with ADEQ in accordance with Section 402 of the CWA and shall provide copies of the permit authorization to ADOT.	ADOT to oversee for compliance
WRE-6	A SWPPP shall be prepared by the contractor in accordance with the AZPDES construction general permit. Upon construction completion, all contaminated material (e.g., concrete wash water) will be removed and disposed of in accordance with local, regional, and federal regulations. The contractor will comply with ADOT's Post-Construction Best Management Practices Program.	ADOT to oversee for compliance
WRE-7	ADOT will coordinate with appropriate governmental bodies such as flood control districts and GRIC when designing drainage features for the proposed action.	ADOT to oversee for compliance
WRE-8	ADOT will replace water lost through well acquisitions. This will be done through full well replacement or well abandonment and compensation (if requested by the owner).	See Article 5 of the Agreement for further details related to ADOT's responsibilities.
WRE-9	An analysis will be performed during the design process to determine whether it is possible to keep the Foothills Community Association well in its current location, but move the well controls and associated piping to outside of the R/W.	ADOT will satisfy this commitment.
WRE-10	Existing irrigation canals affected by the freeway may be relocated to allow for conveyance of irrigation water (through installation of pipe, conduit, or extension) from one side of the freeway to the other.	ADOT to oversee for compliance

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WRE-11	A copy of the certificate authorizing permit coverage and a copy of the Notice of Termination acknowledgement letter will be sent to ADOT EPG, Glendale, Phoenix, Chandler, Goodyear, Tolleson, and Avondale, as appropriate, based on the location of project activities	ADOT to oversee for compliance
WRE-12	ADOT will comply with the State of Arizona Surface Water Quality Standard Rules (18 A.A.C. § 11).	ADOT to oversee for compliance
WRE-13	Water used for dust suppression will not contain contaminants that could violate ADEQ water quality standards for surface waters or aquifers and will not be discharged off site. ADOT will obtain the necessary permits for such activities.	ADOT to oversee for compliance
Floodplain		
FLD-1	Bridge structures will be designed to cross floodplains in such a way that their support piers and abutments will not contribute to a rise in floodwater elevation of more than a foot.	ADOT to oversee for compliance
FLD-2	Floodplain impacts will be minimized by implementing transverse crossings of the floodplain and avoiding longitudinal encroachments.	ADOT to oversee for compliance
FLD-3	The Maricopa County Floodplain Manager will be given an opportunity to review and comment on the design plans.	ADOT to oversee for compliance
FLD-4	On-site drainage design must be performed using the procedures in FHWA's *Urban Drainage Design Manual*, *Hydraulic Engineering Circular No. 22* (2009b, with revisions).	ADOT to oversee for compliance

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FLD-5	The hydraulic design of culverts must be performed using the procedures in FHWA's *Hydraulic Design Series No. 5*, *Hydraulic Design of Highway Culverts* (2012). Other criteria include: • Culverts must be sized, at a minimum, based on the design discharge of a 50-year storm. • With the 100-year storm, water levels must not significantly increase the flood damage potential on areas outside of the proposed R/W or as noted in accordance with ADOT's *Roadway Design Guidelines* (2012a), Section 611.3.C. • Reinforced concrete box culvert and reinforced concrete pipe must be provided with adequate cover. • Outflow discharges from detention basins must not cause peak discharges downstream greater than peak discharges without the project.	ADOT to oversee for compliance
FLD-6	Comprehensive hydrologic, hydraulic, sediment transport, and erosion-related assessments regarding potential 100-year flood effects associated with ephemeral washes will be conducted on the Selected Alternative. Results will provide information necessary to make a determination regarding what mitigation measures will need to be implemented. Measures may include physical structures associated with the freeway such as culverts.	ADOT to oversee for compliance
Waters of the United States		
WUS-1	ADOT will prepare and submit an application to USACE for a CWA Section 404 permit as appropriate, dictated by impacts on jurisdictional waters. If necessary, ADOT will submit a CWA Section 401 application to ADEQ. The permit conditions will be developed according to the current Memorandum of Agreement between USACE, ADOT, and FHWA. Work must not occur within jurisdictional waters until the appropriate CWA Section 401 certification and Section 404 permit is obtained.	ADOT will be the signatory for this commitment (see Section DR 420.2.6.2 for more details).

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ECR Number	Environmental Commitment Record Requirements	Description of ADOT Responsibilities
WUS-2	If more time is required to complete the South Mountain Freeway than authorized by the Section 404 of the CWA permit, ADOT will submit a request for a time extension to USACE and ADEQ at least 1 month prior to reaching the authorized date.	ADOT to oversee for compliance
WUS-3	If previously unidentified cultural resources are encountered in or adjacent to waters of the United States during the construction of the freeway, ADOT will notify FHWA and USACE immediately to make arrangements for the proper treatment of those resources.	Developer must alert ADOT immediately if any unidentified cultural resources are encountered during activity related to the construction of the freeway. ADOT will make arrangements for the proper treatment of those resources and notify the appropriate agencies to evaluate the significance of those resources.
WUS-4	If ADOT sells the freeway, ADOT will obtain the signature of the new owner in the applicable space provided in the permit and will forward a copy of the permit to USACE to validate the transfer of the authorization.	ADOT will satisfy this commitment.
WUS-5	ADOT will provide a copy of the Section 401 water quality certification conditions to all appropriate contractors and subcontractors. ADOT will post a copy of these conditions in a water-resistant location at the construction site where it may be seen by workers.	ADOT to oversee for compliance
WUS-6a	ADOT will maintain the project authorized by the permit in good condition and in conformance with the terms and conditions of the permit.	ADOT to oversee for compliance
WUS-6b	ADOT will not be relieved of this condition even if ADOT abandons the project. Should ADOT cease to maintain the freeway or abandon the freeway without a good faith transfer, ADOT will obtain a modification of the CWA Section 404 permit from USACE.	ADOT will satisfy this commitment.
WUS-7	If a substantive change/modification to the project is necessary, ADOT will provide notice and supporting information to FHWA, ADEQ, and USACE for review.	ADOT to oversee for compliance

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WUS-8	When construction begins, ADOT will notify ADEQ and USACE prior to the start date. When notification is made, ADOT will provide the start date and the name and phone number of the primary contractor and a contact person. When the activities are completed, ADOT will notify ADEQ and USACE after project completion as required by the CWA Section 401 certification and CWA Section 404 permit.	ADOT to oversee for compliance
WUS-9	ADOT will comply with all conditions set forth in the CWA Section 404 permit, CWA Section 401 certification, and CWA Section 402 construction general permit made as part of the project.	ADOT to oversee for compliance
WUS-10	Prior to initiating construction activities under the permit, ADOT will ensure that all appropriate contractors and subcontractors have been provided with a copy of the Section 404 authorization. This is to confirm that the contractor(s) will comply with the terms and conditions of the Section 404 authorization and that a copy of the permit is maintained on-site.	ADOT to oversee for compliance
WUS-11	After completion of the proposed project, the washes will be returned to a preconstruction elevation. [see Section DR 420.3.7 of the TPs]	ADOT to oversee for compliance
WUS-12	Pollution from the operation of equipment in the floodplain shall be cleaned up and removed by the contractor before it can be washed into a watercourse. Spills will be promptly cleaned and properly disposed.	ADOT to oversee for compliance
WUS-13	Temporary erosion and sediment control measures will be installed, at a minimum, according to ADOT's *Standard Specifications for Road and Bridge Construction* (2008) and *Erosion and Pollution Control Manual* (2012b), prior to construction and will be maintained as necessary during construction and will not be installed in a manner that causes noncompliance with the Section 404 permit.	ADOT to oversee for compliance

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WUS-14	If permanent erosion and sediment control measures are required, they will be installed as soon as practicable, preferably prior to construction activities, and will be maintained throughout the life of the project. Permanent erosion and sediment control measures will be located to protect downstream entities from construction impacts when there will be a flow in watercourses within the project boundary.	ADOT to oversee for compliance
WUS-15	Any soil contaminated as a result of contractors' operations shall be assessed and then disposed of in an appropriate, approved disposal facility.	ADOT to oversee for compliance
WUS-16	No excavation, fill, or leveling will be permitted in the watercourses outside the boundaries of the permitted work area.	ADOT to oversee for compliance
WUS-17	No fill will be taken from any watercourse outside the boundaries of the permitted work area. Fill will come from an area outside the OHWM of any watercourses and will be free of any contaminants or pollutants.	ADOT to oversee for compliance
WUS-18	Heavy equipment traffic shall be restricted from entering the watercourses outside the boundaries of the permitted work area. Appropriate barricades shall be installed to preclude this activity.	ADOT to oversee for compliance
WUS-19	During construction, the work sites shall be maintained such that no construction debris or material spillover shall be allowed in the watercourses. Upon completion of the work, all construction debris and excess material shall be removed from the job sites and disposed of appropriately outside the USACE jurisdictional areas.	ADOT to oversee for compliance
WUS-20	During construction, appropriate measures shall be taken to accommodate flows within the watercourses, such that waters will not be diverted outside the OHWM.	ADOT to oversee for compliance
WUS-21	ADOT will fence, stake, or flag the construction limits for work within waters of the United States	ADOT to oversee for compliance
WUS-22	ADOT will mitigate for any permanent loss of waters of the United States, as required by USACE.	ADOT to oversee for compliance
Geotechnical		

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ECR Number	Environmental Commitment Record Requirements	Description of ADOT Responsibilities
GEO-1	The contractor shall be required to perform in-depth pre- and postconstruction surveys for all structures located within one-half mile in the event any blasting and/or heavy ripping is planned for construction purposes. This documentation shall include photographic and video documentation.	ADOT to oversee for compliance
GEO-2	Geotechnical-related construction effects will be mitigated through use of appropriate design, including excavations and slopes in soil and rock with an accepted degree of safety, placement of fills with an accepted degree of safety, protection of excavation and fill slopes against erosion, and design of roadway subgrade and foundations in accordance with accepted practices.	ADOT to oversee for compliance
Biological Resources		
BIO-1	Protected native plants within the project limits will be affected by this project; therefore, ADOT will determine whether ADA notification will be needed. If notification is needed, ADOT will send the notification at least 60 calendar days prior to the start of construction.	ADOT to oversee for compliance

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BIO-2	The freeway will be designed to protect and maintain opportunities for wildlife movement between the South Mountains, the Gila River, and the Sierra Estrella. These opportunities will be located in the region where the freeway will intersect the southwestern portion of the South Mountains. The project will include the five multiuse crossings (bridge structures) identified in Figure 16 of the ROD. Multiuse crossing 4 is aligned with the Maricopa County Regional Trail/Sun Circle Trail/National Trail (see Figure 5-5 on page 5-8 of the Final Environmental Impact Statement). Multiuse crossings 1, 2, 3, and 5 will facilitate wildlife movement and provide access by GRIC members to the South Mountains. These crossing structures and associated fences will be designed to reduce the incidence of vehicle-wildlife collisions and to reduce the impact of the proposed action on wildlife connectivity between the South Mountains, the Gila River, and the Sierra Estrella. ADOT will coordinate with USFWS, AGFD, and GRIC Department of Environmental Quality during the design phase regarding the location and design of wildlife-sensitive roadway structures.	ADOT to oversee for compliance
BIO-3	For drainage structures, such as culverts located in potential wildlife movement corridors, ADOT will coordinate with USFWS, AGFD, and GRIC Department of Environmental Quality during the design phase regarding the location and design of wildlife-sensitive roadway structures based on the results of species surveys.	ADOT will satisfy this commitment.
BIO-4	All disturbed soils not paved that will not be landscaped or otherwise permanently stabilized by construction will be seeded using species native to the project vicinity.	ADOT to oversee for compliance
BIO-5	ADOT will coordinate with AGFD and GRIC Department of Environmental Quality regarding State and culturally sensitive species and ADOT will determine whether additional species-specific mitigation measures are appropriate.	ADOT will satisfy this commitment.

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BIO-6	If new species or critical habitat are listed following completion of the ROD, or if the potential effects on species or critical habitat from the Project have changed from those described in the Biological Evaluation, an update to the Biological Evaluation must be prepared and any required consultation with USFWS must be completed. ADOT will coordinate with USFWS, AGFD, and the Community's Department of Environmental Quality to determine whether any additional species-specific mitigation measures are required.	This commitment must be satisfied through Final Acceptance.
BIO-7	Prior to construction, ADOT will arrange for surveys to be completed for the Sonoran desert tortoise and other species as determined by ADOT to be necessary.	ADOT will satisfy this commitment.
BIO-8	ADOT will require the contractor's personnel to receive training as part of the overall project safety program regarding procedures for interactions with sensitive species that may be encountered during construction.	ADOT to oversee for compliance
BIO-9	If vegetation clearing will occur during the migratory bird breeding season (March 1 to August 31), the contractor shall avoid any active bird nests. If the active nests cannot be avoided, the contractor shall notify the ADOT Engineer to evaluate the situation. During the non-breeding season (September 1 to February 28), vegetation removal is not subject to this restriction. If any active bird nests cannot be avoided by vegetation clearing or construction activities, the ADOT Engineer will contact the EPG Biologist (602-712-6819 or 602-712-7767) to evaluate the situation.	ADOT to oversee for compliance
BIO-10	Invasive species surveys will be conducted during the design phase. If noxious or invasive species are found to be present in the project footprint during that survey, the contractor will develop and implement an invasive and noxious species control plan.	ADOT to oversee for compliance
BIO-11	To prevent the introduction of invasive species seeds, the contractor shall inspect all earthmoving and hauling equipment at the equipment storage facility and the equipment shall be washed prior to entering the construction site.	ADOT to oversee for compliance

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BIO-12	To prevent invasive species seeds from leaving the site, the contractor shall inspect all construction equipment and remove all attached plant/vegetation and soil/mud debris prior to leaving the construction site.	ADOT to oversee for compliance
BIO-13	Habitat impacts shall be minimized by restricting construction activities to the minimum area necessary to perform the activities and by maintaining natural vegetation where possible.	ADOT to oversee for compliance
BIO-14	If any Sonoran desert tortoises are encountered during construction, the contractor shall adhere to the most current guidelines regarding encounters with Sonoran desert tortoises.	ADOT to oversee for compliance
BIO-15	The contractor shall develop procedures for encounters with sensitive species in the Environmental Management Plan. The procedures shall include allowing the animal to leave of its own accord or contacting a trained person if the animal needs to be removed from the work area.	ADOT to oversee for compliance
BIO-16	A biologist will be employed to complete a preconstruction survey for burrowing owls 96 hours prior to construction in all suitable habitat that will be disturbed. The biologist shall possess a burrowing owl survey protocol training certificate issued by AGFD. Upon completion of surveys, the survey results will be reviewed with the ADOT biologist and a course of action will be identified.	ADOT will review and determine the course of action based on Developer's survey.
BIO-17	If any burrowing owls are located in the work area, the contractor shall immediately stop work at that location and notify the ADOT Engineer. The ADOT Engineer will contact the ADOT biologist to determine whether the owls could be avoided or must be relocated. The contractor shall not work within 100 feet of any active burrow until the situation had been evaluated by the ADOT biologist. If the ADOT biologist determined that the owl must be relocated, a biologist holding a rehabilitation permit from USFWS will relocate burrowing owls from the project area.	ADOT must be contacted immediately if any burrowing owls are located in the Work area and ADOT will determine whether the owls could be avoided or must be relocated.
Cultural Resources		

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ECR Number	Environmental Commitment Record Requirements	Description of ADOT Responsibilities
CUL-1	ADOT, on behalf of FHWA and in conjunction with tribal and local authorities, Western, and BIA, developed a Programmatic Agreement (PA) for the proposed action under Section 106 of the National Historic Preservation Act of 1966. No ground-disturbing activities will be conducted until ADOT EPG has notified the ADOT Engineer that the terms and stipulations of the PA have been fulfilled.	ADOT will develop and implement all testing and data recovery for cultural resources at the Known Cultural Resource Sites.
CUL-2	Strategies for prehistoric sites will include: • In accordance with the PA, a historic properties treatment plan will be developed and implemented for the sites by ADOT. ADOT will consult with SHPO and other consulting parties as required. Depending on the results of the testing program, follow-up data recovery excavations might also be required. • A burial agreement with the ASM and concerned Native American Tribes will be developed to outline procedures for proper removal, treatment, and reburial of any human remains and associated funerary objects that might be encountered.	ADOT will satisfy this commitment, except that Developer shall be responsible for costs in connection with Developer-Designated ROW and Developer's Temporary Work Areas.
CUL-3	Impacts on the Roosevelt Canal and historic Southern Pacific Railroad will be avoided through the use of bridges to span the resources.	ADOT to oversee for compliance
CUL-4	ADOT and FHWA will fund a TCP evaluation of the South Mountains TCP to be prepared by GRIC. FHWA and ADOT will fund the development and implementation of a TCP enhancement and management plan to be prepared by GRIC.	ADOT will satisfy this commitment.
CUL-5	Consultation will continue throughout design and construction with SHPO, GRIC, and other Tribes regarding other appropriate mitigation strategies; selected, limited disclosure of locations of cultural resources sites; and other cultural resources issues related to the freeway.	ADOT will be the point of contact for all consultation.

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ECR Number	Environmental Commitment Record Requirements	Description of ADOT Responsibilities
CUL-6	Pedestrian access to TCPs will be modified by the freeway. Access will be maintained by multifunctional crossings under the freeway. The interested Native American Tribes will continue to be consulted on the multifunctional crossings in conjunction with the design of the freeway.	ADOT will be the point of contact for all consultation.
CUL-7	Gaps in the cultural resources inventory are being investigated by ADOT and will continue during the design phase. All cultural resource inventories will be completed prior to any construction or any ground-disturbing activities. Additionally, all land acquired by ADOT that has not been previously surveyed will be surveyed and consultation will occur as appropriate.	ADOT will satisfy this commitment for Known Cultural Resource Sites.
CUL-8	If previously unidentified cultural resources are encountered during activity related to the construction of the freeway, the contractor shall stop work immediately at that location and shall take all reasonable steps to secure the preservation of those resources and notify the ADOT Engineer. The ADOT Engineer will contact the ADOT EPG HPT immediately and make arrangements for the proper treatment of those resources. ADOT will, in turn, notify the appropriate agency(ies) to evaluate the significance of those resources.	ADOT must be contacted immediately if any unidentified cultural resources are encountered during activity related to the construction of the freeway. ADOT will make arrangements for the proper treatment of those resources and notify the appropriate agencies to evaluate the significance of those resources.
CUL-9	The contractor shall contact the ADOT EPG HPT (602-712-8636 or 602-712-7767) at least 14 business days prior to the start of ground-disturbing activities to arrange for a qualified archaeologist to flag avoidance areas and arrange for a monitor. The contractor shall avoid all flagged and/or otherwise designated sensitive resource areas within or adjacent to the project area.	ADOT to oversee for compliance

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ECR Number	Environmental Commitment Record Requirements	Description of ADOT Responsibilities
CUL-10	If human remains or funerary objects are encountered during activity related to the construction of the freeway, the contractor shall stop work immediately within the area of the discovery, take steps to protect the discovery, and immediately notify the ADOT EPG HPT (602-712-8636 or 602-712-7767). ADOT EPG HPT shall notify and consult with appropriate Native American groups to determine the proper treatment and disposition measures in accordance with the implemented burial agreement. ADOT EPG HPT shall also inform the director of the ASM and SHPO of the discovery.	ADOT to oversee for compliance
CUL-11	All key personnel and those people involved in field work or ground disturbing activities during the design, construction, and operation of the project will attend cultural sensitivity training conducted by GRIC prior to any ground disturbing activities.	ADOT to oversee for compliance
Prime and Unique Farmlands		
PUF-1	During the design phase of the proposed action, ADOT will coordinate with affected property owners as part of the R/W acquisition process to provide access, if possible, for farm equipment between divided agricultural parcels or to purchase remaining farm parcels considered too small to be farmed either economically or functionally.	ADOT to oversee for compliance
PUF-2	Provision will be made for access to farmland otherwise made functionally inaccessible by the project.	ADOT to oversee for compliance
Hazardous Materials		
HZM-1	A site-specific Phase I assessment will be performed prior to site acquisition for each property.	ADOT will perform Phase I assessment for Retained Parcels.

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ECR Number	Environmental Commitment Record Requirements	Description of ADOT Responsibilities
HZM-2	ADOT will review the status of open regulatory cases relating to hazardous materials releases during the Phase I assessments. Responsible parties associated with any open regulatory cases will be determined at that time. ADOT will coordinate with responsible parties to determine the status of any required cleanup actions.	ADOT will perform Phase I assessment for Retained Parcels.
HZM-3	ADOT will conduct asbestos and lead-paint inspections of structures to be demolished and will require abatement measures during demolition according to NESHAP regulations.	ADOT will comply with this requirement for Retained Parcels.
HZM-4	ADOT will determine the need for additional site assessments with the Final Design submittal.	ADOT to oversee for compliance
HZM-5	Staging for construction activities near wells or dry wells will be located in areas where accidental releases of potential contaminants will be minimized and any accompanying threat to groundwater resources minimized.	ADOT to oversee for compliance
HZM-6	In cooperation with the contractor, ADOT will develop and coordinate emergency response plans with local fire authorities, local hospitals, and certified emergency responders for hazardous materials releases or chemical spills.	ADOT to oversee for compliance
HZM-7	If suspected hazardous materials are encountered during construction, work will cease at that location and ADOT will arrange for proper assessment, treatment, or disposal of those materials.	ADOT will take responsibility with respect to third-party vehicle spills per the Agreement.
HZM-8	Asbestos- and lead-paint-containing materials identified in structures to be demolished will be properly removed and disposed of prior to demolition according to NESHAP and EPA/HUD regulations, respectively.	ADOT will comply with this requirement for Retained Parcels.
HZM-9	Any existing aboveground storage tanks or underground storage tanks will be removed or relocated. The removal/relocation activities will be addressed in accordance with applicable laws and regulations of ADEQ.	ADOT will comply with this requirement for Retained Parcels.
HZM-10	The contractor shall develop an on-site health and safety plan for construction activities.	ADOT to oversee for compliance

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ECR Number	Environmental Commitment Record Requirements	Description of ADOT Responsibilities
HZM-12	The contractor shall develop a hazardous waste management plan for the handling of hazardous materials during construction.	ADOT to oversee for compliance
HZM-13	Use of asbestos-containing materials will be prohibited for construction.	ADOT to oversee for compliance
Visual Resources		

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ECR Number	Environmental Commitment Record Requirements	Description of ADOT Responsibilities
VIS-1	During the design phase, ADOT will evaluate: • leaving in place rock outcrops—if stable and not a hazard to the traveling public—not interfering with construction or looking out-of-place in the natural landscape • using vegetative buffers to screen views both of the road and from the road • transplanting saguaro, mature trees, and other cacti likely to survive the transplanting and setting-in period to visually sensitive or critical roadway areas • blending retention basins and their landscape treatments into their natural surroundings • placing landscape treatment on the periphery of R/W areas at overpass locations as well as at other areas adjacent to residential development • clustering or grouping plant material in an informal pattern to break up the linear form of the freeway • using strategic gaps in plantings to frame positive views from the road • using earth colors for overpasses, retaining and screen walls, and noise barriers • using natural-tone metals with a non-contrasting, non-glare finish for guardrails and handrails • using riprap that blends with the surrounding rocks and exposed soil color • using shotcrete that matches the color and texture of adjacent rocks • using bridges and overpass structural systems that help unify a visually complex landscape • minimizing structural sizes and/or recessing the face of structural members from the edge of the Roadway to reduce real or apparent breadth of structures	ADOT to oversee for compliance

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ECR Number	Environmental Commitment Record Requirements	Description of ADOT Responsibilities
VIS-2	If a jurisdiction through which the freeway will pass were to request treatments other than ADOT's South Mountain Freeway corridor standard palette of treatments to noise barriers, screen walls, piers, concrete barriers, retaining walls, or highly visible headwalls, such efforts may be negotiated with ADOT. (Treatments beyond the ADOT South Mountain Freeway corridor standard palette may be more expensive to construct and/or maintain. In such cases, a given jurisdiction must cover the additional expenses to secure the desired treatment.)	ADOT to oversee for compliance
VIS-3	Road cuts through the South Mountains will incorporate the newly exposed rock faces characteristic of the adjacent natural rock features, including scale, shape, slope, and fracturing to the extent that could be practicable and feasible as identified through geotechnical testing and constructibility reviews. ADOT will require the contractor to round and blend new slopes to mimic the existing contours to highlight natural formations. ADOT will evaluate having the contractor adjust and warp slopes at intersections of cuts and natural grades to flow into each other or transition with the natural ground surfaces without noticeable breaks.	ADOT to oversee for compliance
VIS-4	Freeway lighting will be provided along the median of the freeway and at interchanges to achieve desired lighting levels for safety reasons. Any freeway lighting will be designed to reduce illumination spillover onto sensitive light receptors (such as residential and natural areas).	ADOT to oversee for compliance
Temporary Construction Impacts		
TMP-1	A traffic control plan will be developed and implemented to help reduce impacts of traffic congestion and associated emissions during construction.	ADOT to oversee for compliance
TMP-2	An approved "Application for Earth Moving Permit, Demolition, and Dust Control Plan" will be obtained prior to construction from the Maricopa County Air Quality Department for all phases of the proposed action. The permit will describe measures to control and regulate air pollutant emissions during construction.	ADOT to oversee for compliance

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ECR Number	Environmental Commitment Record Requirements	Description of ADOT Responsibilities
TMP-3	The following measures will be implemented for the Selected Alternative: • All equipment exhaust systems will be in good working order. Properly designed engine enclosures and intake silencers will be used. • Equipment will be maintained on a regular basis. New equipment will be subject to new product emission standards. • Stationary equipment will be located as far away from sensitive receivers as possible. • Construction-related noise generators will be shielded from noise receivers (e.g., use temporary enclosures to shield generators or crushers, take advantage of site conditions to provide topographic separation). • Construction alerts will be distributed to keep the public informed of construction activities, and a toll-free number for construction-related complaints will be provided. • During the design phase, hours of operation will be evaluated to minimize disruptions during construction.	ADOT to oversee for compliance
TMP-4	Congestion from construction-related traffic will create temporary impacts in the project vicinity. The magnitude of these impacts will vary depending on the location of the sources of the fill material and of the disposition sites for surplus material, the land uses along the routes, the duration of hauling operations, staging locations, and the construction phasing. To identify acceptable routes and times of operation, ADOT, or its representative, will prepare an agreement with local agencies regarding hauling of construction materials on public streets.	ADOT to oversee for compliance

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ECR Number	Environmental Commitment Record Requirements	Description of ADOT Responsibilities
TMP-5	Traffic will be managed by a detailed Transportation Management Plan, including coordination with potentially affected public services. Access will be maintained during construction, and construction activities that might substantially disrupt traffic will not be performed during peak travel periods. To minimize disruption, ADOT will coordinate with local jurisdictions regarding traffic control and construction activities during special events. Requirements for the use of construction notices and bulletins will be identified as needed. The effectiveness of the traffic control measures will be monitored during construction and any necessary adjustments will be made.	ADOT to oversee for compliance
TMP-6	ADOT will coordinate with the responsible local entities regarding the relocation of utilities, as appropriate. ADOT coordination with affected utilities will be ongoing and will continue through the design phase. Utilities with prior rights will be relocated at ADOT cost according to the requirements of the utility.	ADOT to oversee for compliance
TMP-7	Disruptions to utility services, if necessary, will be restricted to being short-term and localized. ADOT and project contractors will continue to coordinate with utility providers during the design phase and project construction to identify potential problems and/or conflicts and to provide opportunities for their resolution prior to proposed actions. Replacement and/or relocation of utilities will be coordinated with ADOT construction activities and other projects in the area. Planning will include scheduling of disruptions and prior notification of adjacent property owners who will be affected by temporary service cut-offs. Emergency response procedures will be outlined by ADOT in consultation with local utility providers to ensure quick and effective repair of any inadvertent or accidental disruptions in service.	ADOT to oversee for compliance
TMP-8	GRIC access to the TCPs will be maintained during construction, but may temporarily involve detours. The TCPs will be flagged or fenced for avoidance during construction.	ADOT to oversee for compliance

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ECR Number	Environmental Commitment Record Requirements	Description of ADOT Responsibilities
Material Sources		
MAT-1	The contractor may use material sources from the ADOT *Contractor-Furnished Materials Sources List*. If the source that the contractor prefers to use is not on the ADOT list, then the contractor shall complete ADOT EPG's Material Source Environmental Analysis Application. Contractor-furnished material sources must go through a process to obtain environmental clearance for use on ADOT projects. The material source owner or operator must submit a Material Source Environmental Analysis Application, with cultural survey and reports, to ADOT EPG. After receiving the completed application, ADOT EPG will initiate a cultural consultation process. Upon successful completion of the environmental review, the material source will receive a tracking number and may be included on the ADOT *Contractor-Furnished Materials Sources List*.	ADOT to oversee for compliance
MAT-2	Materials excavated from the cuts through the South Mountains shall be used along the project only between 51st Avenue and 17th Avenue.	ADOT to oversee for compliance
Section 4(f)		
S4F-1	Where the Selected Alternative will cross NRHP-eligible properties (specifically, the Grand Canal, Roosevelt Canal, and the historic Southern Pacific Railroad [Wellton-Phoenix-Eloy Mainline]), the freeway will be constructed as an elevated span to clear the properties.	ADOT to oversee for compliance
S4F-2	Because existing access to some of the NRHP-eligible properties afforded protection under Section 4(f) may be affected, alternative access will be provided. In those instances, access will not be restricted and utility of the resources will not be altered.	ADOT to oversee for compliance

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ECR Number	Environmental Commitment Record Requirements	Description of ADOT Responsibilities
S4F-3	Where the Selected Alternative will cross over trail segments (specifically, Segments Seven, Fifty-six, Sixty-eight, and Sixty-nine of the Maricopa County Regional Trails System, and Segment One of the Sun Circle Trail), the freeway will be constructed as an elevated span to clear the trail segments.	ADOT to oversee for compliance
S4F-4	ADOT will engage Maricopa County in the design phase to coordinate the design of the freeway with relevant segments of the County's trail system.	ADOT to oversee for compliance
S4F-5	During the design phase, ADOT will consult directly with the Phoenix City Manager's office in representing City of Phoenix interests and on behalf of the Sonoran Preserve Advisory Committee, Phoenix Mountains Preservation Council, Mountain Bike Association of America, Phoenix Parks and Recreation Board, and Arizona Horsemen's Association to identify and implement other design measures, when possible, to further reduce parkland needed for the freeway.	ADOT to oversee for compliance
S4F-6	During the design phase, ADOT will consult directly with the Phoenix City Manager's office in representing City of Phoenix interests to enter into an IGA to identify and purchase replacement land. Replacement land will not exceed a 1:1 ratio (minus previously purchased replacement land) unless ADOT and the City of Phoenix determine jointly that exceeding the 1:1 ratio will be in the best interests of both parties. Under provisions set forth in the IGA entered into by both ADOT and the City of Phoenix, the City will be responsible for identification of replacement land. Once agreed upon under the terms of the IGA, ADOT will issue payment to the City of Phoenix for the acquisition of replacement land. Provisions of the IGA will ensure commitment of the transaction will be solely for the purposes of timely acquisition of public parkland within Phoenix.	ADOT will satisfy this commitment.
S4F-7	ADOT will undertake the acquisition process to obtain the land from SMPP for the Selected Alternative. Replacement land will be provided as a measure to minimize harm.	ADOT will satisfy this commitment.

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ECR Number	Environmental Commitment Record Requirements	Description of ADOT Responsibilities
S4F-8	Design measures will be implemented to blend the appearance of the cuts with the surrounding natural environment, as feasible. The degree of slope treatment will depend on the interaction of two primary factors: the angle of the cut slope and the receptivity of the cut rock to rock sculpting and rounding to mimic existing contours and allow for staining, revegetation, and other related measures to blend the slope with the South Mountains' natural setting.	ADOT to oversee for compliance
S4F-9	ADOT will undertake additional geotechnical investigations during the design phase to determine, in part, how receptive the proposed slope angles will be to slope treatments. During this period, ADOT will consult directly with the Phoenix City Manager's office in representing City of Phoenix interests and on behalf of the Sonoran Preserve Advisory Committee, Phoenix Parks and Recreation Board, and Phoenix Mountains Preservation Council in establishing a slope treatment plan for cut slopes through the ridgelines, with the clear intent to blend as well as will be possible the cut slopes with the South Mountains' natural setting.	ADOT to oversee for compliance
S4F-10	Barriers proposed to mitigate noise impacts on neighboring residential developments (near the Foothills Reserve residential development and the Dusty Lane residential area), while not specifically intended to mitigate noise intrusion into SMPP, will provide incidental noise mitigation.	ADOT to oversee for compliance

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ECR Number	Environmental Commitment Record Requirements	Description of ADOT Responsibilities
S4F-11	Where appropriate, visual intrusions will be reduced by a number of measures: • Vegetation buffers will be used to screen views of the freeway from SMPP. • Saguaros, mature trees, and other cacti likely to survive the transplanting and setting-in period will be transplanted in relatively natural areas near the proposed action to blend with the existing landscape. • Clustering or grouping plant material in an informal pattern to break up the linear form of the freeway will be utilized where appropriate to "naturalize" areas within the R/W. • Landscape treatments using native plants on the periphery of R/W areas at overpass locations and areas near residential developments will be installed where appropriate. • Aesthetic treatments and patterning will be applied to noise barriers, overpasses, abutments, retaining and screening walls.	ADOT to oversee for compliance
S4F-12	To set clear parameters defining the scope of the mitigation measures to be implemented and for making environmental determinations, an IGA will be created between ADOT and the City of Phoenix. For the proposed action through SMPP, ADOT will consult directly with the Phoenix City Manager's office in representing City of Phoenix interests and on behalf of the Sonoran Preserve Advisory Committee, Phoenix Parks and Recreation Board, and the Phoenix Mountains Preservation Council and with GRIC representatives to develop the aesthetic treatment of landscaping and structures through the park/preserve.	ADOT will be the signatory for any IGA between the City of Phoenix and ADOT.
S4F-13	During the design phase, ADOT will consult directly with USFWS, AGFD, and the GRIC Tribal Historic Preservation Officer and Department of Environmental Quality to finalize design features and locations of the crossings designed to provide access to SMPP.	ADOT will satisfy this commitment.

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ECR Number	Environmental Commitment Record Requirements	Description of ADOT Responsibilities
S4F-14	The Selected Alternative was designed to avoid two contributing elements to the South Mountains TCP, resulting in no direct use of the TCP elements. A R/W fence will restrict access to the sites by freeway users, but GRIC members will continue to gain access to the sites as they do currently. ADOT and FHWA will consult with GRIC during final design of these features.	ADOT to oversee for compliance
S4F-15	As a measure to minimize harm to the South Mountains TCP, ADOT and FHWA will provide funds for GRIC to conduct the TCP evaluation.	ADOT will satisfy this requirement.
S4F-16	ADOT will invite GRIC to participate in direct consultation with the City of Phoenix in establishing a slope treatment plan for cut slopes through the ridgelines, with the clear intent to blend the cut slope with the South Mountains' natural setting.	ADOT to oversee for compliance
S4F-17	ADOT will invite GRIC to participate in direct consultation with the City of Phoenix to develop the aesthetic treatment of landscaping and structures (e.g., noise barriers) through the South Mountains TCP.	ADOT to oversee for compliance
S4F-18	The multipurpose crossings constructed as a measure to minimize harm to SMPP will provide access from GRIC land to the mountains.	ADOT to oversee for compliance

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A.A.C. – Arizona Administrative Code
ADA – Arizona Department of Agriculture
ADEQ – Arizona Department of Environmental Quality
ADOT – Arizona Department of Transportation
AGFD – Arizona Game and Fish Department
ASLD – Arizona State Land Department
ASM – Arizona State Museum
AZPDES – Arizona Pollutant Discharge Elimination System
BIA – U.S. Bureau of Indian Affairs
BLM – Bureau of Land Management
BMPs – best management practices
C.F.R. – Code of Federal Regulations
CWA – Clean Water Act
EPA – U.S. Environmental Protection Agency
EPG - ADOT Environmental Planning Group
FHWA – Federal Highway Administration
GRIC – Gila River Indian Community
HPT – ADOT Historic Preservation Team
HUD – U.S. Department of Housing and Urban Development
IGA – intergovernmental agreement
MAG – Maricopa Association of Governments
NEPA - National Environmental Policy Act
NESHAP - National Emissions Standards for Hazardous Air Pollutants
NRHP – National Register of Historic Places
OHWM – ordinary high-water mark
PA – programmatic agreement
ROD - Record of Decision
R/W – right-of-way
SHPO – State Historic Preservation Office
SMPP – Phoenix South Mountain Park/Preserve
SWPPP – Stormwater Pollution Prevention Plan
TCP – traditional cultural property
USACE – U.S. Army Corps of Engineers
USFWS – U.S. Fish and Wildlife Service
Western – Western Area Power Administration

1

ADDENDUM #1

1 # TP ATTACHMENT 440-1 – ROADWAY DESIGN CRITERIA

TP Attachment 440-1 Roadway Design Criteria					
	Mainlines	**System to System 2-Lane Direct Connectors and HOV Direct Connectors**	**Interchange Ramps**	**Frontage Roads/ Access Roads**	**Crossroads (within Access Control)**
General					
Minimum Design Speed	65 MPH	Body: 55 MPH @ Mainline Entrance Gore: 60 MPH @ Mainline Exit Gore: 65 MPH	Body: 50 MPH @ Mainline Entrance Gore: 55 MPH @ Mainline Exit Gore: 60 MPH @ Crossroad Terminus: 35 MPH	45 MPH	40 MPH But not less than the design speed of the approaches to the interchange
Cross Section					
Lane Width	12 feet	12 feet	12 feet	12 feet	12 feet
Shoulder Width[1] (includes gutters):					
Left Shoulder	10 feet	4 feet	2 feet	2 feet	
Right Shoulder	10 feet	8 feet	Multi-Lane: 2 feet 1-Lane: 8 feet	4 feet (5 feet where there is commercial access)	6 feet (including gutter)
Barrier Offset[2]	2 feet	2 feet	2 feet	2 feet	2 feet
Maximum Superelevation Rate	6%	6%	6%	4%	2%
Normal Cross-Slope	2%	2%	2%	2%	2%[3]

TP Attachment 440-1 Roadway Design Criteria					
	Mainlines	**System to System 2-Lane Direct Connectors and HOV Direct Connectors**	**Interchange Ramps**	**Frontage Roads/ Access Roads**	**Crossroads (within Access Control)**
Curb Type (ADOT Construction Std C-05.10)	If used, Type B, E (or E-1) or C (or C-1), See Section 302.2 of the ADOT *Roadway Design Guidelines* for guidance			Type D (or D-3), h=6 inches	Outside: Type D (or D-3), h=6 inches Medians: Type A or A-1, h=6 inches
Vertical Clearance					
Over Roadway[4]	16 feet – 6 inches				
Overhead Signs[4]	18 feet – 0 inches; 18 feet – 6 inches to variable message signs				
Overhead Pedestrian Crossings[4]	17 feet – 6 inches				
Multiuse Crossings	16 feet - 0 inches at point where equestrians would cross				
Over Railroad[4]	23 feet – 6 inches				
Over Canals and Channels[4]	Per Canal / Channel Authority Requirements				
Other					
Design Vehicles	WB-67	WB-67	WB-67	WB-67	WB-67

Notes:
1. Left and right are in the direction of travel
2. Does not apply to median shoulders. Does not apply to 12 foot shoulders. 12 feet is the maximum shoulder.
3. 1.5 percent is allowable on crossroads at frontage road intersections to minimize crown breakover for the through movement.
4. The required vertical clearance must be provided over the entire roadway width, including shoulders and bike lanes. For railroads, clearance is measured from the top of rail.
5. See Section DR 440 of the TPs for design vehicle requirements at traffic interchanges and outside ADOT access control.

1

TP ATTACHMENT 440-2 – CROSSROAD DESIGN INFORMATION

TP Attachment 440-2 Crossroad Design Information								
					Through Lanes To Be Accommodated at Freeway Crossings (Base Configuration Turn Lanes Shown)			
Crossroad	**Crossing Type (Base Configuration)**	**Jurisdiction**	**Classification**	**Governmental Entity's Ultimate Standard**	**WB/SB Through Lanes**	**WB/SB Left Turn Lanes**	**EB/NB Left Turn Lanes**	**EB/NB Through Lanes**
40th Street	Interchange	City of Phoenix	Arterial	COP Detail P-1010, Type C	18', 12'	2-12'	12'	12', 18'
32nd Street	Grade Separation Only	City of Phoenix	Arterial	COP Detail P-1010, Type B	17',11',12'	—	—	12', 11', 17'
24th Street	Interchange	City of Phoenix	Arterial	COP Detail P-1010, Type C	18', 12'	2-12'	12'	12', 18'
Desert Foothills Parkway	Interchange	City of Phoenix	Arterial	COP Detail P-1010, Type C	18', 12'	2-12'	12'	12', 18'
17th Avenue	Interchange	City of Phoenix	Arterial	COP Detail P-1010, Type C	18', 12'	2-12'	12'	12', 18'
Ivanhoe Street	Grade Separation Only	Maricopa County DOT	Collector	Unknown	17'-6"	—	—	17'-6"
51st Avenue	Grade Separation Only	City of Phoenix	Arterial	COP Detail P-1010, Type CM	18', 12'	—	—	12', 18'
51st Avenue Spur	Interchange	City of Phoenix	Arterial	COP Detail P-1010, Type CM	18', 12'	2-12'	12'	12', 18'
Estrella Drive	Grade Separation Only	City of Phoenix	Arterial	COP Detail P-1010, Type D	18', 12'	—	—	12', 18'
Elliot Road	Interchange	City of Phoenix	Arterial	COP Detail P-1010, Type CM	18', 12'	12'	12'	12', 18'
Dobbins Road	Interchange	City of Phoenix	Arterial	COP Detail P-1010, Type C	18', 12'	12'	2-12'	12', 18'
Baseline Road	Interchange	City of Phoenix	Major Arterial	COP Detail P-1010, Type A	18', 2-12'	2-12'	2-12'	2-12', 18'
Southern Avenue	Interchange	City of Phoenix	Arterial	COP Detail P-1010, Type CM	18', 12'	12'	12'	12', 18'

TP Attachment 440-2 Crossroad Design Information								
					Through Lanes To Be Accommodated at Freeway Crossings (Base Configuration Turn Lanes Shown)			
Crossroad	**Crossing Type (Base Configuration)**	**Jurisdiction**	**Classification**	**Governmental Entity's Ultimate Standard**	**WB/SB Through Lanes**	**WB/SB Left Turn Lanes**	**EB/NB Left Turn Lanes**	**EB/NB Through Lanes**
Broadway Road	Half Interchange	City of Phoenix	Arterial	COP Detail P-1010, Type CM	18', 12'	12'	12'	12', 18'
Lower Buckeye Road	Half Interchange	City of Phoenix	Arterial	COP Detail P-1010, Type CM	18', 12'	2-12'	2-12'	12', 18'
Buckeye Road	Interchange	City of Phoenix	Arterial	COP Detail P-1010, Type C	18', 2-12'	2-12'	2-12'	2-12', 18'
Van Buren Street	Half Interchange	City of Phoenix	Arterial	COP Detail P-1010, Type C	18', 2-12'	2-12'	2-12'	12', 18'
Roosevelt Street	Grade Separation Only	City of Phoenix	Minor Collector	N/A	Existing			
Notes: 1. Developer shall verify existing conditions								

1

ADDENDUM #1

1 # TP ATTACHMENT 450-1 – CHARACTER AREA PLANT LIST

TP Attachment 450-1A Character Area 1 Plant List		
Botanical Name	**Common Name**	**Minimum Percentage that Each Species Shall be Represented in Final Design (%)**
Large Trees		
Cercidium floridum	Blue palo verde	10
Olneya tesota	Desert ironwood	10
Pithecellobium flexicaule	Texas ebony	10
Prosopis pubescens	Screwbean mesquite	10
Prosopis velutina	Velvet mesquite	10
Small Trees		
Acacia willardiana	Palo blanco	8
Caesalpinia cacalaco	Cascalote	8
Pistacia lentiscus	Mastic tree	8
Psorothamnus spinosus	Desert smoke tree	8
Sophora secundiflora	Texas mountain laurel	8
Sophora secundiflora ‘Silver Peso’	‘Silver Peso’ Texas mountain laurel	8
Large Shrubs		
Caesalpinia pulcherrima	Red bird of paradise	6
Calliandra sp.	Fairy duster	6
Cordia parvifolia	Little leaf cordia	6
Justicia californica	Chuparosa	6
Leucophyllum candidum	Silver Cloud sage	6
Leucophyllum frutescens	Green Cloud sage	6
Leucophyllum laevigatum	Chihuahuan sage	6
Simmondsia chinensis	Jojoba	6
Small Shrubs		
Muhlenbergia capillaris	Regal Mist	25

TP Attachment 450-1A Character Area 1 Plant List		
Botanical Name	**Common Name**	**Minimum Percentage that Each Species Shall be Represented in Final Design (%)**
Ruellia peninsularis	Baja ruellia	25
Accent		
Asclepias sp.	Milkweed	8
Carnegiea gigantea	Saguaro	8
Dasylirion wheeleri	Desert spoon	8
Fouquieria splendens	Ocotillo	8
Hesperaloe parvifloia	Red yucca	8
Yucca sp.	Yucca	8

1

TP Attachment 450-1B Character Area 2 Plant List		
Botanical Name	**Common Name**	**Minimum Percentage that Each Species Shall be Represented in Final Design (%)**
Large Trees		
Cercidium floridum	Blue palo verde	10
Cercidium microphyllum	Foothills palo verde	10
Olneya tesota	Desert ironwood	10
Prosopis pubescens	Screwbean mesquite	10
Prosopis velutina	Velvet mesquite	10
Small Trees		
Psorothamnus spinosus	Desert smoke tree	25
Sophora secundiflora ‘Silver Peso’	‘Silver Peso’ Texas mountain laurel	25
Large Shrubs		
Calliandra sp.	Fairy duster	12
Justicia californica	Chuparosa	12
Larrea tridentate	Creosote	12
Simmondsia chinensis	Jojoba	12
Small Shrubs		
Ambrosia deltoidea	Bursage	17
Encelia farinosa	Incienso brittlebush	17
Sphaeralcea ambigua	Globe mallow	17
Accent		
Asclepias sp.	Milkweed	10
Carnegiea gigantean	Saguaro	10
Ferocactus sp.	Barrel cactus	10
Opuntia sp.	Prickly pear	10
Opuntia sp.	Cholla	10

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TP Attachment 450-1C Character Area 3 Plant List		
Botanical Name	**Common Name**	**Minimum Percentage that Each Species Shall be Represented in Final Design (%)**
Large Trees		
Cercidium floridum	Blue palo verde	15
Dalbergia sissoo	Indian rosewood	5
Pistachia chinensis	Chinese pistache	5
Pithecellobium flexicaule	Texas ebony	5
Prosopis velutina	Velvet mesquite	15
Quercus virginiana	Southern live oak	5
Ulmus parvifolia	Evergreen elm	5
Small Trees		
Caesalpinia cacalaco	Cascalote	8
Chitalpa tashkinensis	Chitalpa	8
Pistacia lentiscus	Mastic tree	8
Psorothamnus spinosus	Desert smoke tree	8
Sophora secundiflora	Texas mountain laurel	8
Vitex agnus-castus	Chaste tree	8
Large Shrubs		
Caesalpinia Mexicana	Mexican bird of paradise	7
Cordia parvifolia	Little leaf cordia	7
Dodonaea viscosa	Hop bush	7
Eremophila maculate	Valentine bush	7
Leucophyllum candidum	Silver Cloud sage	7
Leucophyllum frutescens	Green Cloud sage	7
Simmondsia chinensis	Jojoba	7
Small Shrubs		

TP Attachment 450-1C Character Area 3 Plant List		
Botanical Name	**Common Name**	**Minimum Percentage that Each Species Shall be Represented in Final Design (%)**
Lantana sp. 'New Gold'	New Gold lantana	12
Muhlenbergia capillaris	Regal Mist	12
Rosmarinus officinalis prostrates	Prostrate rosemary	12
Ruellia peninsularis	Baja ruellia	12
Accent		
Agave sp.	Agave	12
Asclepias sp.	Milkweed	12
Hesperaloe funifera	Giant hesperaloe	12
Hesperaloe parviflora	Red yucca	12

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TP Attachment 450-1D Character Area 4 Plant List		
Botanical Name	**Common Name**	**Minimum Percentage that Each Species Shall be Represented in Final Design (%)**
Large Trees		
Cercidium praecox	Palo brea	15
Dalbergia sissoo	Indian rosewood	5
Pistache chinensis	Chinese pistache	5
Pithecellobium flexicaule	Texas ebony	5
Prosopis glandulosa	Honey mesquite	15
Quercus virginiana	Southern live oak	5
Small Trees		
Caesalpinia cacalaco	Cascalote	10
Chitalpa tashkinensis	Chitalpa	10
Pistacia lentiscus	Mastic tree	10
Psorothamnus spinosus	Desert smoke tree	10
Sophora secundiflora	Texas mountain laurel	10
Large Shrubs		
Bougainvillea sp.	La Jolla	5
Caesalpinia Mexicana	Mexican bird of paradise	5
Caesalpinia pulcherrima	Red bird of paradise	5
Dodonaea viscosa	Hop bush	5
Leucophyllum candidum	Silver Cloud sage	5
Leucophyllum frutescens	Green Cloud sage	5
Leucophyllum laevigatum	Chihuahuan sage	5
Simmondsia chinensis	Jojoba	5
Tecoma stans ‘Orange Jubilee’	Orange jubilee	5
Small Shrubs		

TP Attachment 450-1D Character Area 4 Plant List		
Botanical Name	**Common Name**	**Minimum Percentage that Each Species Shall be Represented in Final Design (%)**
Acacia redolens 'Desert Carpet'	Prostrate acacia Desert Carpet	10
Lantana sp. 'New Gold'	New Gold lantana	10
Muhlenbergia capillaris	Regal Mist	10
Rosmarinus officinalis prostrates	Prostrate rosemary	10
Ruellia peninsularis	Baja ruellia	10
Accent		
Aloe sp.	Aloe	12
Asclepias sp.	Milkweed	12
Dasylirion wheeleri	Desert spoon	12
Hesperaloe parviflora	Red yucca	12

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TP Attachment 450-1E Character Area 5 Plant List		
Botanical Name	**Common Name**	**Minimum Percentage that Each Species Shall be Represented in Final Design (%)**
Large Trees		
Cercidium praecox	Palo brea	12
Dalbergia sissoo	Indian rosewood	12
Eucalyptus papuana	Ghost gum	12
Prosopis glandulosa	Honey mesquite	12
Small Trees		
Acacia aneura	Mulga	10
Acacia willardiana	Palo blanco	10
Chitalpa tashkinensis	Chitalpa	10
Psorothamnus spinosus	Desert smoke tree	10
Sophora secundiflora	Texas mountain laurel	10
Large Shrubs		
Bougainvillea sp.	La Jolla	8
Caesalpinia pulcherrima	Red bird of paradise	8
Leucophyllum candidum	Silver Cloud sage	8
Leucophyllum frutescens	Green Cloud sage	8
Leucophyllum laevigatum	Chihuahuan sage	8
Tecoma stans ‘Orange Jubilee’	Orange Jubillee	8
Small Shrubs		
Acacia redolens ‘Desert Carpet’	Prostrate acacia Desert Carpet	25
Ruellia peninsularis	Baja ruellia	25
Accent		
Agave sp.	Agave	7
Aloe sp.	Aloe	7

TP Attachment 450-1E Character Area 5 Plant List		
Botanical Name	**Common Name**	**Minimum Percentage that Each Species Shall be Represented in Final Design (%)**
Asclepias sp.	Milkweed	7
Dasylirion wheeleri	Desert spoon	7
Fouquieria splendens	Ocotillo	7
Hesperaloe parviflora	Red yucca	7
Yucca sp.	Yucca	7

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ADDENDUM #1

1

TP ATTACHMENT 450-2 – SEED MIX

TP Attachment 450-2A Low Grass And Forb Seed Mix		
Botanical Name	**Common Name**	**Pounds Per Acre of Pure Live Seed**
Abronia villosa	Sand verbena	0.25
Argemone platyceras	Prickly poppy	0.25
Aristida purpurea	Purple threeawn	2
Baileya multiradiata	Desert marigold	2
Bouteloua aristidoides	Needle grama	2
Bouteloua rothrockii	Rothrock's grama	0.5
Bothriochloa barbinodis	Cane beardgrass	1
Distichlis stricta	Desert saltgrass	1
Encelia farinose	Incienso brittlebush	1
Encelia frutescens	Button brittlebush	1
Eschscholtzia Mexicana	Mexican poppy	2
Larrea tridentate	Creosote bush	0.5
Lesquerella gordonii	Gordon's bladderpod	1
Lupinus sparsiflorus	Desert lupine	1.5
Lupinus succulentus	Arroyo lupine	5
Phacelia crenulata	Arizona desert bluebell	2
Plantago ovata	Desert indian wheat	1
Salvia columbariae	Desert chia	1
Senna covesii	Desert senna	1
Sphaeralcea ambigua	Desert globemallow	2
Sporobolus cryptandrus	Sand dropseed	0.75
Verbena goodingii	Desert verbena	0.5

1

TP Attachment 450-2B Tall Background Seed Mix		
Botanical Name	**Common Name**	**Pounds Per Acre of Pure Live Seed**
Abronia villosa	Sand verbena	0.25
Acacia greggii	Catclaw acacia	025
Ambrosia dumosa	White bursage	1
Argemone platyceras	Prickly poppy	0.25
Aristida purpurea	Purple threeawn	2
Atriplex canescens	Fourwing saltbush	1
Baileya multiradiata	Desert marigold	2
Bothriochloa barbinodis	Cane beardgrass	1
Bouteloua aristidoides	Needle grama	2
Bouteloua rothrockii	Rothrock's grama	0.5
Calliandra eriophylla	Fairy duster	0.25
Cercidium floridum	Blue palo verde	0.5
Cercidium microphyllum	Foothills palo verde	0.5
Distichlis stricta	Desert saltgrass	1
Encelia farinosa	Brittlebush	1
Encelia frutescens	Button brittlebush	1
Eschscholtzia mexicana	Mexican poppy	2
Kallstroemia grandiflora	Arizona poppy	0.25
Larrea tridentata	Creosote bush	0.5
Lesquerella gordonii	Gordon's bladderpod	1
Lupinus sparsiflorus	Desert lupine	1.5
Lupinus succulentus	Arroyo lupine	5
Olneya tesota	Desert ironwood	3
Phacelia crenulata	Arizona desert bluebell	2
Prosopisjuliflora velutina	Velvet mesquite	0.25
Salvia columbariae	Desert chia	1

TP Attachment 450-2B Tall Background Seed Mix		
Botanical Name	**Common Name**	**Pounds Per Acre of Pure Live Seed**
Senna covesii	Desert senna	1
Sphaeralcea ambigua	Desert globemallow	2
Sporobolus cryptandrus	Sand dropseed	0.75
Verbena goodingii	Desert verbena	0.5

1

TP Attachment 450-2C Wash Seed Mix		
Botanical Name	**Common Name**	**Pounds Per Acre of Pure Live Seed**
Ambrosia dumosa	White bursage	1
Aristida purpurea	Purple threeawn	2
Atriplex canescens	Fourwing saltbush	1
Baileya multiradiata	Desert marigold	0.5
Bothriochloa barbinodis	Cane beardgrass	1
Bouteloua aristidoides	Needle grama	0.5
Bouteloua rothrockii	Rothrock's grama	0.5
Calliandra eriophylla	Fairy duster	0.25
Celtis pallida	Desert hackberry	2
Cercidium floridum	Blue palo verde	0.5
Chilopsis linearis	Desert willow	0.5
Distichlis stricta	Desert saltgrass	3
Encelia farinosa	Incienso brittlebush	1
Encelia frutescens	Button brittlebush	1
Eschscholtzia mexicana	Mexican poppy	2
Larrea tridentata	Creosote bush	0.5
Lupinus sparsiflorus	Desert lupine	1.5
Lupinus succulentus	Arroyo lupine	5
Lycium andersonii	Wolfberry	2
Olneya tesota	Desert ironwood	3
Phacelia crenulata	Arizona desert bluebell	2
Prosopisjuliflora velutina	Velvet mesquite	0.25
Salvia columbariae	Desert chia	1
Senna covesii	Desert senna	1
Sphaeralcea ambigua	Desert globemallow	2
Sporobolus airoides	Alkali sacaton	2

TP Attachment 450-2C Wash Seed Mix		
Botanical Name	**Common Name**	**Pounds Per Acre of Pure Live Seed**
Sporobolus cryptandrus	Sand dropseed	0.5
Verbena goodingii	Desert verbena	0.5

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TP ATTACHMENT 470-1 – ROW FORMS

ARIZONA DEPARTMENT OF TRANSPORTATION
RIGHT OF WAY GROUP
ACQUISITION SECTION
205 South 17th Avenue, MD 612E
Phoenix, Arizona 85007

AUTHORIZATION TO RELEASE INFORMATION TO THIRD PARTY

To Whom It May Concern:

The Arizona Department of Transportation is currently in the process of purchasing my property located at _____, Phoenix, Arizona.

You may consider this letter as your authorization to provide the following loan information to the Arizona Department of Transportation. We are enclosing a self-addressed stamped envelope for your convenience.

1. Current Principal Balance _____
2. Current Interest Rate _____
3. Monthly Payment (principal & interest only) _____
4. Original term of loan (months) _____
5. Remaining term of loan (months) _____
6. Heloc loan balance 180 days prior* _____

If you have any questions, please contact Right of Way Agent _____
Phone Number: _____

THIS LETTER ALSO AUTHORIZES YOU TO PROVIDE ALL INFORMATION ON MY LOAN TO THE STATE'S ESCROW AGENCY UPON REQUEST. *NOTE IF MORTGAGE IS A HELOC, PLEASE PROVIDE BOTH CURRENT PRINCIPAL BALANCE AND PRINCIPAL BALANCE THAT EXISTED 180 DAYS PRIOR TO THIS REQUESTED DATE. DO NOT INCLUDE ANY LATE PAYMENTS, FEES, ETC. IN PRINCIPAL BALANCE.

Property owner to provide current:

Mortgage loan servicer _____
Mortgage loan servicer address _____
Mortgage loan number _____
Loan servicer phone number _____

_____ _____
Property Owner/Borrower Date Property Owner/Borrower Date

Project:_____ Section:_____ Parcel:_____

RIGHT OF ENTRY AND USE

Name
Attention
Address
City, State, Zip Code

Dear

Permission is hereby granted for _____ of _____, employees or their agents to enter upon the land State of Arizona, by and through the Arizona Department of Transportation (ADOT) land described as follows:

Property Identified as: Approximately _____ square feet of that portion of Land _____Arizona, GSRB&M

Part of Tax Code # _____

ADOT Parcel # _____

For the purpose(s) of: Access for _____

It is understood that this is a voluntary permission and is not a waiver in any way of the right to compensation for such land or of any remedy authorized by law to secure payment thereof.

This Right of Entry permission is in effective on the **Close of Escrow Date or the Order of Immediate Possession**, and it is further agreed that said permission will terminate automatically **upon the beginning of the proposed construction of the** _____.

In receipt of this agreement we are requesting from the _____-, a Certificate of Public Liability Insurance naming ADOT as "Additional Insured" in the amount of not less than $2,000,000.00 and will hold harmless the Arizona Department of Transportation from any liability as a result of any actions caused by _____, agrees to hold the State of Arizona, by and through the Arizona Department of Transportation (ADOT) harmless from any liability as a result of actions caused by _____, in conjunction with the its employees, licensees, invitees, trespassers or third parties.

On _____ day of _____, 2014.

_____ _____
DATE

APPROVED: ARIZONA DEPARTMENT OF TRANSPORTATION:

By: _____
Raul R. C. Torres, Manager
Property Management Section

ARIZONA DEPARTMENT OF TRANSPORTATION (ADOT)
RIGHT OF WAY GROUP – STATEWIDE/URBAN ACQUISITION SECTION

SUMMARY STATEMENT OF OFFER TO PURCHASE AND IMPROVEMENT REPORT

This statement accompanies our letter of _____ and shows the basis on which the offer is made, including any settlement amount.

A. IDENTIFICATION OF THE PROPERTY

The land is identified as _____,
_____County, Arizona

also known as Assessor Parcel No(s). _____

B. THE ESTATE OR INTEREST NEEDED

The estate(s) or interest(s) needed is/are as follows (indicated by an "X"):

☐	Fee interest (new right-of-way)	_____	Square Feet
☐	Underlying fee interest (existing rights-of-way)	_____	Square Feet
☐	Easement (new right-of-way)	_____	Square Feet
☐	_____Easement	_____	Square Feet
☐	Temporary Construction Easement	_____	Square Feet
☐	_____	_____	Square Feet

C. THE OFFER AS JUST COMPENSATION, AND BREAKDOWN

The amount offered represents just compensation, and is the result of a review and analysis of an appraisal made by a certified real estate appraiser. If only part of the property is needed, full consideration has been given to the value of the remaining property, including items requiring compensation on a "cost-to-cure" basis, if any. The analysis of the remaining property takes into account the effect of the acquisition of the land needed, and the establishment and construction of the project. A breakdown of the offer is as follows:

Land (including improvements)	$	_____
Severance Damages to remaining property (possible on partial acquisitions only)	$	_____
"Cost-to-Cure" compensation involving a facility or component on the remaining property	$	_____
_____	$	_____
Total Just Compensation	$	_____

Project:_____ Section:_____ Parcel:_____

1 – 3

D. THE IMPROVEMENTS

THE IMPROVEMENTS ASSOCIATED WITH THE PURCHASE ARE DESCRIBED AS FOLLOWS: _____

It is hereby acknowledged that all buildings and other improvements listed above that are situated entirely within or partially within the Right of Way take limits are conveyed to ADOT with Rights of Entry upon the Grantors remaining land for the purpose of building removal and other improvements as noted.

E. COST TO CURE

THE COST TO CURE ASSOCIATED WITH THE PURCHASE ARE DESCRIBED AS FOLLOWS: _____

Grantor agrees to remove all cost to cure items no later than 30 days from the date of payment, and assumes all liability connected with said removal. Further, upon expiration of the time provided for removal, all improvements associated with the cost to cure remaining partially or wholly upon the lands conveyed shall become the property of the State of Arizona, and all rights of the Grantor to said improvements associated with the cost to cure shall cease and terminate. Grantor shall be liable for the reasonable cost incurred in removing said improvements. (REMOVE STATEMENT IF COST TO CURE IS NOT WITHIN R/W)

COMMENTS AND/OR EXCLUSIONS:

_____

PERSONAL PROPERTY NOT ACQUIRED (INCLUDES ITEMS NOT PERMANENTLY ATTACHED):

_____

F. THE DOCUMENTS NEEDED

Following is a summary of the documents requiring signature (indicated by "X"):

☐ **Purchase Agreement** (this document shows the terms of the transaction, and the attached Exhibit "A" provides the exact legal description)

☐ **Warranty/Special Warranty/Quitclaim Deed** (to be notarized)

☐ Extended Occupancy Agreement

☐ Right of Way Contract (to be notarized)

☐ Temporary Construction Easement

☐ **Manufactured Home**

☐ **Easement** (to be notarized)

☐ **Arizona Substitute W-9 Form**

☐ **Summary Statement of Offer to Purchase and Improvement Report** (see below)

G. SECURITY DEPOSIT INFORMATION AND ACKNOWLEDGMENT

ADOT shall withhold $_____ in escrow, as a security deposit, in accordance with the terms of the Purchase Agreement.

Project:_____ Section:_____ Parcel:_____

H. SUBSURFACE IMPROVEMENT STATEMENT

1. I ☐ am ☐ am not aware of the presence of any subsurface improvements (e.g., septic systems, storm cellars, ground wells) within the area of ADOT's acquisition.*
2. Well(s) ☐ Yes ☐ No Well Registration No(s): 55-_____
3. Irrigation Water Rights ☐ Yes ☐ No **IGR Number**: 58-
4. Well is located ☐ within the acquisition area, ☐ outside the acquisition area.
   (NOTE: If you answered yes regarding water rights, please provide a copy of the appropriate certificate if available)

*If aware of such improvements, please provide any information that may assist in locating same.

GRANTOR

_____ Date _____

_____ Date _____

08/1/12

Project:_____ Section:_____ Parcel:_____

DEMOLITION AUTHORIZATION

DATE:_____ **DEMO #:**_____

PARCEL(S)#:_____

JOB LOCATION: _____

LIST OF STRUCTURES:_____

PERMITS: _____**DEMO** _____**DUST**

NESHAP NOTIFICATION FILED:_____

UTILITIES SHUT OFF: ___**ELECTRIC** ___**GAS** ___**WATER**____**PHONE**____**CABLE**

ABATEMENT COMPLETED BY (COMPANY/OVERSIGHT):

_____

DATE ABATEMENT COMPLETED:_____

IDENTIFY HAZARDOUS MATERIALS: _____

UNDERSTAND ENTIRE SCOPE OF WORK:_____

ALL PARTIES RECEIVED DEMO SPECS:_____

POTENTIAL: UNDERGROUND STORAGE TANKS_____**SEPTIC SYSTEM**_____

SPECIAL CONDITIONS OR CAUTIONS:_____

REMARKS:_____

_____

SIGNATURES

_____
DEMOLITION CONTRACTOR/SUPER/MGR

_____
DEMOLITION ONSITE EQUIP OPER

_____
ADOT DEMOLITION REPRESENTATIVE

(THIS CHECKLIST SHALL SERVE AS THE FINAL AUTHORIZATION FOR THE DEMO COMAPANY TO COMMENCE WORK ON PROPERTY)

Arizona Department of Transportation
Intermodal Transportation Division
206 South Seventeenth Avenue Phoenix, Arizona 85007-3213

RE: Project #:_____

I certify that I have received the following documents from the Arizona Department of Transportation:

1. State of Arizona Asbestos Contract Directory
2. Asbestos NESHAP Regulations
3. NESHAP Notification for Renovation and Demolition Activities, Arizona Department of Transportation Facilities
4. ADOT Erosion and Pollution Control Manual

_____ _____ _____
SIGNATURE PRINTED NAME DATE

_____
FIRM'S NAME

_____
STREET ADDRESS

_____ (____)_____
CITY STATE ZIP CODE TELEPHONE

ADDENDUM #1

1 # TP ATTACHMENT 470-2 – Demolition Contractor Requirements

Demolition Contractor Requirements

Demolition Contractors Experience and Licensing:

A. Minimum of 5 years experience in demolition as primary work.
   1. Commercial and residential experience
   2. Must be able to provide detailed qualifications in performing the range of demolition services on various property types in compliance with NESHAP standards, including team's resumes.
   3. Must be able to provide 3 examples of work completed similar to the Work to be contracted to complete and references
   4. Must have adequate staff to complete contract requirements on time.

B. Demolition contractor and its sub-contractors must be licensed and bonded within the State of Arizona, minimum licensing requirements are; B-1, L-57, K-57, and C-22R. Copies of licenses to be provided.

C. Demolition contractor and its sub-contractors must provide ADOT with a *Certificate of Insurance* as defined by ADOA Risk Management.

D. Demolition contractor must not subcontract work without review and consent from ADOT and all approved sub-contractors must comply with the same requirements of the prime demolition contractor.

E. Must provide a payment and performance bond

F. All demolition contractor or sub-contractors must provide and file all necessary permits required to include proper filing of all NESHAP, SWPPP, dust permits, and any and all required documentation regarding regulatory requirements. Copies of all documents must be provided to ADOT.

Equipment:

A. Provide a detailed listing of equipment owned and ability to obtain additional equipment necessary to complete the assigned work within the specified time frame.

B. All equipment must conform to current Federal, State, EPA and OSHA Laws, rules, and regulations.

C. Equipment must not be utilized for any activity that is not related to the demolition project.

D. All equipment must be in good running order and truck bed should contain side boards and top covers to prevent debris and material from spilling out.

Personnel:

A. Detailed resume of all key personnel.

B. Demolition project manager, onsite superintendent or foreman, must be AHERA certified as a contractor/supervisor. AHERA certification credential must be available at all times. If the designated individual leaves the work site, all work must cease.

C. Company must have designated and have a certified dust control coordinator on site and all water truck operators must have their certification in basic dust control. All credentials must be available at all times.

Job Site Requirements:

A. Demolition contractor and its sub-contractors must ensure that all debris and waste is deposited in an approved licensed landfill as defined by the type of waste classification.

B. Demolition contractor and its sub-contractors must remove all structure, substructures and abandoned utilities and remove trash and debris from the site and backfill any excavation with clean fill. If any excavation requires backfill it must be backfilled to a 30º slope or back to grade upon direction of the demolition project manager.

C. Remove all Freon by an approved certified EPA technician from the A/C units on the structures prior to beginning demolition.

D. Demolition contractor and its sub-contractors must be responsible for coordination and contacting Blue Stake and identify any utilities within the work area.

E. If any asbestos containing material or other hazardous material is discovered on the work site all work must cease, the demolition project manager must be notified and all workers must be removed from the area until the material can be analyzed, identified, and removed upon which the work can resume upon written notification by the demolition project manager.

F. Contractor must submit the NESHAP notification for review and approval by ADOT prior to filing it with the appropriate jurisdiction, as required by Law.

G. Demolition contractor must notify the demolition project manager of any unforeseen item discovered during demolition prior to removing said same from the project site.

H. Demolition contractor must notify ADOT of any environmental concerns that may be uncovered during the demolition process and cease work in the area immediately until the demolition project manager issues a release to commence work.

Utility Abandonments:

A. ADOT will provide a blank ABANDONMENT LETTER (template) to Developer for there use in abandoning the utilities.

B. The demolition contractor must have a contact person or number for all Utilities companies to fax or email abandonment letters and cc ADOT on every correspondence.

C. Gas-remove meters and abandon riser.

D. Electrical-remove meters and overhead lines.

E. Water-remove meters.

F. Communication – Phone, Cable

G. Contractor must provide ADOT a time schedule as to when the abandonment will take place prior to any work (asbestos or demo) work be done.

TP ATTACHMENT 470-3 – Acquisition/Relocation Status Report

[THE ACQUISITION/RELOCATION STATUS REPORT IS INCLUDED IN THE RIDS AND WILL BE INCORPORATED AS TP ATTACHMENT 470-3 IN ADDENDUM #3]

ADDENDUM #1

1 # TP ATTACHMENT 500-1 – MAINTENANCE TABLE

TP Attachment 500-1 Maintenance Table									
			Repair Response						
Ref.	**Element**	**Performance Requirement**	**Temporary**	**Permanent**	**Inspection Method**	**Inspection Frequency**	**Measurement Record**	**Target**	**Weight**
1 – Public Appearance									**20%**
1.1	Debris and obstructions	Paved surfaces and roadside is free from debris and obstructions that presents a hazard to motorists	N/A	2 hours paved surfaces, 48 hours other areas	Visual	Weekly	No debris on travelled way or roadside areas	100%	
1.2	Litter	Keep project in neat condition. Remove and dispose of litter regularly,	N/A	1 week, except that significant incidents of litter deposited on the Project require 2 hour response	Visual – no more than 20 pieces of litter per auditable section when travelling at highway speed.	Weekly	Inspection records showing compliance	<20 pieces of litter per auditable section	
1.3	Sweeping	Keep all hard shoulders, gore areas, ramps, intersections, islands, and frontage roads swept clean. Remove and dispose of all sweepings without stockpiling in the ROW	N/A	1 week except gores and ramps – 2 weeks	Visual No un-swept areas greater than 24 inches wide, 50 feet in length or ½ inch deep	Weekly	Inspection records showing compliance	100%	
1.4	Graffiti	All surfaces within the right-of-way shall be maintained free of graffiti.	N/A	24 hours for profanity, areas visible to travelling public and for specific call outs. 1 week for other graffiti discovered in course of Maintenance activities	Visual / Inspection	1 month	Inspection records.	100%.	
1.5	Traffic Signals	All signals including cabinets, signal supports wiring, lenses, and detection loops are functional, clean, aligned, structurally sound, and power supply is maintained. Cabinet electronics are not included.	2 hours	2 weeks	Visual	Monthly	Inspection records.	100%	
1.6	Landscaped areas (Character Areas 1,3,4,5)	All landscaped areas are maintained to their originally constructed condition. Landscaped areas are as designated in the Plans. Irrigation system maintenance and operation; plant maintenance; pruning; insect, disease, and pest control; fertilization; and watering are undertaken according to MMP. Desert pavement, granite mulch, rock mulch, and decomposed granite areas are kept free of weeds. Backflow preventers are operating properly. Damaged or dead vegetation is replaced.	N/A	1 month	Visual Backflow preventers: Certified by qualified inspector	Monthly Annually	Inspection records showing compliance..	X	

TP Attachment 500-1 Maintenance Table									
Ref.	**Element**	**Performance Requirement**	**Repair Response**		**Inspection Method**	**Inspection Frequency**	**Measurement Record**	**Target**	**Weight**
			Temporary	**Permanent**					
1 – Public Appearance									**20%**
1.7	Landscaped areas (Character Area 2)	Plant maintenance; pruning; insect, disease, and pest control; fertilization; and watering are undertaken according to MMP. Vegetation removal at intersections, ramps, or other areas maintains visibility of appurtenances and sight distance. Vegetation does not encroach into or on paved shoulders, main lanes, sidewalks, islands, riprap, traffic barriers, or curbs. A herbicide program is undertaken to control noxious weeds and to eliminate vegetation in pavement or concrete. The height of grass and weeds is kept between 2 in. and 8 in. Mowing begins before vegetation reaches 8 in.	N/A	1 month	Visual	Monthly	Inspection records showing compliance.	100%	
1.8	Fire Hazard	Fire hazards are controlled	N/A	24 hours	Visual	Monthly	Instances of dry brush or vegetation presenting a fire hazard	0	
2 – Roadway – Pavement Ride									**35%**
2.1	Pavement Ride	All roadways have a smooth, quiet surface course (including bridge decks, covers, gratings, frames and boxes) free from Defects.	30 days	1 year	Ride quality: Measurement of International Roughness Index (IRI) according to ADOT Standards, Operating Inertial Profilers. (New Construction is subject to Construction Standards).	Once every other year	Mill and replace AR-ACFC when: Number of Auditable Sections with an average IRI greater than or equal to 150 inches/mile. Mainline lanes and ramps, 0.1 mile average IRI greater than or equal to 150 inches/mile. Frontage roads, 0.1 mile average IRI greater than or equal to 170 inches/mile	0 0 0	

TP Attachment 500-1 Maintenance Table									
			Repair Response						
Ref.	**Element**	**Performance Requirement**	**Temporary**	**Permanent**	**Inspection Method**	**Inspection Frequency**	**Measurement Record**	**Target**	**Weight**
3 – Roadway – Pavement Distress Factors									**10%**
3.1	Pavement distress factors other than ride	Pavement does not exhibit other pavement distress factors listed in FHWA publication on distress identification manual for long term pavement performance program	48 hours for distress affecting traffic on mainline lanes, ramps, and frontage roads. 30 days for less severe distress on travelled way	1 year	Visual	Monthly	Severity rating of “low” or better” for all pavement areas for all distress factors	100%	
			N/A	1 Year	Ruts – Mainline, shoulders, frontage roads, crossroads, and ramps: Depth as measured using automated device in compliance with ADOT Standards. 10-feet straightedge used to measure rut depth in localized areas.	Every other year	Number of Auditable Sections with average rut depth greater than 1/2 inch. Depth of rut at any location greater than 1 inch.	0	
			N/A	6 months	Shoulder/Edge drop offs: Physical measurement of edge drop-off level compared to adjacent paved surface.	Monthly	Repair when: Abrupt vertical differential between the travel lane and paved shoulder reach 2 inches.	100%	
			48 hours	1 year	Potholes: Visual	Monthly	Repair when: Occurrence of potholes of low severity or higher.	100%	
			48 hours for distress affecting traffic on mainline lanes, ramps, and frontage roads. 30 days for less severe distress on travelled way	1 year	Base failures: Visual	Annually	Repair when: Occurrence of Base and/or subgrade failures of low severity or higher.	100%	
			N/A	6 months	Cracks: Visual	Annually	Clean and seal cracks when: Occurrence of individual cracks 1/4 inch wide or wider.	100%	

TP Attachment 500-1
Maintenance Table

Ref.	Element	Performance Requirement	Repair Response		Inspection Method	Inspection Frequency	Measurement Record	Target	Weight
			Temporary	Permanent					
3.1 (Cont.)	Pavement distress factors other than ride	Pavement does not exhibit other pavement distress factors listed in FHWA publication on distress identification manual for long term pavement performance program	48 hours for distress affecting traffic on mainline lanes, ramps, and frontage roads. 30 days for less severe distress on travelled way	1 year	Settlement / Heave / Distortion: Depth as measured using automated device in compliance with ADOT Standards. 10-feet straightedge used to measure rut depth in localized areas.	Annually	Repair when: Surface deviations reach 1-1/2- inches in a length of 50 feet. International Roughness Index (IRI) exceeds 150 inches/mile. Surface deviations exceed 1/2 inch between adjacent slabs.	100%	
			48 hours for distress affecting traffic on mainline lanes, ramps, and frontage roads. 30 days for less severe distress on travelled way	1 year	Joints separation or displacement: Physical Measurement	Annually	Repair when: Concrete pavement joints and shoulder joint separations between concrete pavement and adjacent asphaltic concrete pavement exceed 1/4 inch in width. Concrete pavement joint width more than 1 inch or faulting more than 1/4 inch.	100%	
			48 hours for distress affecting traffic on mainline lanes, ramps, and frontage roads. 30 days for less severe distress on travelled way	1 year	Spalling: Physical Measurement	Annually	Repair when: Transverse spall which exceeds 4 inches in length in the direction of travel or which adversely affects ride quality. Longitudinal spall which adversely affect ride quality.	100%	
3.2	Curbs, sidewalks ADA ramps	Concrete curbs, sidewalks are ADA compliant and are not displaced or damaged.	1 week for conditions affecting ADA requirements. 1 month for other conditions	6 months	Visual	Monthly	Inspection records and physical measurements showing compliance	100% for ADA requirements 90% in auditable section for curb	

TP Attachment 500-1 Maintenance Table									
			Repair Response						
Ref.	**Element**	**Performance Requirement**	**Temporary**	**Permanent**	**Inspection Method**	**Inspection Frequency**	**Measurement Record**	**Target**	**Weight**
4 – Safety and Security									**15%**
4.1	Safety Barriers, attenuators, barrier end treatments	All barriers, guard rail / bridge rail transitions, guard rail end treatments, and attenuators are fully functional, not damaged or displaced and are in proper location and orientation	2 hours	1 week for attenuators and barrier end treatments, 30 days for other failures	Visual	Annual	Inspection records showing compliance	100%	
4.2	Fence/Gates and noise walls	All ROW fence and gates are in good repair, gates are closed and locked. Noise walls are undamaged and functional;	24 hours for ROW fence and gates, Repairs on noise walls that function as ROW fence must be within 24 hrs. 30 days for other noise wall; repairs	1 week for ROW fences and gates, 6 months for noise wall	Visual	Monthly	Inspection records showing compliance	100%	
4.3	Signage and delineators	All signs and delineators are clean, oriented properly, legible, retro-reflectivity greater than 75% of new, unauthorized signs are removed, obsolete signs are removed or replaced,	2 hours for safety critical signs (regulatory and warning); 1 week for other signs.	2 weeks	Visual	Annual	Inspection records showing compliance	100%	
4.4	Lighting	Luminaires are illuminated, clean free from defects, properly aligned; sign lighting is functional. Electrical supply is maintained,	2 hours for restoration of electrical supply; 2 hours for sign lighting for safety critical signs, 24 hours for other sign lighting, N/A for street lighting luminaires	1 month	Visual	Annual	Number of auditable sections with less than 90% of luminaires functioning; instance of 3 or more consecutive luminaires not functioning; lack of sign lighting creating an illegible condition for the sign	90% 0%	
4.5	Pavement marking	Pavement markings are complete, of correct color and configuration. Retro-reflectivity is 75% of new condition	48 hours	3 months	Visual	Annual	90% of pavement markings are present and compliant; no incorrect markings are present	90%	

TP Attachment 500-1 Maintenance Table									
			Repair Response						
Ref.	**Element**	**Performance Requirement**	**Temporary**	**Permanent**	**Inspection Method**	**Inspection Frequency**	**Measurement Record**	**Target**	**Weight**
5 – Structures									**10%**
5.1	Bridges	FHWA mandated inspections – these inspections are not delegated. ADOT will perform the required inspections. Developer will be required to carry out temporary and permanent repairs as indicated in the inspection reports	2 hours for conditions that affect life safety; 1 week or as indicated in bridge inspection report for other issues.	6 months or as indicated in bridge inspection reports.	By ADOT	Once every other year	Bridges in full repair with no condition rating below 7	100%	
		Visual inspections of bridge components	2 hours for conditions that affect life safety; 1 week or as indicated in bridge inspection report for other issues.	6 months or as indicated in bridge inspection reports.	Visual	Annual	No visually apparent defects	100%	
5.2	Retaining walls	Mechanically stabilized earth and other types of retaining walls are free from impact damage, dislocation, are properly drained, have no loose components, and no exposed reinforcing.	2 hours for conditions that affect life safety, 30 days for other conditions	6 months	Visual	Annual	Inspection records showing compliance	0	
5.3	Sign and lighting supports	Sign and lighting supports are structurally sound, have no loose hardware or anchorages and are properly positioned and aligned.	2 hours for conditions that affect life safety, 1 week for other conditions	3 months	Visual	Annual	Inspection records showing compliance	0	
6 – Ponding/Flooding, Drainage and Slopes									**10%**
6.1	Ponding and flooding	Roadway is free from standing water after 50 year storm event	2 hours	1 month	Visual	Monthly and after storm event in compliance with SWPPP requirements	Areas of standing water within travel lanes are less than 50 SY in extent.	100%	
6.2	Detention and retention basins	Detention and retention basins are substantially free from standing water after 50 year storm event	24 hours	1 month	Visual	Monthly and after storm event in compliance with SWPPP requirements	Areas of standing water within detention and retention basins are less than 1,000 SY in extent.	100%	
6.3	Drainage systems	All ditches, channels, culverts, piped drainage systems, including pressure or syphon drainage systems work as designed to carry design flows. Catch basins, inlets, and culverts are substantially free from debris and obstructions in order to carry the design flows.	24 hours as required to maintain capacity in case of storm event	6 months or as required to maintain capacity in case of storm event	Visual and CCTV methods a appropriate.	Annual	Drainage system capacity is unimpaired	100%	
6.4	Slopes	Cut and fill slopes are maintained at design configuration without slope failures or erosion. Erosion debris is kept from roadway.	2 hours for failures that affect or threaten travelled way. 1 month for other issues.	6 months	Visual	Annual	Erosion materials or slope failures affecting travelled way	none	

ADDENDUM #1

1 **TP ATTACHMENT 500-2 – EXAMPLE ASSET CONDITION SCORING TABLE**

TP Attachment 500-2 Example Asset Condition Scoring Table										
Maintenance Limits		**Theoretical Maximum ACS**			**Adjusted Baseline ACS**			**Recorded ACS**		
Auditable Sections		**Max Adjectival Score**	**Weighting Factor (Table 2)**	**Maximum Element Score**	**Baseline Adjectival Score**	**Weighting Factor (Table 2)**	**Baseline Element Score**	**Recorded Adjectival Rating**	**Weighting Factor (Table 2)**	**Recorded Element Score**
Physical AS 1										
	Element 1	5	0.35	1.75	5	0.35	1.75	5	0.35	1.75
	Element 2	5	0.15	0.75	5	0.15	0.75	4	0.15	0.60
	Element 3	5	0.10	0.50	5	0.10	0.50	3	0.10	0.30
Physical AS 2										
	Element 1	5	0.10	0.50	5	0.10	0.50	5	0.10	0.50
	Element 2	5	0.15	0.75	5	0.15	0.75	4	0.15	0.60
	Element 3	5	0.10	0.50	5	0.10	0.50	5	0.10	0.50
Physical AS "n"										
	Element 1	5	0.10	0.50	5	0.10	0.50	2	0.10	0.20
	Element 2	5	0.15	0.75	5	0.15	0.75	4	0.15	0.60
	Element 3	5	0.10	0.50	5	0.10	0.50	4	0.10	0.40

Summation of Theoretical Maximum ACS **∑ (maximum adjectival score ∗weighting factor) for all elements**	**Summation of Baseline ACS** **{∑ baseline adjectival score ∗weighting factor) for all elements}∗baseline adjustment factor from table 3**	**Summation of Recorded ACS** **∑ (recorded adjectival score ∗weighting factor) for all elements**
6.50	6.50	5.45
Adjustment of Baseline ACS Baseline ACS ∗ adjustment factor from Table 400-5 in Section MR 400 of the TPs		**Asset Condition Score** **(recorded ACS ÷ Adjusted baseline ACS) %**
Year 10 adjustment: 96.0% 6.72		87.3%

1

ADDENDUM #1

1 TP Attachment 500-3 - Landscaping Preventative Maintenance Requirements

ADDENDUM #1

1 Staff Qualifications

1.1 Landscaping Supervisor

Landscaping Supervisor must be knowledgeable in the area of responsibility and have a minimum of 12 months experience in the past 24 months, performing in the same capacity on projects of similar size and scope. Supervisor must show continuing education in regards to the landscape and irrigation industry (i.e. class and/or seminars). Supervisor must have completed at least one of the following:

A. Arizona certified Landscaping Professional program or acceptable equivalent
B. Twelve semester hours of Horticulture/Plant care from accredited college
C. Certified Arborist Program as established by the International Society of Arboriculture
D. Other recognized certification programs that require the same level of plant care knowledge/experience

1.2 Irrigation Technician(s)

Irrigation technician(s) must be knowledgeable in the area of responsibility and have a minimum of 12 months experience in the past 24 months performing in the same capacity on projects of similar size and scope. Irrigation worker must show continuing education in regards to the landscape and/or irrigation industry Plant Preventative Maintenance.

1.3 Backflow Prevention Certifiers

Backflow Prevention Certifiers must be certified for the work they perform.

2 General Plant Maintenance

2.1 Tree and Plant Growth

Perform all horticultural techniques necessary to promote and maintain healthy growth of trees and plants, including staking, tying, removing or loosening ties, and removing stakes, as needed. Special devices used to tie up plants to retaining walls shall be maintained. Add, maintain, and adjust present wire net devices around plants and trees as necessary to protect plant material from pests.

2.2 General Trimming

Growth which restrict drivers' view of signs and safety devices, or which is creating other sight distance problems for drivers must be pruned. Plants repetitively causing these issues may be removed. Pruning of plant material that is in bloom is discouraged. Schedules should include sufficient time to achieve pruning when plants are dormant. Remove and legally dispose all cuttings by the end of the daily work shift.

2.3 Tree Trimming

Trees must be trimmed as needed to:

A. facilitate visual inspection of the irrigation system,
B. remove dead, diseased, or injured wood; control or direct growth covering roadway signs or causing a sight distance problem to the public,
C. remove crossed limbs,
D. eliminate growth encroaching on roadway, and
E. raise the canopy.

Acceptable practices for pruning include:

A. Crown cleaning,
B. crown thinning,
C. crown raising,
D. vista pruning, and
E. crown reduction.

Unacceptable practices include:

A. Topping,
B. lion tailing, and
C. pollarding.

2.4 Shrub Trimming

Shrubs shall be trimmed as necessary to:

A. facilitate visual inspection of the irrigation system,
B. remove dead, diseased, or injured wood,
C. control or direct growth,
D. eliminate growth encroaching on roadway, and
E. raise the canopy as needed.

No shrubs will be sheared for aesthetic purposes.

2.5 Palm Tree Trimming

All palm trees must be trimmed/skinned so no more than 1 year growth is present.

3 Plant Removal/Replanting

3.1 Removal

Developer shall remove and dispose of plants, shrubs, and trees which are severely distressed or which die as a result of storm damage, age, pests, or disease. All plants being removed must be noted in MIS upon removal from the job site.

3.2 Replacement

Developer shall replace any plant, shrub, or tree which dies or is severely damaged as a result of neglect, inadequate care, or inadequate maintenance, or application of chemicals, including runoff and drift onto adjacent properties. Replacement plants must be nearest size nursery stock available to the plant being replaced.. Planting methods will be in accordance with standard horticultural practices.

3.3 Potential Survival and Growth

The soil area of the chemically affected plant(s) and planting pit must be treated with activated charcoal and other soil amendments that may be required to enhance the potential survival and growth of the replacement plants.

4 Weed Control

4.1 Non-Granite Areas/Native Vegetation

Developer's pesticide technician must be able to identify various wild flowers and desirable native grasses versus noxious weeds.

Native grasses must be cut, as needed, after seed heads have matured and as directed by the Project Manager or their Representative.

Native shrub species will be left to grow in a natural state and will not be trimmed, pruned, or removed, unless impeding traffic or as directed by the Project Manager or their Representative. Native shrubs must not be allowed to become invasive of one another and form dense thickets.

In the area around plants, Developer shall maintain free of weeds and grass, either a 5-foot radius or the area to the outer edge of the canopy, whichever is greater. A 3-foot radius must be maintained free of weeds and grass around the base of signs, delineators, utility poles, guardrails, fence lines, cable barriers, and other highway fixtures.

All annual and perennial weeds within non-granite areas must be treated with an approved herbicide before reaching 3 inches in height. All weeds and grasses in expansion joints of paved slopes and sidewalks must also be treated with an approved herbicide before reaching 3 inches in height.

If weeds develop beyond 3 inches in height prior to treatment, Developer shall be responsible for manual removal of the weeds, removal and disposal of cut debris, restoration of the disturbed area to its original condition, and application of an approved pre-emergent herbicide to the area.

4.2 Granite Areas

All granite areas within the project must be treated with an approved, pre-emergent herbicide at least once per year. This application will be shown on the annual and monthly schedules. Some variability will be allowed for weather conditions.

The entire granite area is to be maintained free of weeds and grasses. All annual and perennial weeds within granite areas will be treated with an approved herbicide before reaching 3 inches in height.

Disposal must be in a legal manner. All disturbed granite and earth must be restored to original condition when manual weeding is completed.

4.3 Hardscape Areas

Weeds in hardscape areas, including but not limited to slope paving, sidewalks, and capped raised medians and gore points must be treated in the same manner as the granite areas.

5 Pesticides and Pesticide Application

Developer shall furnish all pesticides, equipment, and labor to provide pest control services. Prior to pesticide application, Developer shall provide a listing of all materials and chemicals annually at the maintenance meeting. All pesticides used must be labeled for landscape use. Restricted use pesticides with an LD 50 number lower than 500 are NOT permitted on this Project.

All pesticides used must be in the original manufacturers marked containers and tank-mixed on site. Developer shall provide storage of chemicals at off-site locations, delivering to the work site only sufficient equipment and materials to complete daily tasks.

Developer shall apply all pesticides in strict compliance with the manufacturer's instructions as they appear on the label, and as approved by the rules and regulations of the agency issuing Developer's pesticide license.

Developer shall maintain on site the Material Safety Data Sheets (MSDS) and current labels for each product used on this contract for ready reference.

Gallons of water used from the irrigation system supply for spray mix must be recorded on the daily work report.

6 Other Pest Control

Developer shall control pests within the contracted area. Pests may include, but are not limited to mosquitos, ants, bees, rodents, insects, gophers, and other pests which burrow, crawl, fly, nest or otherwise reside within the contracted area. Pests which infest plants must be treated with an approved pesticide.

Developer shall take all normal precautions common to the trade and institute proper procedures for the control of insects, bees, pests, or disease, including clean-up and removal of standing water or other mosquito vectors. Developer shall be responsible for all damages resulting from improper procedures or the failure to take normal precautions.

Developer shall note on the Daily Work Report all pest intrusions by describing the location, the pest to be controlled, and the method of control.

7 Irrigation

7.1 General Irrigation

Developer shall:

A. Provide all labor and equipment necessary for inspection, maintenance, operation, and repair of the existing irrigation system.

B. See that all trees and shrubs receive the proper amount of water to maintain health and vigor. This will involve adjusting the irrigation systems for appropriate seasonal frequencies.

C. A watering schedule must be prepared by someone specialized in irrigation, such as a horticulturist or water administrator. The detailed schedule must be submitted annually at the maintenance meeting. This schedule must list water requirements for specific species of plants and be entered in to the controllers. Developer shall adhere to the watering schedule and any changes to the schedule, or deviation from it, must be noted in the MIS.

D. Developer shall establish an annual water budget and set a monthly percentage of that budget to determine a maximum monthly usage. This information must be included in Developer's annual irrigation plan.

E. Be responsible for daily surveillance of the irrigation system to assure that all component features are operating as designed. These component features include, but are not limited to, back flow preventers, controllers, valves, pressure regulators, filters, water lines, emitters, sensing devices, and the entire electrical system.

F. Alarms showing on controllers must be rectified, and an entry made in MIS of the occurrence.

G. Report through the MIS any malfunction of the irrigation system which requires emergency repair for the safety of the public or to protect the landscaping.

H. Notify the Project Manager's Representative to inspect all subsurface repairs to the irrigation system prior to backfilling.

7.2 Irrigation System Inspection

In addition to daily Surveillance, during the landscape establishment period after Final Acceptance, Developer shall conduct a formal monthly Inspection of the Non-Maintained

Element irrigation systems. The irrigation inspection must include the items identified in Table 7-1, Irrigation Inspection Checklist.

Irrigation systems in the Maintenance Service Limits shall be inspected when and as determined by Developer.

Table 7-1
Irrigation Inspection Checklist

Item No.	Description	X Indicates Services Completed
1	All emitters for even water distribution over area covered within plant canopy.	
2	Pressure at all electric remote control valves. Clean boxes as needed.	
3	Pressure at all pressure regulators. Clean boxes as necessary.	
4	Gallonage/hour at five emitters per valve.	
5	Pressure at two end caps from same lateral line as emitter check (Item 4). Record valve and regulator number.	
6	Verify zero flow with only master valve open and record pressure.	
7	Verify that the water meter, flow monitor, and controller agree on flow rates.	
8	Clen component cabinets and the controller enclosure area.	
9	Check and record ohms reading for each valve output (all outputs off).	
10	Flush the filter(s) and check pressure gauge(s).	
11	Check system for leakage and malfunctioning components.	
12	Reset total flow counter in flow monitor to zero.	

7.3 Not Used

7.4 Irrigation Water Distribution

7.4.1 Emitters

Emitters must be kept properly positioned for even water distribution within the area of the canopy. Check at random to determine the flow rate in gallons per hour during the monthly irrigation Inspection. When the emitter shows that the flow rate is twice that of the designed flow, the emitter must be replaced by Developer. When the tested emitters have failed, five additional emitters must be checked to determine flow rates. When the majority of emitters fail, the entire section for the tested valve will be replaced. Developer shall replace all failed emitters as part of the Maintenance Services Work.

7.4.2 Irrigation Line

Line cleaning stubs must be flushed and pressure checked at least monthly. Results of the line cleaning stubs pressure checks shall be noted on the Daily Work Report.

7.4.3 Water Efficiency

Developer shall ensure that water is used efficiently and not wasted. Developer shall water by hand or by other ADOT approved means when the irrigation system is temporarily out of order. In case of interruptions, Developer shall create a notification within the MIS for any such occurrence.

8 Repairs to Irrigation System

Developer shall furnish all labor, equipment, pipe, repair parts and kits, and supplies to make repairs, replacements, and adjustments to the irrigation systems as part of the irrigation maintenance service.

All replacement parts and installation procedures must be same as original unless otherwise approved by the Project Manager's Representative.

9 Herbicides

ADOT has approved the following herbicides to be utilized for weed control for this contract. Additional products may be approved upon request and evaluation by ADOT.

Table 9-1
Approved Herbicides for Weed Control

Product Name	Active Ingredient
Surflan	Oryzalin
Pendulum	Pendimethalin
Carricade	Prodiamine
Roundup	Glyphosate
Reward	Diquat dibromide
Poast	Sethoxydim
Fusilade	Fluazifop Butyl
Endurance	Prodiamine
Galary	Isoxaben
Clean	Amine 2,4 Dichloro-Phenoxyacetic acid

All herbicides shall have an approved dye added to facilitate inspection after application