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



and

[DEVELOPER]

VOLUME II
TECHNICAL PROVISIONS – TP ATTACHMENTS

Dated as of: [_____], 2016

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TP Attachment 110-1 - Project Description

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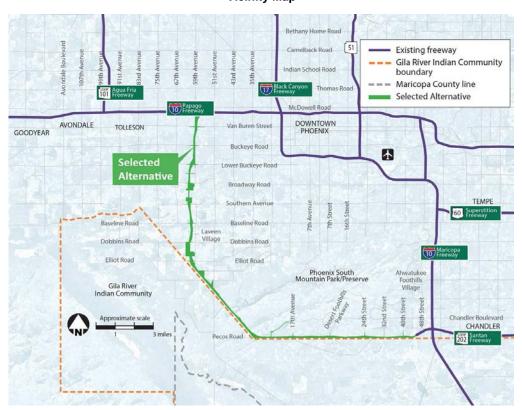
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1 PROJECT DESCRIPTION

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

FINAL RFP

preliminary concept work concerning the Project development, which is included in the 2 Reference Information Documents (RIDs).

2 PROJECT STATUS 3

- 4 ADOT has been moving forward with development of the Project for several years, using its own
- 5 personnel; retaining consultants; and engaging with stakeholders such as MAG, the municipal
- planning organization for Maricopa County, Cities along the Project corridor, resource agencies, 6
- and the public.
- 8 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 9
- public comment period. During the comment period, a public hearing was held on May 21, 2013, 10
- 11 at the Phoenix Convention Center; numerous other community outreach events were also held.
- 12 The public comment period ended on July 24, 2013.
- 13 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 14
- presented in the DEIS for the proposed action, public comments and responses on the DEIS, 15
- and new information that became available after public release of the DEIS. Each comment 16
- 17 received on the DEIS is accompanied by a response in Volume III of the FEIS. Following the
- 18 FEIS review period, the study team considered comments received and prepared a ROD which
- 19 was released to the public on March 13, 2015.
- 20 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. 21
- The design plans included in the Initial L/DCR represent approximately 15%-level design plans. 22
- 23 The Final L/DCR has been finalized and is included in the RIDs.

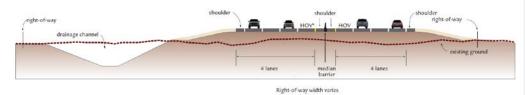
GENERAL PROJECT IMPROVEMENTS 24 3

- 25 The Project will complete the Loop 202 from I-10 (Maricopa Freeway) (milepost MP 54.31) to 26 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 27 28 system traffic interchange between I-10 (Maricopa Freeway) and Loop 202 (Santan Freeway). 29 From this point, it will head westward on the Pecos Road alignment for approximately 8 miles 30 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 31 32 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-33
- occupancy vehicle (DHOV) ramp connection to and from the east on I-10. The design of the 34
- 35 system traffic interchange at I-10 is being coordinated with the high-capacity transit corridor
- planned for I-10. 36
- 37 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 3-1). The median is closed 38
- 39 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 40
- 41 interchanges, as warranted. The freeway mainline design primarily features a rolling profile with

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42 the freeway rising above grade to cross over the crossroads.

Figure 3-1 Typical Freeway Section



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6 7 8 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.

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TP Attachment 110-2 – Materials Quality Assurance Program

1 2		ARIZONA DEPARTMENT OF TRANSPORTATION	
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4 5		MATERIALS QUALITY ASSURANCE REQUIREMENTS	
6		For the	
7		LOOP 202 SOUTH MOUNTAIN FREEWAY PROJECT	
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1 SCOPE

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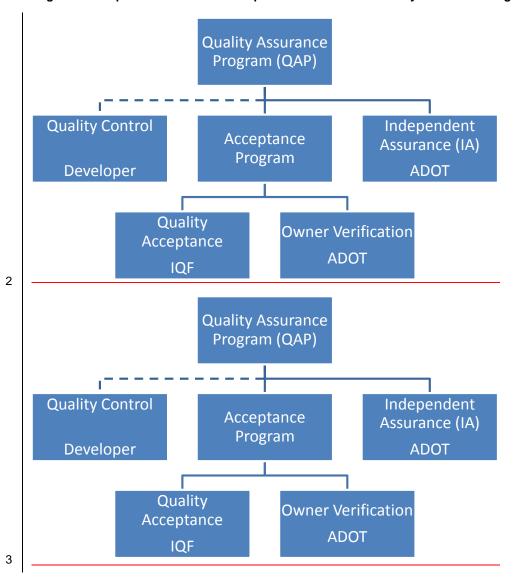
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document.

- It is the objective of this document for the Arizona Department of Transportation (ADOT) to define the Quality Assurance requirements for the Loop 202 South Mountain Freeway ("Project"). 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
 - TA 6120.3 http://www.fhwa.dot.gov
- This document, established by the Arizona Department of Transportation (ADOT), verifies that materials and workmanship incorporated into the Project are in reasonable conformance with the approved plans and specifications, including any approved changes.
- 14 This document is intended to complement ADOT's Materials Quality Assurance Program and 15 defines the main components of the Project-specific materials quality assurance program that involves the collaborative efforts of both the Developer and ADOT. The primary components of 16 the materials quality assurance program include: quality control (QC) activities by the 17 Developer, Quality Acceptance activities by an Independent Quality Firm (IQF), and Owner 18 Verification (OV) activities by ADOT or ADOT's representatives. As noted in Figure 1, the 19 Quality Acceptance and OV activities constitute the Acceptance Program. The Quality 20 21 Acceptance test results performed by the IQF may be used as part of an acceptance decision only when the Quality Acceptance results are validated by Owner Verification (OV) testing 22 results activities. As a part of the materials quality assurance program, ADOT will implement a 23 24 modified version of their existing Independent Assurance (IA) program, as discussed later in this
- This document clarifies federal requirements relating to Quality Acceptance and statistical analysis procedures. This document is to be included (or referenced) in the Agreement, and
- 28 other key preconstruction Project documents with approvals by ADOT and FHWA.
- A vigorous ADOT Owner Verification program is instrumental to the success of a project where the use of IQF test results will be used as part of the acceptance decision.
- The relationships between the parties and functions described in this document are shown in Figure 1.
- 33 The acceptance process for the Project is composed of the following main components:
- Personnel qualifications
 - Laboratory qualifications
 - Approval of Developer's Construction Quality Management Plan (CQMP)
- Developer QC requirements
 - IQF Quality Acceptance requirements
- Owner Verification Testing and Inspection Plan (OVTIP)
- Independent Assurance (IA) program

1 Figure 1: Components and Relationships in ADOT Materials Quality Assurance Program



4 2 QUALIFICATION OF TESTING PERSONNEL

- 5 All field and laboratory personnel performing sampling or testing of construction materials on the
- 6 Project must meet the technician qualification requirements as presented in the Section VII of
- 7 the ADOT Materials Quality Assurance Program ("Sampling and Testing Personnel Qualification
- 8 Requirements"). All personnel who are sampling and testing as a part of the Acceptance

TP Attachment 110-2

- Program must be observed on an annual basis by ADOT's IA program for the sampling and 1 2 testing they perform.
- In the absence of ATTI certification, individuals who currently possess active certification(s) 3
- under another state's certification program may be allowed to perform Project activities that
- would normally be covered by ATTI certification as part of the acceptance decision on a
- provisional basis. This provisional status requires prior approval by ADOT on a case-by-case
 - basis, and is only applicable to this Project. In order to request provisional approval, the
- Developer shall supply the following information to ADOT a minimum of 14 Days before the 8
- individual starts sampling and testing on the Project: 9
 - Name of the individual

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- Name of the appropriately certified person who will be supervising the individual's work
- Description of the Work to be performed by the individual, including the type of sampling and testing the individual is expected to perform
- List of applicable certifications currently held under another state's certification program and expiration dates
- Differences between the other state certifications and the corresponding ATTI certifications.
- Description of how these differences will be managed to avoid errors.

19 Any authorized provisional approval will be in effect for a maximum of six (6) months from the 20 time the individual begins working on the Project. By the time this six month period has elapsed, 21 the individual must have obtained the appropriate ATTI certification(s) in order to be allowed to 22 continue sampling and testing or materials related inspection on the Project. While in provisional 23 status, such individuals must be under the direct supervision of someone who has the 24 appropriate ATTI certification(s). The IQF must obtain this provisional approval from ADOT, document the certification status of these individuals, and ensure the individuals obtain the 25 appropriate ATTI certification(s) within the time allotted. Individuals receiving provisional 26 allowance to perform acceptance work must be observed by ADOT's IA program within the first 27 28 14 days from the time the individual begins sampling and testing on the Project.

QUALIFICATION OF LABORATORIES

- 30 All laboratories, including mobile or satellite labs, engaged in sampling or testing of construction
- materials on the Project must meet the laboratory qualification requirements as presented in 31
- Section VI of the ADOT Materials Quality Assurance Program ("Laboratory Qualifications") prior 32
- to being utilized on the Project. 33
- 34 Laboratories satisfying these requirements, and the specific test methods for which they are
- 35 approved, are listed in the ADOT "Directory of Approved Materials Testing Laboratories"
- 36 (https://www.azdot.gov), which is updated periodically. The Developer is responsible for
- 37 confirming the approval status of any laboratories utilized by the Developer, and verifying that
- laboratories maintain their approval status over the life of their service on the Project. 38
- 39 To avoid an appearance of a conflict of interest, any qualified laboratory and any qualified

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- 40 personnel must perform only one of the following types of testing on the Project:
- 41 A. Developer Quality Control testing;
 - B. IQF Quality Acceptance testing;
- 43 C. ADOT Owner Verification testing;
- 44 D. ADOT Independent Assurance testing; or

1 Referee testing.

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DEVELOPER'S CONSTRUCTION QUALITY MANAGEMENT PLAN

- Developer's Construction Quality Management Plan (CQMP) shall consist of the QC to be 3
- performed by Developer (see Section 5), the Quality Acceptance to be performed by the IQF 4
- 5 (see Section 6), and how such activities will be conducted in conjunction with OV activities (see
- Section 7). The CQMP must establish a clear distinction between QC and Quality Acceptance 6
- activities and define roles and responsibilities.
- 8 Additional information for the technical, review, and approval requirements of Developer's
- CQMP may be found in Section GP Section 110.07.2.1.3 of the TPs. 9

10 **DEVELOPER QUALITY CONTROL REQUIREMENTS**

- 11 Developer 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 Developer's 12
- 13 CQMP. Developer's QC portion of the CQMP must include the specific and detailed internal
- procedures used by Developer that will ensure that the Work is delivered in accordance with the 14
- RFC Documents. This involves the active participation of the entire work force in working to 15
- achieve "quality" initially and to minimize/eliminate re-work. Developer's QC is not a part of the 16
- 17 Acceptance Program.
- 18 Developer's CQMP must establish a systematic approach to define the processes, methods,
- procedures, and documentation for delivery of QC on the Project. These methods and 19
- procedures must clearly define the authority and responsibility for the administration of 20
- 21 Developer's QC plan.

INDEPENDENT QUALITY FIRM QUALITY ACCEPTANCE REQUIREMENTS

- 23 The Quality Acceptance on the Project consists of frontline acceptance testing and inspection
- being performed by the IQF. Owner Verification (OV) and Quality Acceptance together are the 24
- 25 basis for the acceptance decision. With regard to materials testing, the IQF-performed Quality
- Acceptance results may be used in the acceptance decision, provided that they are statistically 26
- validated and/or verified by the OV test results (See Section 7 for details about OV). Quality 27 28
- acceptance is performed by the IQF and OV is performed by ADOT or their consultant(s). With 29 regard to workmanship and other inspection driven features of the Work, the IQF's inspection
- 30 observations and conclusions may be used in the acceptance decision, provided that OV
- 31 activities verify the CQMP process, procedure and documentation adherence.
- Developer's Quality Acceptance portion of the CQMP must include the procedures used by the 32
- 33 IQF to ensure that the Work is inspected and tested to verify compliance with the RFC
- 34 Documents.
- 35 Developer's CQMP must establish a systematic approach to define the processes, methods,
- 36 procedures, and documentation for the IQF to deliver Quality Acceptance on the Project. These
- 37 methods and procedures must clearly define the levels of authority and responsibility for the
- administration of IQF's Quality Acceptance plan. 38

39 6.1 IQF Materials Acceptance

- 40 The quality of materials and construction incorporated into the Project are controlled by
- 41 sampling and testing, and must be accepted based on compliance with Developer's
- specifications and the Contract Documents. Compliance is determined by acceptance sampling 42
- 43 and testing. The IQF must randomly sample at prescribed frequencies based on the IQF

sampling guide schedule that meet or exceed those presented in ADOT's the SMF, Sampling

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- 1 | Guide Schedule included in the ADOT Materials Quality Assurance Program, Appendix CRIDs.
- 2 The IQF's sampling guide schedule must be published in Developer's CQMP. Sampling and
- 3 testing must be performed by qualified laboratories and by qualified sampling and testing
- 4 personnel.
- 5 The IQF must not rely wholly on the results of sampling and testing in determining the
- 6 acceptability of materials and construction work. The sampling and testing must be
- 7 supplemented by sufficient visual inspection of the materials to determine whether the samples
- 8 and tests are reasonably representative. In addition, there should be sufficient observation of
- 9 the construction operations and processes to assure uniformly satisfactory results.

6.2 IQF Acceptance Sampling and Testing

- 11 The IQF's sampling guide schedule must apply to sampling frequencies only for acceptance
- 12 sampling and testing. It must indicate the material type to be sampled, the controlling
- 13 specification(s), the frequency of sampling, the location where sampling will occur, the testing to
- be performed, and the acceptance criteria. Acceptance samples must be obtained randomly by
- 15 IQF. With regard to material types, an approach to type identification similar to that defined in
- 16 Table 10 of the ADOT Materials Quality Assurance Program, Appendix CSMF Minimum
- 17 Sampling Guide Schedule included in the RIDs shall be included in the CQMP. If the Table 10
- codes are not adopted outright by the Developer, an alternate coding system may be proposed;
- 19 however, such alternate system must then include a direct cross reference to the codes of Table
- 20 10.

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- 21 After samples are taken, they must be in the immediate custody of the IQF technician.
- 22 Thereafter, the samples must remain in IQF's "chain of custody" until they are delivered to the
- 23 appropriate laboratory for testing.
- 24 During their initial cure, concrete cylinders may not be in IQF's continual "chain of custody". If
- 25 this is the case, appropriate measures must be taken to ensure the integrity of the samples.
- 26 The intent of the IQF's sampling guide schedule is to provide guidance to personnel responsible
- 27 for sampling and testing materials. The frequency may vary for phases of the Project in
- accordance with job conditions, such as, the uniformity of materials at the source, the methods
- 29 and equipment used, and weather conditions. The actual number of samples, and locations
- 30 from which they are taken, must be representative of the actual construction operations and
- 31 must adequately assure or verify that the materials incorporated into the final product, are in
- 32 compliance with the Contract Documents and Developer's specifications. Under extenuating
- 33 circumstances, the CIQM may utilize engineering judgment to justify acceptance when sampling
- 34 frequencies do not meet the IQF's sampling guide schedule on a case by case basis.
- 35 Conversely, the CIQM may utilize engineering judgment to direct that an amount of acceptance
- 36 testing greater than the required minimum be done when deemed necessary. The CIQM must
- 37 formally document these variations from the prescribed frequencies. The manner in which these
- 38 deviations will be documented must be defined in the Developer's CQMP.
- 39 The IQF must develop a materials sampling and testing plan, indicating the recommended
- 40 number of acceptance samples for any given Project element. For an example, see Section
- 41 V(E)(1) of the ADOT Materials Quality Assurance Program.
- 42 For materials that are sampled on a time designated lot basis, the CQMP must define the
- 43 methodology to estimate the relationship between the production lot quantity and the time
- 44 required to produce such quantity. This relationship is required in order for the IQF to determine
- 45 the recommended number of acceptance samples.

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6.3 IQF Acceptance of Materials by Certification or Other Means

- 2 Acceptance of materials by "Certificate of Compliance" or "Certificate of Analysis" must meet or
- 3 exceed the requirements of Subsection 106.05 of the Standard Specifications for Road and
- 4 Bridge Construction, Section 1000 of the ADOT Materials Testing Manual, and applicable ADOT
- 5 Materials Policy and Procedure Directives. The IQF's sampling guide schedule must reflect the
- 6 specific items or components that are planned to be accepted on the basis of certification.
- 7 The CQMP must include provisions for such approval and define how the IQF will ensure that
- 8 when such approvals are used, they also meet the requirements of the IQF's sampling guide
- 9 schedule and/or the requirements of Contract Documents and Developer's specifications.

10 7 OWNER VERIFICATION TESTING AND INSPECTION PROGRAM

- 11 IQF inspections, test results and conclusions must by validated by Owner Verification activities.
- 12 For materials testing, such validation will be achieved through statistical comparisons between
- 13 IQF testing results and OV testing results. For inspection activities, OV will be focused on IQF
- process adherence and documentation confirmation. In addition to real-time evaluation, ADOT,
- or their consultant(s) will also conduct periodic audits to verify Developer's compliance with the
- 16 approved CQMP.
- 17 ADOT or its consultant(s) will develop a comprehensive OVTIP for the Project and submit it to
- 18 FHWA for their concurrence. ADOT's OVTIP will include internal procedures used by ADOT and
- 19 their consultant(s) to ensure that the IQF's frontline acceptance activities are performed in
- 20 accordance with the approved CQMP and to verify adherence to the CQMP. ADOT may
- 21 complete the development of the OVTIP in parallel with acceptance of Developer's CQMP.
- The OVTIP will clearly address, at a 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 Developer's CQMP for each construction 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 Developer's CQMP to determine adherence to and the effectiveness of the CQMP. Audit results will be documented, reviewed, and sent to ADOT and Developer. Follow-up action, including re-audit of deficient areas following corrective action, must be taken where indicated.
 - G. A system of planned and periodic audits to determine adherence to and the effectiveness of the OVTIP. Audit results will be documented, reviewed, and sent to ADOT. Follow-up action, including re-audit of deficient areas following corrective action, will be taken where indicated.

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- 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.
- 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 verifying 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 Documents and approved CQMP.
- M. Roles and procedures for reviewing Portland cement concrete and hot-mix asphaltic concrete mix designs.
- N. Target frequencies for the independent sampling and testing that are to be conducted as a part of OV. The target frequency will include a higher frequency of testing at the beginning of the Project and may be adjusted, as appropriate throughout the Project, based on the observed consistency of the product, the statistical comparison between OV and IQF test results and ADOT engineering judgment.
- O. Procedures for ensuring that OV testing is performed at the frequencies stipulated in the OVTIP
- P. Identification of the platform and data structure of the database management system that will be used to collect, store and retrieve OV test data. Identification of a strategy to coordinate data between the IQF and ADOT.
- Q. Procedures for performing statistical analyses in compliance with procedures outlined in this <u>TP Attachment 110-2</u>.
- R. Procedures for satisfying System Basis IA obligations on this Project.

8 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). Only ADOT and IQF samples selected randomly and independently may be used in the acceptance decision. The F- and t- tests described in the "FHWA Reporting" section below are only valid when using random independent samples.
- 41 The IQF must perform additional (fixed) tests when the quality of material is questionable at a
- 42 location other than the randomly selected location. This fixed test must constitute an acceptance
- 43 test, and a failing result must be addressed in a similar manner to a failing random independent
- 44 test. Fixed tests must not count towards meeting minimum IQF testing frequencies and must not

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45 be used in statistical analysis.

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- Split samples may be used outside of the statistical analysis for OV of IQF-performed acceptance tests under ADOT's OVTIP. A comparison process for performing and analyzing 2 3 split samples between ADOT and IQF is necessary during the initial implementation of the ADOT Materials Quality Assurance Program to ensure that ADOT and IQF laboratory and 4 5 testing procedures are in alignment. These samples will be analyzed by ADOT and the results 6 discussed with the IQF to assure laboratory and technician test results compare favorably. 7 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 8 will help provide initial alignment of the ADOT and IQF laboratories and testing procedures. The 9 IQF must commit resources and sample material as necessary to accommodate splitting and 10 alignment activities defined herein. 11
- 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(s) which continuously track and record the quantity of material incorporated into the Project- as well as documentation that the IQF is meeting the minimum sampling and testing frequencies. ADOT will use the report(s) to verify compliance of both the Quality Acceptance and OV testing frequency.

9 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. IQF or ADOT 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 OV and Quality Acceptance test results. See Figure 2 for a flowchart of this process.

- A. Both the OV and Quality Acceptance test results are within specification limits.
 - Although statistical validation has not occurred, both the OV and IQF test results are within the established specification limits; thus, material quality in question is considered acceptable.
- B. OV test results are within specification limits and Quality Acceptance test results are outside of 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.
- C. Both the OV and Quality Acceptance test results are outside of 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.
 - 1. OV test results indicate 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.

 2. OV test result doesresults do not indicate reasonable conformance with specification requirement. ADOT makes decision on acceptability based solely on OV test results and ADOT's percentage within limits (PWL) analysis. IQF then performs fixed tests at the OV failed test locations. Based on this analysisthe results of the previously completed (OV and IQF) tests, the additional IQF fixed test results and the subsequent investigation discussions between ADOT and Developer, ADOT makes a determination and documentson whether the material may be left in place and ADOT records the disposition.

If the material is reworked, the IQF must perform a fixed test at the ADOT OV failed location followed by random-independent tests by both the IQF and ADOT. Random-independent test results representing material prior to rework should be excluded from new statistical analyses.

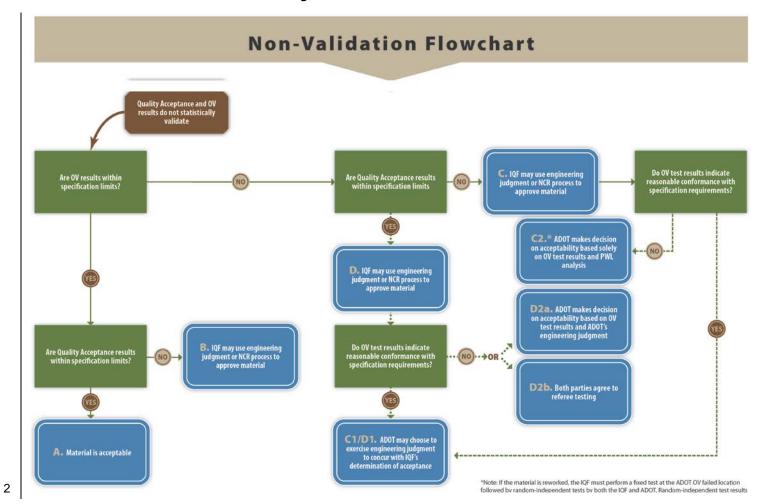
D. OV test results are outside of specification limits, but Quality Acceptance test results are within specification limits.

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.

- OV test result indicates reasonable conformance with specification requirements. ADOT exercises engineering judgment to concur with acceptance of material based on the IQF's engineering judgment or through the NCR process.
- 2. OV test result does not indicate reasonable conformance with specification requirement. IQF then performs fixed tests at the OV failed test locations. Based on the results of the previously completed (OV and IQF) tests, the additional IQF fixed test results and the subsequent investigation discussions between ADOT and Developer, ADOT makes a determination on whether the material may be left in place and ADOT records the disposition
 - ADOT makes decision on acceptability based solely on OV test results and ADOT's percentage within limits (PWL) analysis; or
 - b. Both parties agree to referee testing as outlined in Section 14 Referee Testing. Based on the results of referee testing, a determination is made and documented on whether the material may be left in place.

If the material is reworked, the IQF must perform a fixed test at the ADOT OV failed location followed by random-independent tests by both the IQF and ADOT. Random-independent test results representing material prior to rework should be excluded from new statistical analyses.

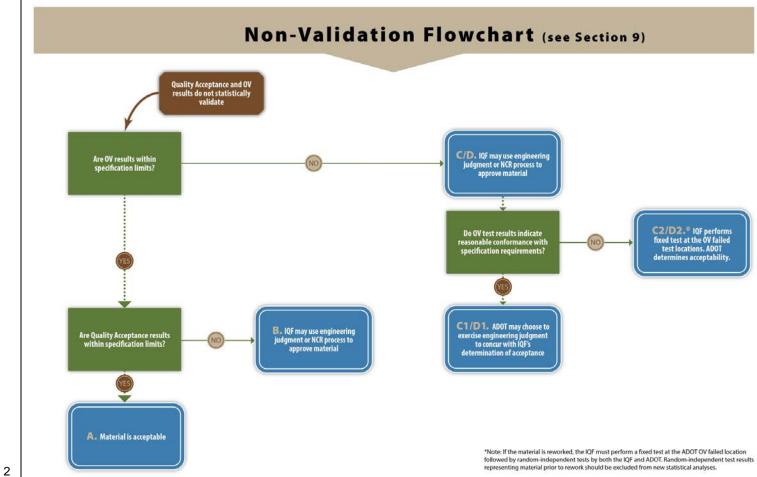
Figure 2: Non-Validation Flow Chart



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Arizona Department of Transportation South Mountain Freeway Project Addendum #2 (9-2-2015)

Request for Proposals 202 MA 054 H882701C Volume II - Technical Provisions TP Attachment 110-2



Arizona Department of Transportation South Mountain Freeway Project Addendum #2 (94 (10-2-2015)

10 ENGINEERING JUDGMENT GUIDING PRINCIPLES

- The development of the Project must proceed with a reasonable approach to the quality duties of the IQF and the extension of the IQF's ability to render decisions in the field with regard to the Work performed. ADOT recognizes that the IQF is an element of Developer team working to progress the development of the Project for ADOT, and working alongside Developer who is responsible for compliance. ADOT recognizes that the IQF should be afforded the opportunity, in concert with their independent role, to render engineering decisions with respect to appropriate documents for inspection and testing as long as:

 - B. Engineering judgment to accept material or Work failing specifications will never be applied solely to promote "partnering" or to help out Developer. The project development quality will be regarded as the highest order of concern. Schedule is a secondary consideration with respect to quality delivery of the Project.
 - C. If these guiding principles do not address the situation, the individual applying engineering judgment must provide a decision to ADOT as to whether a material failing to meet specification requirements and is not within applicable tolerances should be accepted, or not accepted, based on sound engineering principles, experience, and or related results of applicable material tests.
 - D. Engineering judgment to accept materials or Work failing specification requirements will be applied only in cases where natural resources may be lost that will otherwise meet the intent of the design, (i.e. strength tests versus slump requirements), rejection of material endangers quality or loss of larger or more significant item (i.e. by rejecting load of concrete, structure element subject to a cold joint, reflective cracking, etc.) or some other issue that unduly threatens the overall quality/schedule of the Project.
 - E. Failed results of material tests may be accepted only for individual tests. Patterns of failure will not be accepted and will be considered a breakdown in Quality Control activities and shall be addressed in the CQMP. Recurring use of engineering judgment for the same plan or specification deviation should result in process corrections to the construction operations to assure material and work is conforming to plan and specification requirements. The intent of delegating engineering judgment to the IQF is not to allow widening of a specification requirement on a continuing basis.
 - F. Under extenuating circumstances, the CIQM may utilize engineering judgment to direct that less acceptance sampling and testing be accomplished on a case by case basis. Conversely, the The CIQM may utilize engineering judgment to direct that an amount of acceptance testing greater than the required minimum be done when deemed necessary. The CIQM must document these any variations from the prescribed frequencies.
 - G. The individual making the engineering judgment will apply good engineering practices to ensure quality of accepted material by making additional tests, through engineering analysis, etc. and will document his/her acceptance and justification.
 - H. When accepting material or Work not meeting specification requirements will result in a change in Agreement cost or time, approval must be obtained from ADOT.

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- I. Engineering judgment in acceptance of material or Work not meeting specification requirements will be applied only to situations that are technically sound, in consideration of localized conditions. Engineering judgment will not be utilized to waive specification for conditions that have project wide implications. The acceptance of material or Work not meeting specifications in one instance at a location will not become a corridor wide or project wide decision. Each situation will be judged on the merits of its unique characteristics.
- J. ADOT may, at any time, remove engineering judgment authority from the IQF Project Engineer in specific circumstances.
- K. ADOT and FHWA have oversight agreements in place that requires specific documentation relating to nonconforming material that is allowed to remain in place. Any instance of the application of these Guiding Principles will be accompanied by appropriate documentation.
- L. The IQF is encouraged but not required to consult with ADOT prior to making acceptance decisions.
- M. IQF personnel are not placed, or appear to be placed, in a position that exhibits signs that they were pressured by Developer to accept, approve, or continue the duties of the IQF scope of work as detailed in the Project under duress.

11 FHWA REPORTING

ADOT will submit quarterly reports to FHWA for concurrence with ADOT's compliance with the OVTIP. Approved reports must 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 must cover a period of construction not greater than 3 months.

- The FHWA quarterly report must 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; and
 - E.F. ADOT and IQF engineering judgment decisions.

12 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.

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- 40 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.

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13 REFEREE TESTING

- Throughout the life of the Project, there may be differences in material test results or statistical 2
- sample populations between the IQF and ADOT. It is important to recognize the difference 3
- between material quality and statistical validation. 4
- 5 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 6
- 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 8
- populations are statistically equal. It does not represent the quality of material being 9
- incorporated into the Project. 10
- 11 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 12
- Construction & Materials Group or an independent third-party testing laboratory as appointed by 13
- 14 ADOT's Construction & Materials Group. The decision by ADOT, or its designee, is final.
- Referee testing is solely an owner function. Therefore, if a third-party laboratory is utilized, 15
- ADOT will pay for this testing. 16

14 INDEPENDENT ASSURANCE PROGRAM

- 18 The Code of Federal Regulations (23 CFR 637, Subpart B) requires the implementation of an IA
- 19 program. ADOT, or its designee, will implement the IA program as described in the ADOT
- 20 Materials Quality Assurance Program, Sections V.B ("Independent Assurance Sampling and
- Testing") and V.C ("Correlation Testing"). 21
- 22 The IA program evaluates the sampling/testing personnel and testing equipment used in 23 acceptance of materials. The Code of Federal Regulations allows observations, split sample 24 results, and proficiency sample results as means of evaluating testing personnel within a State's 25 IA program. Calibration checks, split sample results, and proficiency sample results are 26
 - permissible inclusions to the IA program for evaluating acceptance testing equipment. The IA
- program does not directly determine the acceptability of materials. 27
 - The Project will utilize a "System Basis" IA, which is based on ebserving evaluating and verifying satisfactory performance by the individuals performing acceptance sampling and testing, and the equipment utilized, for a particular period of time. The IA Program on this Project will be implemented as follows:
 - A. Each IQF individual who will perform acceptance sampling and testing in the field must be observed and evaluated by ADOT IA personnel to verify that sampling and testing is being conducted properly in accordance with the appropriate test methods. Except as indicated in Section 2, such evaluation must occur within 30 days of initial service on the Project and every 12 months thereafter.
 - B. Each IQF individual who will perform acceptance sampling and testing in the laboratory must be evaluated on the basis of IA split or proficiency sample testing. Except as indicated in Section 2, such evaluation must occur within 30 days of initial service and every 12 months thereafter.
- 41 The IQF must track the qualification status of all IQF technicians and proactively request and 42 schedule all evaluations.
 - The objective of the "System Basis" is to ebserveevaluate and verify that the individuals performing acceptance sampling and testing, and the equipment utilized, are qualified for a twelve month period. The goal is for all individuals who are performing such sampling and

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- 1 testing, and the equipment utilized, in a given twelve month period to be covered by this 2 verification.
- For each twelve month period, ADOT will submit a report to the FHWA documenting activities of the I.A. "System Basis" program for the Project. The report will include the following information:
 - A. Names and number of technicians performing acceptance sampling and testing the Project.
 - B. Number of such technicians evaluated by the program.
 - C. Number of such technicians that had deviations, as determined by the evaluation.
- D. Summary of how the deviations were addressed, along with any potential systematic
 solutions to recurring deficiencies.
 - E. Goals for the upcoming twelve month period.
- 12 ADOT will identify materials requiring IA sampling and testing in the OVTIP. The IA program

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does not directly determine the acceptability of materials

1	TP Attachment 408-1 – Pertinent Third-Party Agreemen	t Requirements
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3	TP Attachment 408-1 – Pertinent Third-Party Agreement Requirement	ents
4 5	TP Attachment 408-1.1 – Project Master Maintenance Agreement TP Attachment 408-1.2 – Local Street Turnback	[Under Development] [Under Development]

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TP Attachment 408-1.3 – Pedestrian Bridge

[Under

Development]

TP Attachment 408–1.1 [UNDER DEVELOPMENT]

City of Phoenix Project Master Maintenance Agreement

The following table identifies the commitments stated in the pertinent Third-Party Agreement 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.

City of Pridei	City of Prideritx, of Maricopa County Parks and Recreation.		
Third- Party Agreement Reference Number	Third-Party Agreement Term	Description of Obligations of ADOT	
	[Under development. ADOT plans to provide by Addendum No. 35.]		

1 TP Attachment 408-1.2 [UNDER DEVELOPMENT]

City of Phoenix Local Street Turnback

The following table identifies the commitments stated in the pertinent Third-Party Agreement 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.

with all requir	with all requirements identified in the following table, except those requirements that are specifically identified as being the obligations of ADOT.				
Third- Party Agreement Reference Number	Third-Party Agreement Term	Description of Obligations of ADOT			
]	[Under development. ADOT plans to provide by Addendum No. 35.]				
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TP Attachment 408-1.3 [UNDER DEVELOPMENT]

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Pedestrian Bridge			
The following	table identifies the commitments stated in the pertinent Third-Pa	arty Agreement listed above. Developer is responsible for complying	
with all requir	ements identified in the following table, except those requirement	s that are specifically identified as being the obligations of ADOT.	
Third- Party Agreement Reference Number	Third-Party Agreement Term	Description of Obligations of ADOT	
	[Under development. ADOT plans to provide by Addendum No. 5.]		

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1 TP Attachment 420-1 – Project Environmental Commitment Requirements

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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 Cond	litions	
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

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 fur details related to ADOT's responsibility.		
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

	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 <u>Article 5 of the Agreement</u> 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				

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

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

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

ECR	Environmental Commitment Record Requirements	Description of ADOT Responsibilities
Number	Environmental Communicity 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

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

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 Reso	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		

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

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	ADOT to oversee for compliance
	Notice of Termination with ADEQ in accordance with Section 402 of the CWA and shall provide copies of the permit authorization to ADOT.	
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 <u>Article 5 of the Agreement</u> 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

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

ECR Number	Environmental Commitment Record Requirements	Description of ADOT Responsibilities
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

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

ECR Number	Environmental Commitment Record Requirements	Description of ADOT Responsibilities
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 <u>Section DR 420.2.6.2 of the TPs</u> for more details).

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

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

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

ECR Number	Environmental Commitment Record Requirements	Description of ADOT Responsibilities
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

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

ECR Number	Environmental Commitment Record Requirements	Description of ADOT Responsibilities
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
Geotechnic	al	

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

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

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

ECR Number	Environmental Commitment Record Requirements	Description of ADOT Responsibilities
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.

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

ECR Number	Environmental Commitment Record Requirements	Description of ADOT Responsibilities
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

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
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

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

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.

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

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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delegated to Developer.		
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 U	nique 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.

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

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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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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
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 Decourses		

Visual Resources

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

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	

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

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	

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

ECR Number	Environmental Commitment Record Requirements Description of ADOL Respons	
Material Sou	urces	
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

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.

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

HPT - ADOT Historic Preservation Team

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TP Attachment 440-1 – Roadway Design Criteria

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TP Attachment 440-1 Roadway Design Criteria								
Mainlines		System to System 2-Lane Direct Connectors and HOV Direct Connectors	2-Lane Direct Connectors and HOV Direct Interchange Ramps		Crossroads (within Access Control)			
General								
Minimum Design Speed 65 MPH		Body: 55 MPH	Body: 50 MPH	45 MPH	40 MPH			
		@ Mainline Entrance Gore: 60 MPH	@ Mainline Entrance Gore: 55 MPH		But not less than the design speed of the approaches to the interchange			
		@ Mainline Exit Gore: 65 MPH	@ Mainline Exit Gore: 60 MPH					
			@ Crossroad Terminus: 35 MPH					
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			

			ment 440-1 esign 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)		or E-1) or C (or C-1), See dway Design Guidelines	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 vari	able 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 Notes:	WB-67	WB-67	WB-67	WB-67 WB-67			

- 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.

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TP Attachment 440-2 – Crossroad Design Information

					P Attachment 440-2 road Design Informa	tion					
Crossroa	Crossing Type (Base	Jurisdictio	Classific	Governmen tal Entity's		Through La	nes To Be	Accommoda	nted		
<u>d</u>	Configur ation)	<u>n</u>	<u>ation</u>	<u>Ultimate</u> <u>Standard</u>	(rn Lanes Sho	own)		
40th StreetCro	Interchan ge	City of Phoenix	<u>Arterial</u>	CrossingCO P Detail P- 1010, Type (Base Cenfiguratio n) D	JurisdictionMatch existing	<u>Classific</u> ation	Governme tal Entity Ultimate Standare	's B Throu	WB/S B Left Turn Lanes	EB/N B Left Turn Lane s	B Through Lanes
40th32nd Street	Grade Separatio n OnlyInterc hange	City of Phoenix	Arterial	COP Detail P-1010, Type C B	18', 12' <u>Match</u> existing	2-12'	12'		<u>,12', 18'</u>		•
32nd24th Street	Interchan geGrado Separatio n Only	City of Phoenix	Arterial	COP Detail P-1010, Type BE	47',11',12'Match existing	_			12', 11', 1		
Desert Foothills Parkway2 4th Street	Interchan ge	City of Phoenix	Arterial	COP Detail P-1010, Type <u>CD</u>	Match existing 18',	2-12'	12'		12', 18 '		
17th AvenueD esert Feethills Parkway	Interchan ge	City of Phoenix	Arterial	COP Detail P-1010, Type <u>CD</u>	Match existing18',	2-12'	12'		12', 18 '		
Ivanhoe Street47th Avenue	Grade Separatio n OnlyIntere	Maricopa County DOTCity of Phoenix	Collector Arterial	COP Detail P 1010, Type DMCDOT Roadway Design Manual Figure 5.5	48', 12' <u>Match</u> existing	2-12'	12'		12', 18 '		

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<u>d</u>	Configur	<u>n</u>	<u>ation</u>	<u>Ultimate</u> Standard	(a nes Shown)		Inserted Cells
	<u>ation)</u>	City of				<u> </u>	<u> </u>	1	17'-6"		Inserted Cells
51st Avenue ++ anhee Street	Grade Separatio n Only	City of PhoenixMer icopa County DOT	Arterial Collector	UnknownCO P Detail P- 1010, Type CM	17' 6"Per COP Detail P-1010, Type CM	_			17-0-		
51st	<u>Interchan</u>			COP Detail		18',			<mark>,12', 18'</mark>		Deleted Cells
Avenue	geCrade Separatio	City of Phoenix	Arterial	P-1010,	Per COP Detail P- 1010, Type CM	12'			•	1	Deleted Cells
<u>Spur</u>	n Only	Filoeilix		Type CM	TOTO, Type Civi						Deleted Cells
Estrella	Grade					2-12'	12'		, <mark>12', 18'</mark>		Inserted Cells
Drive51st	<u>Separatio</u>	City of	A wta wia I	COP Detail	18', 12'Per COP						Formatted: Table Text Center
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Spur	hange			·)[_					`	Deleted Cells
Elliot	Interchan	Oite of		COP Detail	D-= 00D D-4-ii D	18', 12'	_		12', 18'	_	Deleted Cells
RoadEetr	geGrade Separatio	City of Phoenix	Arterial	P-1010,	Per COP Detail P- 1010, Type DCM	12					Deleted Cells
olla Drivo	n Only			Type CM							Deleted Cells
ElliotDobb	Interchan	City of	A	COP Detail	18', 12'Per COP	12'	12'		, 12', 18'		Inserted Cells
ins Road	ge	Phoenix	Arterial	P-1010, Type <u>CMC</u>	Detail P-1010, Type						Formatted: Table Text Center
Dobbins B	Interchan	City of	Major	COP Detail	18', 12'Per COP	12'	2 12	<u>.,</u>	12', 18'	- / /	Deleted Cells
aseline Road	ge	Phoenix	Arterial	P-1010, Type C A	Detail P-1010, Type A						Deleted Cells
Southern				COP Detail	_	18', 2-	2-12'	2-12'	2-12', 18'		Deleted Cells
Avenue Ba	Interchan	City of Phoenix	Major Arterial	P-1010,	Per COP Detail P- 1010, Type ACM	12'			•	1	Deleted Cells
Road	ge	FIIOEIIIX	Allellal	Type CM	TOTO, Type ACIVI						Deleted Cells
<u>Broadway</u>	Half			COP Detail		18',	12'	12'	12', 18'		Inserted Cells
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hern Avenue	ge	Phoenix		Type CM	1010, Type CM						Formatted: Table Text Center

	TP Attachment 440-2 Crossroad Design Information									
Crossroa d	Crossing Type (Base Configur ation)	Jurisdictio n	Classific ation	Governmen tal Entity's Ultimate Standard	s at Freeway Crossings (Rase Configuration Turn Lanes Shown)					
Broadway Lower Buckeye Road	Half Interchan ge	City of Phoenix	Arterial	COP Detail P-1010, Type CM	18', 12'Per COP Detail P-1010, Type CM	12'	, 12'	<u>,12', 18'</u>		
Lower Buckeye RoadDura ngo Street	Half Interchan geGrade Separatio n Only	City of Phoenix	Minor Collector Arterial	COP Detail P-1010, Type CM F	18', 12'Per COP Detail P-1010, Type <u>F</u>	2 12'	2 12'	12', 18'		
Buckeye Road	Interchan ge	City of Phoenix	Arterial	COP Detail P-1010, Type C	18', 2-12'Per COP Detail P-1010, Type C	2-12'	2-12'	2-12', 18'		
Van Buren Street	Half Interchan ge	City of Phoenix	Arterial	COP Detail P-1010, Type C	18', 2-12'Match existing	2-12'	2-12'	12', 18'		
Roosevelt Street	Grade Separatio n Only	City of Phoenix	Minor Collector	N/A	Existing Match existing					

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Request for Proposals 202 MA 054 H882701C Volume II – Technical Provisions TP Attachment 440-2

Developer shall verify existing conditions

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TP Attachment 440-3 - Design Variances

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	TP Attachment 440-3 Access Control Variances
<u>Location</u>	<u>Variance</u>
40th Street - Northeast Quadrant	Allow full access at existing Cottonwood Lane.
40th Street - Northwest Quadrant	Allow full access at existing Phoenix Park and Ride main bus driveway.
Desert Foothills Parkway –	Allow full access at existing Phoenix Park and Ride northern driveway. Allow right-in access at existing USPS southern driveway.
Northeast Quadrant	Allow left-out/right-out access at existing USPS northern driveway.
	Allow full access at existing Sierra Foothills Professional Plaza driveway.
Desert Foothills Parkway – Northwest Quadrant	By permit, allow gated right-in/right-out access for maintenance purposes only to the SRP substation.
17th Avenue – Northeast Quadrant	Allow full access at existing Glenhaven Drive. By permit, allow gated right-in/right-out access for maintenance purposes only at existing City of Phoenix pump station.
17th Avenue – Northwest Quadrant	Allow full access at existing Cottonwood Lane. Allow right-in/right-out access at existing Lacewood Place.
51st Avenue – Southeast Quadrant	Allow full access to realigned 51st Avenue.
Elliot Road – Southeast Quadrant	Allow full access at 59th Avenue.
Elliot Road - Northeast Quadrant	Allow full access at 59th Avenue.
Elliot Road – Southwest Quadrant	Allow full access to vacant parcel
Elliot Road – Northwest Quadrant	Allow full access to vacant parcel.
Baseline Road – Northwest Quadrant	Allow right-in/right-out access to vacant parcel.
Broadway Road – Northwest Quadrant	Allow right-in/right-out access at existing 62nd Drive.
Lower Buckeye Road – Northeast Quadrant	Allow full access at existing 59th Avenue.
Lower Buckeye Road – Southeast Quadrant	Allow full access at existing 59th Avenue.
Buckeye Road – Southeast Quadrant	Allow right-in/right-out access to existing commercial driveway.
Van Buren Street – Southeast Quadrant	Allow right-in/right-out access to 57th Drive.
Van Buren Street – Southwest Quadrant	By permit, allow left-in/left-out for maintenance purposes only to RID well site.

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TP Attachment 450-1 - Character Area Plant List

- 1 -

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			
	Remaining large or small trees	To be determined by Developer			
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					

TP Attachment 450-1A Character Area 1 Plant List					
Botanical Name	Common Name	Minimum Percentage that Each Species Shall be Represented in Final Design (%)			
Muhlenbergia capillaris	Regal Mist	25			
Ruellia peninsularis	Baja ruellia	25			
	Remaining large or small shrubs	To be determined by Developer			
Accents					
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			
	Remaining accents	To be determined by Developer			

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		
Acacia greggii	Whitethorn acacia	15
Acacia constricta	Catclaw acacia	15
	Remaining large or small trees	To be determined by Developer
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
	Remaining large or small shrubs	To be determined by Developer
Accents		
Asclepias sp.	Milkweed	10
Carnegiea gigantean	Saguaro	10
Ferocactus sp.	Barrel cactus	10
Opuntia sp.	Prickly pear	10

TP Attachment 450-1B Character Area 2 Plant List		
Botanical Name	Common Name	Minimum Percentage that Each Species Shall be Represented in Final Design (%)
Opuntia sp.	Cholla	10
Fouquieria splendens	Ocotillo	10
Remaining Accents To be determined Developer		To be determined by Developer

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	5
Chitalpa tashkinensis	Chitalpa	5
Pistacia lentiscus	Mastic tree	5
Psorothamnus spinosus	Desert smoke tree	5
Sophora secundiflora	Texas mountain laurel	5
Vitex agnus-castus	Chaste tree	5
	Remaining large and small trees	To be determined by Developer
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		

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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 (%)
Lantana sp. 'New Gold'	New Gold lantana	12
Muhlenbergia capillaris	Regal Mist	12
Rosmarinus officinalis prostrates	Prostrate rosemary	12
Ruellia peninsularis	Baja ruellia	12
	Remaining large and small shrubs	To be determined by Developer
Accents		
Agave sp.	Agave	12
Asclepias sp.	Milkweed	12
Hesperaloe funifera	Giant hesperaloe	12
Hesperaloe parviflora	Red yucca	12
	Remaining accents	To be determined by Developer

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
	Remaining large and small trees	To be determined by Developer
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
	Remaining large and small shrubs	To be determined by Developer
Accents		
Aloe sp.	Aloe	12
Asclepias sp.	Milkweed	12
Dasylirion wheeleri	Desert spoon	12
Hesperaloe parviflora	Red yucca	12
	Remaining accents	To be determined by Developer

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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
	Remaining large and small trees	To be determined by Developer
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
	Remaining large and small shrubs	To be determined by Developer
Accents		
Agave sp.	Agave	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 (%)
Aloe sp.	Aloe	7
Asclepias sp.	Milkweed	7
Dasylirion wheeleri	Desert spoon	7
Fouquieria splendens	Ocotillo	7
Hesperaloe parviflora	Red yucca	7
Yucca sp.	Yucca	7
	Remaining accents	To be determined by Developer

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TP Attachment 450-2 - Seed Mix

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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

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	0.25
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

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		

1 TP Attachment 460-1 – Specifications for Battery Back-up System for Traffic Signals

- 1 -

Specifications for Battery Back-up System for Traffic Signals

2 1 GENERAL

- 3 This specification establishes the minimum requirements for a complete emergency battery
- 4 back-up system for use at traffic signals utilizing light emitting diodes (LED) signals and
- 5 pedestrian heads. The battery back-up system (BBS) must include, but not be limited to the
- 6 following:

1

- 7 A. UPS with inverter, charger, tap switching transformer and internal power transfer switch;
- 8 B. Automatic/manual bypass transfer switch unit;
- 9 C. Batteries;
- 10 D. Cabinet;
- 11 E. Mounting hardware; and
- 12 F. Wiring.
- 13 The BBS must provide reliable emergency power to a traffic signal in the event of a power
- 14 failure or interruption.

15 2 OPERATION

16 **2.1 General**

- 17 The BBS must provide the following operational modes when operating on battery power:
- 18 A. Full operation of all traffic signal devices;
- 19 B. Flash operation; and
- 20 C. Combination of full and flash operation.

21 **2.2 Run Time**

- 22 The BBS must provide a minimum of 8.0 hours of full time operation with a 450 watt load. The
- 23 minimum battery size requirement is listed in section 7.0, Battery Type.

24 **2.3 Compatibility**

- 25 The BBS must be compatible with Model 332, 336, and 337 cabinets; the ITS cabinet; model
- 26 170 and 2070 controllers and any NEMA style cabinet and enclosures; the advanced
- 27 transportation controller; and all cabinet components for full time operation.

28 2.4 Output Capacity

- 29 The BBS must provide a minimum of 1100W/1100VA at 25°C active output capacity with 83
- 30 percent minimum inverter efficiency with 30 percent minimum loading.

31 2.5 Output Voltage

- 32 When operating in backup mode, the BBS output must be 120VAC ± 2 percent, pure sine wave
- 33 output, ≤ 3 percent THD, 60Hz ± 0.3 Hz.

34 2.6 DC System Voltage

35 The BBS DC system voltage shall be 48VDC nominal.

1 2.7 Transfer Time

- 2 The maximum transfer time allowed, from disruption of normal utility line voltage to stabilized
- 3 inverter line voltage from batteries, must be 5 milliseconds (ms). The same maximum allowable
- 4 time must also apply when switching from the inverter line voltage to utility-line voltage.
- 5 Transfers to and from battery operation must not interfere with the operation of the other
- 6 equipment in the intersection.

7 2.8 Operating Temperature

- 8 The BBS and all components must operate without performance degradation over a
- 9 temperature range of -40°C to +74°C with a maximum load of 70 percent of rated output of the
- 10 BBS inverter.

11 2.9 Feedback Level

12 The BBS must be tested and certified to Electrical Standards UL 1778 and CSA 107.3.

13 2.10 Surge Protection

14 The BBS must have surge protection compliant with IEEE/ANSI C.62.41 Cat. A & B.

15 **2.11 Reliability**

- 16 The BBS system must have a mean-time-before-failure of 174,955 hours at a temperature of 25
- degree C (77 degree F) and 103,030 hours at a temperature of 50 degree C (122 degree F).

18 2.12 Power and Control Connections

- 19 The BBS must be easily installed, replaced, or removed by using easily removable cables for
- 20 AC input, AC output, DC input, external transfer control/alarm and battery temperature sense.

21 2.13 AC Connection

22 The AC input and output must hard wired connections.

23 2.14 DC Connection

- 24 The DC connection must be a recessed one piece Anderson Style connector rated to handle the
- 25 maximum DC current required by the inverter while running on batteries.

26 2.15 Temperature Probe Connections

27 The battery temperature sense inputs shall be panel-mounted Telco style connector.

28 2.16 Unit Failure

- 29 In the event of inverter/charger failure, battery failure or complete battery discharge, the
- 30 automatic bypass transfer switch shall revert to normally closed (NC) (de-energized) state,
- 31 where utility line power is connected to the cabinet.

32 **2.17 Overload**

- 33 The BBS inverter module must be able to shutdown in order to protect against internal damage
- 34 in the event of an overload at the output. The inverter must support an overload up to 115
- 35 percent for 2 minutes and then turn off the inverter output. The fault recovers when the overload
- 36 is removed and line power returns.

37 **2.18 Schedule**

38 The BBS must provide a time-of-day schedule settings programmable by the user.

- 1 The time-of-day schedule must allow the user to program schedule operational modes as
- 2 required, per intersection.
- 3 The BBS time-of-day function when programmed must automatically change operational modes
- 4 based on the time-of-day schedule. Operational modes must be red flash or full operation.
- 5 The BBS must not switch from flash operation to full operation mode when the remaining battery
- 6 capacity is ≤ 40 percent.

7 2.19 AC Feedback

- 8 The BBS must prevent a malfunction feedback to the cabinet or from feeding back to the utility
- 9 service.

10 2.20 BBS Failure Mode

- 11 In the event of BBS failure (inverter/charger or battery) or complete battery discharge, the
- 12 internal power transfer relay must revert to NC (de-energized) state and provide utility power to
- the intersection when utility line power is available to the cabinet.

14 2.21 Automatic Shutdown

15 The BBS must initiate an automatic shutdown when battery output reaches 42.5VDC.

16 2.22 Destructive Discharge or Overcharge

- 17 The BBS must be equipped with an integral system to prevent the battery from destructive
- 18 discharge or overcharge.

19 3 AUTOMATIC BYPASS TRANSFER SWITCH

20 **3.1 Rating**

21 The BBS must include an automatic/manual transfer switch rated at 120VAC/30 amps.

22 3.2 Automatic & Manual Bypass Switch

- 23 The automatic bypass transfer switch must be a combination automatic/manual bypass switch.
- 24 Placing the bypass switch in the "bypass" mode must transfer the intersection load from the
- 25 UPS output directly to commercial power. AC commercial power must still be available to the
- 26 UPS input, allowing the UPS to keep the batteries charged. An inverter input breaker must be
- 27 provided and located on the bypass switch so to shut off commercial power to the UPS input,
- 28 allowing safely disconnecting and removing the inverter. With the inverter turned off, the
- 29 batteries can be safely disconnected from the system.

30 3.3 Indicator Light

- 31 The automatic bypass transfer switch must include a bypass indicator light that automatically
- 32 notifies the user when the manual bypass switch is in bypass position. The indicator light must
- 33 be illuminated when in UPS mode.

34 3.4 Status Relay

35 The automatic transfer switch must have an optional bypass status relay with normally open, dry

- 4 -

36 contacts that automatically close when the manual bypass switch is in bypass position.

1 3.5 Integrated Switch

- 2 The manual bypass switch and the automatic transfer relay must be integrated together within
- 3 the automatic bypass transfer switch allowing the manual bypass switch to be rated at 15 Amp
- 4 and to be integrated with the bypass indicator light.

5 3.6 Terminal Blocks

- 6 The automatic bypass transfer switch must have terminal blocks capable of accepting #6 AWG
 - wiring for the AC input and output with #10 AWG from the automatic bypass transfer switch to
- 8 inverter/charger module.

9 4 FUNCTIONALITY

10 4.1 Output Voltage Regulation Mode

- 11 The BBS must include auto voltage regulation functionality.
- 12 4.1.1 AC Input Voltage Range for Output Regulation
- 13 The buck/boost mode must have a minimum range of 88 175 VAC.
- 14 4.1.2 Transfer Set Points
- 15 There must not be any user definable transfer set points for the buck boost mode.

16 4.1.3 Regulated Voltage

- 17 Whenever auto voltage regulation mode is selected the output of the system must be regulated
- 18 between 108-130VAC. When the output of the system can no longer be maintained with this
- 19 range, the BBS must transfer to backup mode.

20 4.2 Circuit Breakers

- 21 The BBS must be equipped with an AC Input circuit breaker that protects both the UPS and the
- 22 loads connected to the output. Should the AC input breaker on the UPS trip, it must allow the
- 23 UPS to go to inverter mode to power the intersection off of batteries. Should an overload
- 24 condition still exist when the inverter is energized the inverter must revert to its internal
- 25 electronic protection, preventing damage to the inverter due to the overload or short circuit
- condition, on the output. Once this overload condition is cleared the inverter must energize and power the intersection utilizing the available battery power. If the condition does not clear itself,
- the inverter must stay in the standby mode until manually cleared by a technician.
- 29 The BBS must have a flush mounted battery circuit breaker installed on the front panel of the
- 30 BBS inverter module.

35

31 4.3 Line Qualify Time

- 32 The BBS must have a user definable line qualify time. The user must be able to select a
- 33 minimum of six possible settings. The settings must be 3, 10, 20, 30, 40 and 50 seconds. The
- 34 default line qualify time must be 3 seconds.

4.4 Battery Charger

- 36 The BBS must have an integral charger that is compatible with Gel and AGM battery topology.
- 37 The charger must be an intelligent charger with control systems that automatically incorporates

- 5 -

38 bulk, absorption and float charging modes.

1 4.4.1 Battery Temperature Compensation

- 2 The integral intelligent charger must use temperature compensation. The charging system must
- 3 compensate over a range of 2.5 6.0mV/°C per cell, user adjustable when required.

4 4.4.2 Battery Temperature Sensor

- 5 A temperature probe which plugs into the front panel of the BBS must be used to monitor the
- 6 internal temperature of the batteries. The temperature sensor must be 2 meter in length,
- 7 external to the inverter/charger module and taped to the side of a center battery within the
- 8 battery string.

9 4.4.3 Battery Temperature Charging

10 The batteries must not be recharged whenever the battery temperature exceeds 50°C.

11 4.4.4 Battery Balancing

- 12 The BBS must include an external battery balancer to automatically balance the battery charger
- 13 voltage on all batteries in the string to within +/- 100 mV between any two batteries. The
- 14 balancer must allow for any single 12V battery within the battery string to be replaced without
- 15 replacing all batteries in the string during the battery warranty period.

16 4.4.5 Recharge Time

- 17 The recharge time for the batteries from "protective low-cutoff" to 90 percent or more of full
- 18 charge capacity must not exceed 12 hours. The BBS charger must be capable of providing 15
- 19 amps at 54VDC.

20 5 USER INTERFACES AND DISPLAYS

21 5.1 Inverter/Charger Display

- 22 The BBS inverter/charger unit must include a backlit LCD display for viewing all status and
- 23 configuration information. The screen must be easily viewable in both bright sunlight and in
- 24 darkness.

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25 **5.1.1 Screen Size**

- 26 The screen must be large enough to display the following information with the use of menu
- 27 scrolling buttons to read required information. All active readings must be real time.
- A. Operating mode (line, standby, backup, buck / boost)
- 29 B. Utility input voltage
- C. BBS output voltage and current
- 31 D. Battery temperature
- 32 E. Input frequency
 - F. Output power
- 34 G. Battery voltage
- 35 H. Charger current
 - Shed timer relays time to activation
- 37 J. Ethernet MAC address and IP address
- 38 K. Accumulated output power in kW hours
- 39 L. Battery runtime remaining
- 40 M. Unit serial number

- 1 N. Unit firmware version
- O. Any alarms and faults
- 3 5.1.2 Keypad
- 4 The BBS inverter/charger unit must include a keypad for navigating system information.
- 5 5.1.3 Web-based Interface
- 6 The BBS must be provided with a web-based-interface for user configuration and management
- 7 through a web browser.
- 8 5.1.4 Minimum Capabilities
- 9 The BBS must allow the user to do the following through the web browser:
- 10 A. View logs;
- 11 B. Change modes of operation;
- 12 C. Configure email alarms;
- 13 D. Adjust line qualify time;
- 14 E. Program relay contacts;
- 15 F. Configure network parameters;
- 16 G. Inverter/charger firmware to be upgradeable remotely via Ethernet; and
- 17 H. Communication module firmware upgradeable remotely.
- 18 **5.1.5 Status LEDs**
- 19 The BBS must have discrete status LED indications on the front of the inverter/charger.
- 20 5.1.6 Green Output LED
- 21 This LED must be "on" any time that the output of the BBS is in normal mode. When the BBS
- 22 output is either in backup mode or auto voltage regulation modes the LED must flash "on" and
- 23 "off".
- 24 5.1.7 Red Fault LED
- 25 This LED must be solid "on" any time that there are any faults in the system.
- 26 5.1.8 Red Flashing Alarm LED
- 27 This LED must flash "on" and "off" any time that there are any alarms in the system.
- 28 **5.1.9 Event Log**
- 29 The BBS must maintain an event log containing a minimum of 200 of the most recent events
- 30 recorded by the BBS. These events must be down loadable remotely via Ethernet and
- 31 automatically reported to the central monitoring software. The events log must be date and time
- 32 stamped.
- 33 5.1.10 Events, Alarms and Faults
- 34 The BBS must display and log the following events, alarms and faults:
- 35 A. Operating mode;
- 36 B. Weak battery;
- 37 C. Overload;
- 38 D. High and low temperatures;

- 1 E. User input, S2 is shorted;
- 2 F. Line frequency out of specifications;
- G. No temperature probe;
- 4 H. Low battery;
- I. Battery breaker open;
- J. BBS is performing a self-test;
- 7 K. Fan fail;
- 8 L. Incorrect firmware;
- 9 M. AC input breaker open;
- 10 N. Short circuit;
- 11 O. Output voltage high;
- 12 P. Output voltage low;
- 13 Q. Battery voltage high;
- 14 R. Battery voltage low;
- 15 S. Isolation relay fail; and
 - T. Temperature high.

17 5.1.11 Counters

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- 18 The BBS must keep track of the following:
- 19 A. The number of times that the unit was in backup mode.
- 20 B. The accumulated number of hours and minutes that the unit has operated in backup 21 mode since the last reset.

22 5.1.12 Programmable Relay Contacts

- 23 The BBS must provide the user six programmable dry relay contacts and one 48VDC relay
- 24 contact. As a minimum, the programmable options must be on battery, low battery, timer, alarm,
- 25 fault, and off. The BBS must also have three input dry relay contacts. BBS self test, user alarm,
- 26 and BBS shutdown.

27 5.2 Relay Contact Terminals

- 28 The relay contacts must be made available on the front panel of the BBS via 6, 3 position
- 29 plug-in terminal blocks with screw down wiring connections.

30 **5.2.1 Contacts**

- 31 Each relay, C-1 through C-5 must have their own common and their own set of normally open
- 32 (NO) and NC terminals. The terminals for each relay must be oriented as NO-C-NC on the
- 33 terminal block. C-6 must provide continuous 48 VDC voltage for powering of enclosure DC fan.

34 **5.2.2 Labeling**

- 35 The contacts on the terminal block must be labeled 1-18, left to right. Additionally, each set of
- 36 contact must be labeled with the NO-C-NC designation, as well as C1...C6 from left to right.
- 37 Printed labels noting all alarms and faults must be provided with the BBS inverter/charger to be

- 8 -

38 installed when required.

39 **5.2.3 Rating**

The relay contacts must be rated at a minimum of 1 amp at 250 VAC.

1 5.2.4 On Battery Relay Contact

- 2 The dry relay contacts that are configured for "on battery" must only energize when the Inverter
- 3 is operating in backup mode.

4 5.2.5 Timer Relay Contacts

- 5 The BBS must include a timer that must energize the "timer" configured dry relay contact after
- 6 the user configured time has elapsed. The timer is started when the BBS enters backup mode.
- 7 The user must be able to configure the timer to the required time. The format must be hours,
- 8 minutes, seconds.

9 5.2.6 Low Battery Relay Contact

- 10 The BBS must have an adjustable low battery relay setting. This setting must be adjustable so
- 11 that the user can set the point at which the low battery relay contact is energized.

12 6 COMMUNICATIONS

13 6.1 Serial Interface

- 14 The BBS must be equipped with an industry standard RS-232 serial connection for user
- 15 configuration and management. The serial port must be an EIA-232 (DB9-Female) connector.

16 **6.2 Ethernet Interface**

- 17 The BBS must have an internal Ethernet communication interface for user configuration and
- 18 management. The Ethernet port must be an RJ-45, EIA 568B pin out connector.

19 6.3 Remote Monitoring

- 20 The BBS must be include remote monitoring & alarms transmission capabilities through the
- 21 Ethernet RJ-45 IP addressable port, using simple network management protocol.

22 6.4 Notification

- 23 System must have the capability of notifying operations, maintenance or TMC via e-mail of any
- 24 alarms, faults or events, user selectable. E-mail set up must allow for different levels of
- 25 notifications based on the criticalness of the alarms.

26 6.5 User Configuration Menus

- 27 All BBS configuration and system menus must be accessible and programmable from the
- 28 RS-232 and Ethernet port.

29 **6.6 Communication Protocols**

30 The BBS must support TCP and UDP over IP protocol communications.

31 6.7 Application Layer Protocols

32 The BBS must support FTP, Telnet, and HTTP.

33 6.8 Simple Network Management Protocol

34 The BBS must be simple network management protocol compliant.

1 7 BATTERIES

2 7.1 Battery Type

- The battery must be comprised of extreme temperature, float cycle, GEL valve regulated lead acid. Individual batteries must meet the following specifications:
- 5 A. Voltage rating: 12V
 - B. Amp-hour rating: 109 AH, at the 20 hour rate, to 1.75 Volts per cell, minimum battery rating. Larger AH batteries are acceptable providing they do not exceed the group size listed below. (Case 31)
- 9 C. Group size: Case 31
 - D. Batteries must be easily replaced and commercially available off the shelf
- E. Batteries must provide 100% runtime capacity out-of-box. Each battery must meet its specification without the requirement of cycling upon initial installation and after the initial 24 hour top off charge.

14 7.2 Battery String

- 15 Batteries used for the BBS must consist of a 4 batteries configured for a 48 VDC battery buss
- 16 system.

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17 7.3 Operating Temperature

- 18 The battery system must consist of one or more strings of extreme temperature; float cycle GEL
- 19 valve regulated lead acid batteries. Batteries must be certified to operate at extreme
- 20 temperatures from -40°C to +71°C.

21 7.4 Construction

22 **7.4.1 Terminals**

- 23 The batteries must have maintenance-free threaded insert terminals eliminating annual
- 24 torqueing. Battery terminals that require annual torqueing of each post connection must not
- 25 permitted.
- 26 **7.4.2 Ability to Function**
- 27 An integral lifting handle should be provided on the batteries for ease of removal/installation.
- **28 8 CABINET**
- 29 **8.1 General**
- 30 8.1.1 BBS Cabinet Dimensions
- 31 The dimensions for the BBS cabinet must not exceed 50 inches in height, 17 inches in width
- 32 and 17 inches in depth.
- 33 8.1.2 Inverter/Charger Mounting
- 34 The inverter/charger unit must be shelf or rack mounted on a standard EIA 19 inch rack.
- 35 8.1.3 Automatic Transfer Switch Mounting
- 36 The automatic transfer switch must be mounted on EIA 19 inch rail.
- 37 8.1.4 Interconnect Wiring
- 38 All interconnect wiring must be provided and must be UL Style 1015 CSA TEW.

1 8.2 BBS Replacement

- 2 The BBS equipment and batteries must be easily replaced and must not require any special
- 3 tools for installation.

4 8.3 Hot Swappable

- 5 The BBS inverter and batteries must be hot swappable. There must be no disruption to the
- 6 traffic signal when removing the inverter or batteries for maintenance.

7 8.4 Quick Disconnects

- 8 All inverter and battery connections must be of the quick disconnect type for ease of
- 9 maintenance.

10 8.5 Ancillary Installation Hardware

- 11 All necessary installation hardware (bolts, fasteners, washers, shelves, racks, etc.) must be
- 12 included.

13 8.6 Cabinet Sizing

- 14 The external cabinet must be capable of housing batteries up to a group 31 size,
- 15 inverter/charger power module, automatic transfer switch, control panels, wiring, wiring
- 16 harnesses, and all other ancillary equipment.

17 8.7 Cabinet Types

- 18 The BBS can be installed either as:
 - A. Free-standing base-mounted cabinet with optional 8 inch riser for easy cable entrance;
- 20 B. Pole-mounted cabinet with optional pole mount bracket kit; or
- 21 C. Side-mounted to a traffic controller cabinet with no mounting brackets required.

22 **8.8 Rating**

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- 23 All external cabinets must be NEMA 3R rated. The enclosure must be made of 0.125 (5052-
- 24 H32) aluminum.

25 8.9 Ventilation

- 26 The external cabinet must be ventilated through the use of louvered vents, filter, and one
- 27 thermostatically controlled fan. The filter must be the re-usable type and matching the
- 28 dimensions of the louver with both located on the bottom half of the door.
- 29 The cabinet fan must be DC operated for longer reliability.

30 8.10 Ancillary Hardware

- 31 The BBS cabinet must come with all bolts, washers, nuts required to mount it to a controller
- 32 cabinet.

33 8.11 Accessibility

- 34 All components, terminations, terminal blocks, relays, etc. must be fully accessible.
- 35 **8.12 Shelves**
- 36 Battery shelves must be located in the bottom half of the enclosure. All battery shelves must be
- 37 removable and on ball bearing rollers to slide in and out for easy access for the batteries. Air

- 1 must be allowed for flow from the bottom of the cabinet and up the back internal wall. Neither
- 2 the top battery shelf nor the power module shelf must inhibit the airflow to the top of the cabinet.

3 8.12.1 Locking

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- 4 The cabinet must include a 3 point locking system, including a Type 2 Corbin lock and utilize a
- 5 handle with pad locking capability.

6 8.12.2 Cabinet Options

- 7 The following options must be available for the cabinet:
- 8 A. On-battery lamp mounted externally on the top of the cabinet that illuminates when the BBS is operating in inverter mode;
 - B. Battery heater mats to increase battery capacity in cold climates;
- 11 C. Receptacle plate assembly that mounts on the transfer switch panel to provide utility power to the battery heater mats;
 - D. Automatic generator transfer switch that senses a generator is connected and automatically switches to the generator source;
 - E. Internal lamp with door push-button switch to illuminate the interior of the cabinet; and
- F. Status monitoring dry contacts for the automatic transfer switch and the generator transfer switch.

18 9 MAINTENANCE

19 9.1 Probe Jacks

- 20 The BBS must provide voltmeter standard probe input-jacks (+) and (-) to read the exact battery
- 21 voltage drop at the inverter input.

22 9.2 Self-Testing

- 23 The BBS inverter module must be programmable to perform automatic self-testing, programmed
- 24 in weekly intervals and programmed by the user to meet their specific requirements or
- 25 manufacturer's recommendation. During self-test the BBS inverter module must identify a weak
- 26 battery or multiple batteries in the string that have reached a weak state and notify maintenance
- 27 by initiating a weak battery alarm.

28 10 WARRANTY

29 10.1 Battery Backup System

- 30 The BBS system must include a five-year warranty on parts and labor on the entire BBS
- 31 system, including batteries, to ADOT when utilizing the BBS Manufacturers own designed
- 32 enclosure, meeting the above cabinet specifications.
- 33 If another enclosure is provided by the BBS manufacturer, the manufacturer must provide a
- 34 three-year warranty on parts and labor on the BBS inverter module only.

35 **10.2 Batteries**

- 36 The BBS manufacturer must provide a 5 year unconditional full replacement warranty for every
- 37 battery with the BBS under this specification. Under the warranty time period, the battery must
- 38 provide a minimum of 70% of its original capacity.

1 11 VENDOR SUPPORT

- 2 11.1 Technical Support
- 3 The BBS manufacturer must provide a toll-free technical support phone number. The toll-free
- 4 phone number must be included in the BBS manual.
- 5 11.2 Documentation
- 6 Equipment manuals must be provided for each BBS cabinet. Equipment manuals must include
- 7 installation, operation, programming, maintenance and troubleshooting.
- 8 12 QUALITY ASSURANCE
- 9 12.1 Design and Production
- 10 Each BBS must be manufactured in accordance with a written manufacturer's Quality
- 11 Assurance program. The QA program must include, as a minimum, specific design and
- 12 production QA procedures.
- 13 12.2 ISO Certified
- 14 The BBS power module manufacturer must be ISO 9001or ISO 9002 certified.
- 15 12.3 Design Qualification Testing
- 16 The manufacturer must be certified to carry out the CSA and UL standards testing on the BBS
- 17 system.

1

TP Attachment 470-1 - ROW Forms

- 1 -

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:						
	Department of Trar						
the Arizona	nsider this letter as Department of T your convenience.						
1.	Current Principal	Balance					
2.	Current Interest Rate						
3.	Monthly Payment (principal & interest only)						
4.	Original term of lo	an (months)					
5.	Remaining term of	of loan (months)					
6.	Heloc loan baland	ce 180 days pric	or*				
Phone Num THIS LETTE MY LOAN T IS A HELOO BALANCE INCLUDE AI Property ow Mortgage loa	any questions, pleas hber: CR ALSO AUTHORI TO THE STATE'S E C, PLEASE PROVIE THAT EXISTED 18 NY LATE PAYMEN Viner to provide cur an servicer an servicer address	ZES YOU TO P SCROW AGEN DE BOTH CURI 30 DAYS PRIC IS, FEES, ETC rent:	ROVIDE ALL INFO ICY UPON REQU RENT PRINCIPAL DR TO THIS RE	EST. *NOTE IF . BALANCE AND QUESTED DAT ALANCE.	MORTGAGE PRINCIPAL E. DO NOT		
Mortgage loa	an number	· <u>-</u>					
Loan service	er phone number						
Property Ow	ner/Borrower	Date	Property C)wner/Borrower	Date		
Project:		Section:		Parcel:			

- 2 -

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 LandArizona, 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 <u>Close of Escrow Date or the Order of Immediate Possession</u> , and it is further agreed that said permission will terminate automatically <u>upon the beginning of the proposed construction of the proposed construction</u>
In receipt of this agreement we are requesting from the
On day of, 2014.
DATE
APPROVED: ARIZONA DEPARTMENT OF TRANSPORTATION:
By:
Raul R. C. Torres, Manager Property Management Section
Arizona Department of Transportation - 3 - Request for Proposals

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

SUMMARY STATEMENT OF OFFER TO PURCHASE AND IMPROVEMENT REPORT

compensation on a "cost-to-cure" basis, if any. The analysis account the effect of the acquisition of the land needed, and 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: 1 – 3	\$ \$ \$ \$	rcel:
account the effect of the acquisition of the land needed, and 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	\$ \$ \$	
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account the effect of the acquisition of the land needed, and of the project. A breakdown of the offer is as follows:	u ine esia	blishinent and construction
The amount offered represents just compensation, and is the an appraisal made by a certified real estate appraiser. If on consideration has been given to the value of the remaining	lly part of g property s of the rei	the property is needed, ful y, including items requiring maining property takes into
C. THE OFFER AS JUST COMPENSATION, AND BREAK	DOWN	
		Square Feet
Temporary Construction Easement		Square Feet
Easement		Square Feet
Easement (new right-of-way)		Square Feet
Underlying fee interest (existing rights-of-way)		Square Feet
Fee interest (new right-of-way)		Square Feet
The estate(s) or interest(s) needed is/are as follows (indicate	ed by an "	'X"):
B. THE ESTATE OR INTEREST NEEDED		
also known as Assessor Parcel No(s)		
The land is identified as,County, Arizona		
The land is identified as,	ows the b	asis on which the oner is

D. THE IMPROVEMENTS									
THE IMPROVEMENTS ASSO	OCIATED	WITH	THE	PURC	HASE	ARE	DESCRI	3ED /	AS
It is hereby acknowledged tha situated entirely within or partiall Rights of Entry upon the Granto improvements as noted.	ly within th	e Right	of Way	take lir	nits are	conve	eyed to Al	DOT w	/ith
E. COST TO CURE									
THE COST TO CURE ASS FOLLOWS:	OCIATED	WITH _	THE	PURC	HASE	ARE	DESCRII	3ED /	AS
Grantor agrees to remove all co and assumes all liability conne provided for removal, all improv wholly upon the lands conveyed of the Grantor to said improvem Grantor shall be liable for the (REMOVE STATEMENT IF COS	ected with vements as shall beconents associated as ents associated reasona	said re ssociate ome the ciated w ble cos	emoval ed with proper ith the t incu	Furthed the cost to cost to cost to cost in	er, upo st to cu e State cure sh remov	n expiure rented of Arizonal of Arizonal of Arizonal of Arizonal cesting and arizonal of Arizonal Orizonal of Arizonal of Arizonal of Arizonal of Arizonal of Ariz	ration of naining partona, and to assert and to assert and to assert and to assert assert assert assert assert	the tir artially all righ ermina	me or hts ite.
COMMENTS AND/OR EXCLUS	SIONS:								
PERSONAL PROPERTY NO ATTACHED): F. THE DOCUMENTS NEEDED		— IRED (—	INCLU	DES I	TEMS	NOT	PERMA	NENT	LY
Following is a summary of the de	ocuments	requiring	g signa	iture (in	dicated	by "X'	'):		
Purchase Agreement (that attached Exhibit "A" provides the	his docum e exact leg	nent sho al descr	ows th	ie term	s of tl	-	•	and t	the
Warranty/Special Warran		im Dee	d (to be	e notari					
Extended Occupancy Agre							ed Home		
Right of Way Contract (to b	oe notarize	ed)			Easen	nent (t	o be nota	rized)	
Temporary Construction E							stitute W		m
Summary Statement of C	offer to Pu	rchase	and In	nprove	ment R	eport	(<u>see</u> belo	w)	
G. SECURITY DEPOSIT INFOR	RMATION	AND A	CKNO	WLEDG	MENT				
ADOT shall withhold \$ in escrow, as a security deposit, in accordance with the terms of the Purchase Agreement.									
Project:	Section:_				Parc	el:			
		2 – 3	3						
Arizona Department of Transportation South Mountain Freeway Project		- 5 -					Request for 202 MA 05		

H. SUI	BSURFACE IMPROVEMENT STATE	MENT				
1.	I am am not aware of the presystems, storm cellars, ground wells)					
2.	Well(s) Yes No Well Registration No(s): 55-					
3.	Irrigation Water Rights					
4.	Well is located within the acquisiti (NOTE: If you answered yes regarappropriate certificate if available)	ding water rights, ple	e acquisition area. ease provide a copy of the			
*If awa	are of such improvements, please p	rovide any information	that may assist in locating			
GRAN	TOR					
		Date				
		Date				
08/1/1	2					
Projec	t: Section:		Parcel:			
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DEMOLITION AUTHORIZATION

DATE:	DEMO #:			
PARCEL(S)#:				
JOB LOCATION:				
LIST OF STRUCTURES:				_
PERMITS:	DEMODUST			
NESHAP NOTII	FICATION FILED:			
UTILITIES SHU	T OFF:ELECTRIC _	_GASWATER_	PHONECABLE	
ABATEMENT C	COMPLETED BY (COMP	ANY/OVERSIGHT):		
DATE ABATEM	IENT COMPLETED:			
IDENTIFY HAZ	ARDOUS MATERIALS:			
UNDERSTAND	ENTIRE SCOPE OF WO	RK:		
ALL PARTIES I	RECEIVED DEMO SPEC	S:		
POTENTIAL:	UNDERGROUND STOR	AGE TANKSS	EPTIC SYSTEM	
SPECIAL CONE CAUTIONS:	DITIONS OR			
REMARKS:			0.000	
SIGNATURES				
		DEMOLITION CO	NTRACTOR/SUPER/M	GR
		DEMOLITION ON	SITE EQUIP OPER	
		ADOT DEMOLITIC	ON 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 #:						
	rtify that I have received the followin sportation:	g documents from the Ar	izona Department o				
1.	State of Arizona Asbestos Contract Dire	ectory					
2.	Asbestos NESHAP Regulations						
3.	NESHAP Notification for Renovation and Demolition Activities, Arizona Department of Transportation Facilities						
4.	ADOT Erosion and Pollution Control M	anual					
	SIGNATURE	PRINTED NAME	DATE				
	FIRM'S NAME						
	STREET ADDRESS						
	CITY STATE ZIP CODE	TELEPHONE					

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TP Attachment 470-2 – Demolition Contractor Requirements

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Demolition Contractor Requirements

2 Demolition Contractors Experience and Licensing:

- A. Minimum of 5 years experience in demolition as primary work.
 - 1. Commercial and residential experience
 - 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.

24 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.

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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 30° 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.
- 31 E. Water-remove meters.
- 32 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

- 1 -

								Acqui	TP Attac		'0-3 atus Report								
No.	Parcel No.	Owner's Name	APN	Site Address	Property Type	Full or Partial Take	Relos.	Retained Parcel	Appraiser	Acq. Agent	ROW Status	Appraisal Ordered	First Written Offer	Possession	Relo/ Vacate Date	Demo Status	Known Env. Site (Cultural; Haz Mat)	Est. Date Parcel Available for Developer's Use	Market Value (\$/sq. ft.)
1	7-11408	Smith Trust	103-25-234	1217 N 61st Dr.	SFR	Full	1	N		CEI	Appraisal in Process	9/11/2014						10/1/2016	\$13
2	7-11409	1133 N 60th Ave Llc	103-25-010	5932 W Belleview St	SFR	Full	1	N		CEI	Offer Made	9/11/2014	4/9/2015					4/1/2016	\$76
3	7-11412	Gideon & Julie Aboud	306-06-333	2742 E Redwood Lane	SFR	Full	1	Y		ADOT	Possession	9/11/2014	3/23/2015	4/30/2015	6/26/2015			4/1/2016	\$44
4	7-11413	Gregory Adams	306-06-322	2660 E Redwood Lane	SFR	Full	1	Y	R. Kloc	ADOT	Possession	9/11/2014	4/13/2015	6/30/2015	8/3/2015			4/1/2016	\$42
5	7-11414	AHP VIII, LLC	104-57-024	6202 W Pueblo Ave	SFR	Full	1	Y	D. Lopez	Tierra	Possession	10/6/2014	3/30/2015	8/14/2015	8/12/2015			4/1/2016	\$27
6	7-11427	Julia Ann Baarstad / Michaels	306-06-280	2717 E Redwood Lane Mailing: 111 7th Ave Independent Iowa -50644	SFR	Full	1	Y	R. Kloc	ADOT	Possession	9/11/2014	3/25/2015	5/8/2015	6/7/2015			4/1/2016	\$43
7	7-11428	Brandon Baker	306-06-267	17037 S 27th Place	SFR	Full	1	Υ	R. Kloc	ADOT	Possession	9/11/2014	4/11/2015	6/5/2015				4/1/2016	\$28
8	7-11429	Christine McKinney aka Christine Balderacchi	306-06-294	2623 E Redwood Lane	SFR	Full	1	Y	R. Kloc	ADOT	Possession	9/11/2014	4/24/2015	6/30/2015				4/1/2016	\$42
9	7-11430	Ruiz	103-25-019	6032 W Belleview St	SFR	Full	1	Y	D. Lopez	CEI	Possession	9/11/2014	4/20/2015	7/15/2015	8/18/2015			4/1/2016	\$16
10	7-11431	Rogelio Lamas & Maria A. Tinoco	103-25-230	6126 W Belleview St	SFR	Full	1	Y	D. Lopez	CEI	Possession	9/11/2014	4/7/2015	7/27/2015				4/1/2016	\$13
11	7-11433	Heather Bauer & Morton Kaye	306-06-331	2734 E Redwood Lane	SFR	Full	1	Y	R. Kloc	ADOT	Possession	9/11/2014	4/12/2015	8/31/2015				4/1/2016	\$41
12	7-11437	Dennis Berube	300-04-017X	4418 W Galveston St	SFR	Full	1	Y	D. Lopez	ORC	Offer Made	10/22/2014	4/25/2015					4/1/2016	\$4
13	7-11440	Joseph & Karen Bross	300-05-598	2755 W Cedarwood Lane	SFR	Full	1	Y	L. Beatty	ADOT	Possession	9/11/2014	4/1/2015	5/29/2015	7/2/2015			4/1/2016	\$61
14	7-11447	Salvatore & Sharon Castronova	306-06-268	2765 E Redwood Lane	SFR	Full	1	Y	R. Kloc	ADOT	Possession	9/11/2014	4/15/2015	6/17/2015	6/18/2015			4/1/2016	\$27
15	7-11448	Cazarez Alfredo/ Gastelum Judith	103-25-229	6130 W Belleview St	SFR	Full	1	N	D. Lopez	CEI	Offer Made	9/11/2014	4/24/2015					4/1/2016	\$12
16	7-11449	Likai Chai	300-05-599	2751 W Cedarwood Lane	SFR	Full	1	Y	L. Beatty	ADOT	Possession	9/11/2014	4/23/2015	6/29/2015				4/1/2016	\$61
17	7-11454	Tricia Coleman	306-06-269	2761 E Redwood Lane	SFR	Full	1	Y	R. Kloc	ADOT	Possession	9/11/2014	4/15/2015	5/15/2015	7/23/2015			4/1/2016	\$44
18	7-11456	Daniel Contreras	306-06-275	2737 E Redwood Lane	SFR	Full	1	N	R. Kloc	ADOT	Offer Made	9/11/2014	4/3/2015					4/1/2016	\$48
19	7-11458	Gary & Alice Coombs Family Trust	306-06-307	17002 S 26th St	SFR	Full	1	Y	R. Kloc	ADOT	Possession	9/11/2014	4/6/2015	6/17/2015	8/3/2015			4/1/2016	\$32

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No.	Parcel No.	Owner's Name	APN	Site Address	Property Type	Full or Partial Take	Relos.	Retained Parcel	Appraiser	Acq. Agent	ROW Status	Appraisal Ordered	First Written Offer	Possession	Relo/ Vacate Date	Demo Status	Known Env. Site (Cultural; Haz Mat)	Est. Date Parcel Available for Developer's Use	Market Value (\$/sq. ft.)
20	7-11460	Tomas & Maria Cortez	300-04-021E	4544 W Ivanhoe St	SFR	Full	1	Y	D. Lopez	ORC	Offer Made	10/16/2014	4/22/2015					4/1/2016	\$8
21	7-11462	Ellis & Williams	300-03-016J	5901 W Elliot Rd.	SFR	Full	1	N		ORC	Offer Made	10/16/2014	7/8/2015					4/1/2016	\$1
22	7-11463	Robert & Maia Crawley	300-04-017S, 300-04-017U	4427 W Monterey St	SFR / Vacant	Full	1	Y	R. Lopez	ORC	Possession	10/22/2014	6/5/2015	7/29/2015				4/1/2016	\$1
23	7-11465	Dad Victor & Elisa M	300-02-021J	6102 W Dobbins Rd	SFR	Full	1	N		ORC	Offer Made	10/16/2014	4/7/2015					4/1/2016	\$1
24	7-11467	William & Shandra Daniels	300-05-615	17021 S. 27th Ave	SFR	Full	1	Y	L. Beatty	ADOT	Possession	9/11/2014	4/4/2015	6/12/2015	8/6/2015			4/1/2016	\$45
25	7-11468	Daniel & Donna Darling	306-06-336	17032 S. 27th Place	SFR	Full	1	Υ	R. Kloc	ADOT	Possession	9/11/2014	4/7/2015	5/22/2015	5/31/2015			4/1/2016	\$45
26	7-11472	Michael & Michelle Moore	306-06-283	2705 E Redwood Lane	SFR	Full	1	Υ	L. Beatty	ADOT	Possession	9/11/2014	3/31/2015	4/30/2015	5/1/2015			4/1/2016	\$40
27	7-11474	Michael & Kathy DeLos	300-05-613	17026 S. 27th Ave tele: 480.460.6279	SFR	Full	1	Y	L. Beatty	ADOT	Cleared for Construction	9/11/2014	3/27/2015	5/21/2015	5/22/2015	9/1/2015		4/1/2016	\$45
28	7-11477	Mehdi Derakhshande h	306-06-323	2702 E Redwood Lane	SFR	Full	1	N	R. Kloc	ADOT	Offer Made	9/11/2014	4/3/2015					4/1/2016	\$42
29	7-11480	Michael DiGoia	306-06-278	2725 E Redwood Lane	SFR	Full	1	Y	R. Kloc	ADOT	Possession	9/11/2014	3/31/2015	5/26/2015	6/17/2015			4/1/2016	\$41
30	7-11481	Robert & Candice Diaz	300-04-051, 300-04-002D	4543 W Ivanhoe St.	SFR	Full	1	N		ORC	Offer Made	10/16/2014	4/8/2015					4/1/2016	\$3
31	7-11485	Ferid & Rushije	300-05-597	2759 W Cedarwood Lane	SFR	Full	1	Y	L. Beatty	ADOT	Possession	9/11/2014	3/30/2015	6/5/2015	5/1/2015			4/1/2016	\$69
32	7-11486	Michael Dostall & Hollu Costein	306-06-316	2634 E Redwood Lane	SFR	Full	1	Y	L. Beatty	ADOT	Possession	9/11/2014	4/9/2015	6/5/2015	7/21/2015			4/1/2016	\$40
33	7-11487	Scott Downey	300-05-674	3105 W Cedarwood Lane	SFR	Full	1	Y	L. Beatty	ADOT	Possession	9/11/2014	3/31/2015	6/30/2015	7/9/2015			4/1/2016	\$48
34	7-11489	Maria Dunker	306-06-337	17028 S. 27th Place	SFR	Full	1	Y		ADOT	Possession	9/17/2014	4/1/2015	5/22/2015				4/1/2016	\$51
35	7-11492	Edwards Paul F/Melanie A	300-03-018F, 300-03-018G	11202 S. 59th Ave.	SFR / Business	Full	2	N	D. Lopez	ORC	Offer Made	10/16/2014	4/27/2015					4/1/2016	\$3
36	7-11498	Carlton Prpoerty Management LLC	306-06-285	2659 E Redwood Lane	SFR	Full	1	Y	R. Kloc	ADOT	Possession	9/11/2014	3/30/2015	5/1/2015	5/19/2015			4/1/2016	\$46
37	7-11499	Wild Paw Enterprises, Llc	300-02-021F	8444 S. 61st Ave	SFR	Full	1	Y		ORC	Offer Made	10/16/2014	4/23/2015				С	9/1/2016	\$4
38	7-11501	Flores Ruben & Sylvia O	103-25-228	6134 W Belleview St	SFR	Full	1	Y		CEI	Possession	9/11/2014	4/7/2015	6/30/2015				4/1/2016	\$12
39	7-11502	Michael Foerst	300-02-021H	6104 W. Dobbins	SFR	Full	1	N		ORC	Offer Made	10/16/2014	4/13/2015					4/1/2016	\$3
40	7-11503	Venkateswara Kottapalli	306-06-296	2615 E Redwood Lane	SFR	Full	1	Y	R. Kloc	ADOT	Possession	9/11/2014	4/7/2015	6/16/2015				4/1/2016	\$50

Arizona Department of Transportation South Mountain Freeway Project Addendum #3 (9-15-2015) Request for Proposals 202 MA 054 H882701C Volume II – Technical Provisions TP Attachment 470-3

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No.	Parcel No.	Owner's Name	APN	Site Address	Property Type	Full or Partial Take	Relos.	Retained Parcel	Appraiser	Acq. Agent	ROW Status	Appraisal Ordered	First Written Offer	Possession	Relo/ Vacate Date	Demo Status	Known Env. Site (Cultural; Haz Mat)	Est. Date Parcel Available for Developer's Use	Market Value (\$/sq. ft.)
41	7-11507	Shaun & Margaret Ford	300-05-616	17017 S. 27th Ave	SFR	Full	1	Y	L. Beatty	ADOT	Possession	9/11/2014	4/3/2015	5/29/2015				4/1/2016	\$62
42	7-11509	Jaime Fox	306-06-276	2733 E Redwood Lane	SFR	Full	1	Y	R. Kloc	ADOT	Possession	9/11/2014	4/10/2015	5/29/2015	6/19/2015			4/1/2016	\$44
43	7-11510	Roseann Fox	306-06-311	2614 E Redwood lane	SFR	Full	1	Y	R. Kloc	ADOT	Possession	9/11/2014	3/27/2015	5/28/2015	7/2/2015			4/1/2016	\$47
44	7-11511	James & David Franchini	306-06-277	2729 E Redwood Lane	SFR	Full	1	Y	R. Kloc	Tierra	Possession	9/11/2014	4/1/2015	6/12/2015	7/1/2015			4/1/2016	\$44
45	7-11512	Foreclosure Support Services LLC & Focus One LLC	306-06-288	2647 E Redwood Lane	SFR	Full	1	Y	R. Kloc	ADOT	Possession	9/11/2014	4/2/2015	4/30/2015	7/7/2015			4/1/2016	\$47
46	7-11516	Granado Luz Adriana	104-57-051	6201 W Encinas ST	SFR	Full	1	Y	D. Lopez	Tierra	Possession	10/6/2014	4/3/2015	6/11/2015	7/10/2015			4/1/2016	\$25
47	7-11517	Granados	103-25-013	6002 W Belleview St	SFR	Full	1	Y		CEI	Possession	9/11/2014	4/4/2015	7/27/2015	8/5/2015			4/1/2016	\$14
48	7-11519	Sharon Sauls	306-06-312	2618 E Redwood Lane	SFR	Full	1	Y	R. Kloc	ADOT	Possession	9/24/2014	3/31/2015	8/28/2015				4/1/2016	\$47
49	7-11520	Charlie Hamilton & Debora Pinkham	300-04-021G	4607 W Sandy Rd	SFR	Full	1	N	D. Lopez	ORC	Offer Made	10/16/2014	6/29/2015					4/1/2016	\$2
50	7-11521	Al & Pam Hare	300-07-003M	4910 W Dusty Lane	SFR	Full	1	N	D. Lopez	ORC	Offer Made	1/27/2015	4/21/2015					4/1/2016	\$6
51	7-11522	Felipe N. Oblea and Erika Gallardo De Negrete,	104-57-239	4227 S 61st Ave	SFR	Full	1	Y	D. Lopez	Tierra	Possession	10/6/2014	4/7/2015	7/2/2015	7/10/2015			4/1/2016	\$18
52	7-11526	Dianne Hennel	306-06-279	2721 E Redwood Lane	SFR	Full	1	Y	R. Kloc	ADOT	Possession	9/11/2014	4/3/2015	4/30/2015	4/21/2015			4/1/2016	\$43
53	7-11527	Robert Henson	306-06-289	2643 E Redwood Lane	SFR	Full	1	Y	R. Kloc	ADOT	Possession	9/11/2014	4/3/2015	6/12/2015	9/2/2015			4/1/2016	\$45
54	7-11530	Hernandez Ricardo Serna	103-25-227	6138 W Belleview St	SFR	Full	1	N		CEI	Offer Made	9/11/2014	6/10/2015					4/1/2016	\$11
55	7-11531	Higareda Octavio/Maria	103-25-017	6022 W Belleview St	SFR	Full	1	Y		CEI	Possession	9/11/2014	4/10/2015	6/29/2015	8/31/2015			4/1/2016	\$17
56	7-11532	Hoffman Sandra	104-57-076	6202 W Encinas Ln	SFR	Full	1	Y	D. Lopez	Tierra	Possession	10/6/2014	4/13/2015	8/3/2015				4/1/2016	\$22
57	7-11533	Hogan Kenneth Lee & Patricia Kay	104-86-001T	6124 W Baseline Rd	SFR	Full	1	Y	D. Lopez	ORC	Possession	10/16/2014	4/6/2015	8/20/2015				4/1/2016	\$3
58	7-11534	Martinez	104-86-002T	6016 W. Vineyard	SFR	Full	1	N		ORC	Appraisal in Process	10/16/2014						10/1/2016	\$5
59	7-11536	Hrabowy	103-25-023	1150 N. 61st Ave	SFR	Full	1	N		CEI	Appraisal in Process	9/11/2014						10/1/2016	\$11
60	7-11539	Jay & Joan Isabel	306-06-287	2651 E Redwood Lane	SFR	Full	1	Y	R. Kloc	ADOT	Possession	9/11/2014	4/8/2015	6/18/2015	7/8/2015			4/1/2016	\$42
61	7-11540	Fida Janwari	300-05-601	2743 W Cedarwood Lane	SFR	Full	1	Y	L. Beatty	ADOT	Possession	9/11/2014	3/30/2015	9/8/2015				4/1/2016	\$49

Arizona Department of Transportation South Mountain Freeway Project Addendum #3 (9-15-2015)

Request for Proposals 202 MA 054 H882701C Volume II – Technical Provisions TP Attachment 470-3

								Acqui	TP Attack		0-3 atus Report								
No.	Parcel No.	Owner's Name	APN	Site Address	Property Type	Full or Partial Take	Relos.	Retained Parcel	Appraiser	Acq. Agent	ROW Status	Appraisal Ordered	First Written Offer	Possession	Relo/ Vacate Date	Demo Status	Known Env. Site (Cultural; Haz Mat)	Est. Date Parcel Available for Developer's Use	Market Value (\$/sq. ft.)
62	7-11543	Jo Ann Kulik Costa / Trustee of the Jo Ann Kulik Trust	300-04-022D	4503 W Sandy Rd	SFR	Partial	1	N	D. Lopez	ADOT	Appraisal in Process	10/16/2014						10/1/2016	\$1
63	7-11544	Alan Johnson & Meehee Jang	300-05-600	2747 E Cedarwood Lane	SFR	Full	1	Y	L. Beatty	Tierra	Possession	9/11/2014	4/2/2015	6/15/2015	7/16/2015			4/1/2016	\$63
64	7-11545	Judi John & Jill Johnson	306-06-274	2741 E Redwood	SFR	Full	1	Υ	R. Kloc	Tierra	Possession	9/11/2014	4/17/2015	8/27/2015				4/1/2016	\$44
65	7-11550	Home Away From Home Invs LLC	306-06-303	17018 S. 26th St	SFR	Full	1	Y	R. Kloc	Tierra	Possession	9/11/2014	4/21/2015	8/3/2015	7/23/2015			4/1/2016	\$54
66	7-11552	Zakaullah Khagyani	306-06-335	2750 E Redwood Lane	SFR	Full	1	Y	R. Kloc	ADOT	Possession	9/11/2014	4/15/2015	6/5/2015	7/1/2015			4/1/2016	\$49
67	7-11553	Kenneth C. Kilgore, Jr. and Machele Kilgore,	104-57-238	4232 S. 61st Avenue	SFR	Full	1	Υ	D. Lopez	Tierra	Possession	10/6/2014	5/6/2015	7/31/2015				4/1/2016	\$22
68	7-11554	Kloeber Family Trust	300-03-019D	12722 S. 51st Avenue	SFR / Business	Full	2	N		ORC	Offer Made	10/16/2014	4/6/2015					4/1/2016	\$1
69	7-11556	Troy Koile	300-04-002B	14405 S. 45th Ave	SFR	Full	1	Y	D. Lopez	ORC	Offer Made	10/22/2014	6/25/2015					4/1/2016	\$1
70	7-11557	Janet Kropiewnicki Declaration of Trust	306-06-310	2610 E Redwood Lane	SFR	Full	1	Y	R. Kloc	ADOT	Possession	9/11/2014	4/10/2015	8/31/2015	8/3/2015			4/1/2016	\$41
71	7-11559	L&J Holdings LLC	300-05-700	3117 W Cedarwood Lane	SFR	Full	1	Y	L. Beatty	ADOT	Possession	9/11/2014	3/30/2015	4/15/2015	6/15/2015			4/1/2016	\$50
72	7-11560	Jason Laferriere & Jennifer Andersen	306-06-314	2626 E Redwood Lane	SFR	Full	1	Y	R. Kloc	ADOT	Possession	9/11/2014	3/23/2015	6/5/2015	7/1/2015			4/1/2016	\$42
73	7-11562	Felipe De Jesus Arellano Lamas & Marisela Rodriguez De Arellano	300-04-021H	4608 W Ivanhoe	SFR	Full	1	N		ORC	Offer Made	10/16/2014	4/2/2015					4/1/2016	\$7
74	7-11565	Walter Lay	300-04-021A	4601 W Sandy Rd	SFR	Full	1	N		ORC	Offer Made	10/22/2014	4/2/2015					4/1/2016	\$0.49
75	7-11566	Bailey, Colette	104-57-077	6201 W Southgate Ave	SFR	Full	1	Υ	D. Lopez	Tierra	Possession	10/6/2014	4/30/2015	8/3/2015	8/12/2015			4/1/2016	\$25
76	7-11570	Chia Lan Li	306-06-315	2630 E Redwood Lane	SFR	Full	1	Y	R. Kloc	ADOT	Possession	9/11/2014	4/3/2015	5/26/2015	6/26/2015			4/1/2016	\$47
77	7-11579	Michael & Hanna LoGrasso	306-06-318	2644 E Redwood Lane	SFR	Full	1	Y	R. Kloc	ADOT	Possession	9/11/2014	3/30/2015	5/11/2015	6/17/2015			4/1/2016	\$37
78	7-11580	Brian & Ellen Loehnis	300-04-002E	14428 S. 45th Ave	SFR	Full	1	N		ORC	Offer Made	10/22/2014	4/8/2015					4/1/2016	\$2

								Acqu	TP Attacl										
No.	Parcel No.	Owner's Name	APN	Site Address	Property Type	Full or Partial Take	Relos.	Retained Parcel	Appraiser	Acq. Agent	ROW Status	Appraisal Ordered	First Written Offer	Possession	Relo/ Vacate Date	Demo Status	Known Env. Site (Cultural; Haz Mat)	Est. Date Parcel Available for Developer's Use	Market Value (\$/sq. ft.)
79	7-11581	Sonny Loh	306-06-284	2701 E Redwood Lane	SFR	Full	1	N		Tierra	Offer Made	9/11/2014	5/1/2015					4/1/2016	\$46
80	7-11582	Lopez Melissa D/Bravo Alan R	104-57-025	6201 W Wood St	SFR	Full	1	Y	D. Lopez	Tierra	Offer Made	10/6/2014	4/2/2015					4/1/2016	\$24
81	7-11583	Lopez Pedro & Veronica N	103-25-021	6040 W Belleview St	SFR	Full	1	Y		CEI	Possession	9/11/2014	4/8/2015	8/31/2015				4/1/2016	\$12
82	7-11584	Cali Beach Bound	300-05-606	17023 S. 27th Drive	SFR	Full	1	Y	L. Beatty	ADOT	Possession	9/11/2014	4/14/2015	5/29/2015	7/1/2015			4/1/2016	\$63
83	7-11586	Jeto, Llc	103-25-018	6026 W Belleview St	SFR	Full	1	Y	D. Lopez	CEI	Possession	9/11/2014	4/9/2015	7/30/2015	8/1/2015			4/1/2016	\$74
84	7-11589	Maricopa Rentals Limited Partnership	104-57-050	6202 W Wood St	SFR	Full	1	Y	D. Lopez	Tierra	Possession	10/6/2014	3/31/2015	8/14/2015	6/25/2015			4/1/2016	\$26
85	7-11591	Desiderio & Kathryn Marquez	300-04-003J, 300-04-003K	4535 W Ray Rd	SFR / Well	Full	1	Y		ORC	Offer Made	10/22/2014	7/29/2015					4/1/2016	\$2
86	7-11593	Jessica Martin & Matthew Gage	306-06-290	2639 E Redwood Lane	SFR	Full	1	Y	L. Beatty	Tierra	Possession	9/11/2014	4/10/2015	6/18/2015	8/10/2015			4/1/2016	\$46
87	7-11594	Philip Martin	300-05-604	17020 S. 27th Drive	SFR	Full	1	Y	L. Beatty	ADOT	Possession	9/11/2014	4/8/2015	7/6/2015	8/21/2015			4/1/2016	\$56
88	7-11595	Northhold LLC	103-25-225	6146 W Belleview St	SFR	Full	1	Y	D. Lopez	CEI	Possession	9/11/2014	4/9/2015	8/7/2015	8/25/2015			4/1/2016	\$10
89	7-11596	Lisa & Lucio Martinez	306-06-273	2745 E Redwood Lane mailing: 1772 S. Comanche Dr. Chandler 85286	SFR	Full	1	Y	R. Kloc	ADOT	Offer Made	9/11/2014	3/31/2015					4/1/2016	\$42
90	7-11597	Olivera	103-25-226	6142 W Belleview St	SFR	Full	1	Y	D. Lopez	CEI	Possession	9/11/2014	4/1/2015	8/7/2015	6/8/2015			4/1/2016	\$11
91	7-11598	Robert & Frances Martinez	306-06-297	2611 E Redwood Lane	SFR	Full	1	Υ	R. Kloc	Tierra	Possession	9/11/2014	4/22/2015	9/9/2015				4/1/2016	\$42
92	7-11601	Sharon McCauley Revocable Liviing Trust	306-06-265	17029 S. 27th Place	SFR	Full	1	Y	R. Kloc	Tierra	Possession	9/11/2014	4/8/2015	8/3/2015	9/1/2015			4/1/2016	\$47
93	7-11603	Mike & Bertha Melendez	300-04-018	4338 W Galveston	SFR	Full	1	N		ORC	Appraisal in Process	10/22/2014						10/1/2016	\$3
94	7-11605	Michael & Nancy Middleton	306-06-329	2726 E Redwood Lane	SFR	Full	1	Y		ADOT	Possession	9/11/2014	3/30/2015	6/30/2015	8/26/2015			4/1/2016	\$59
95	7-11608	Thomas & Billie Moffit. Moffit Living Trust	300-05-603	17016 S. 27th Drive	SFR	Full	1	Y	L. Beatty	ADOT	Possession	9/11/2014	3/31/2015	4/30/2015	6/1/2015			4/1/2016	\$46
96	7-11609	Nick & Ester Nacopoulos	306-06-291	2635 E Redwood Lane	SFR	Full	1	Y	R. Kloc	ADOT	Possession	9/11/2014	4/10/2015	5/14/2015	6/9/2015			4/1/2016	\$43

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No.	Parcel No.	Owner's Name	APN	Site Address	Property Type	Full or Partial Take	Relos.	Retained Parcel	Appraiser	Acq. Agent	ROW Status	Appraisal Ordered	First Written Offer	Possession	Relo/ Vacate Date	Demo Status	Known Env. Site (Cultural; Haz Mat)	Est. Date Parcel Available for Developer's Use	Market Value (\$/sq. ft.)
97	7-11610	Moss Michael L/Kathy A	104-86-001R	7221 S. 61st Dr	SFR	Full	1	N	D. Lopez	ORC	Offer Made	10/16/2014	8/5/2015					5/1/2016	\$2
98	7-11611	Moss Michael L/Kathy A	104-86-001P		Vacant	Partial	1	N	D. Lopez	ORC	Offer Made	10/16/2014	8/5/2015					5/1/2016	\$2
99	7-11613	Laura Nava,	104-57-236	4239 S. 61st Avenue	SFR	Full	1	Y	D. Lopez	Tierra	Offer Made	10/6/2014	4/8/2015					4/1/2016	\$26
100	7-11618	Harold & Crystal Nelson, Trustees of the Harold -& Crystal Nelson Revocable Trust	300-04-024A	14910 S. 43rd Ave	SFR	Full	1	Y		ORC	Possession	10/16/2014	5/5/2015	7/14/2015	8/18/2015			4/1/2016	\$3
101	7-11619A	Arthur & Carmina Nephew (Parcel 1)	300-04-028J	15004 S. 43rd Ave	SFR	Full	1	N	D. Lopez	ORC	Offer Made	10/16/2014	7/29/2015					4/1/2016	\$1
102	7-11619B	Arthur & Carmina Nephew (Parcel 2)	300-04-028K	15004 S. 43rd Ave	SFR	Full	1	N	D. Lopez	ORC	Offer Made	10/16/2014	7/29/2015					4/1/2016	\$1
103	7-11620	Roy New Successor Trustee of the New Family Irrevocable Trust	300-04-003C	4631 W Ray Rd	SFR / Well	Full	1	N		ORC	Offer Made	10/22/2014	7/20/2015					4/1/2016	\$2
104	7-11623	Patricia Nichols	306-06-295	2619 E Redwood Lane	SFR	Full	1	Y	R. Kloc	ADOT	Possession	9/11/2014	4/3/2015	5/12/2015	6/8/2015			4/1/2016	\$42
105	7-11624	Noli Pete A & Maryann	300-02-021E	6130 W Dobbins Rd	SFR	Full	1	N		ORC	Offer Made	10/16/2014	4/13/2015					4/1/2016	\$3
106	7-11625	Nunez Juana Ortega	103-25-014	6008 W Belleview St	SFR	Full	1	Y	D. Lopez	CEI	Possession	9/11/2014	4/14/2015	8/17/2015				4/1/2016	\$17
107	7-11627	Lewis Okert	306-06-334	2746 E Redwood Ln	SFR	Full	1	Y	R. Kloc	ADOT	Possession	9/11/2014	4/1/2015	5/12/2015	6/12/2015			4/1/2016	\$46
108	7-11631	Amie Mendoza aka Amie Otis, John Reynolds aka John Charles	306-06-299	SFR 17011 S. 26th St	SFR	Full	1	Y	R. Kloc	ADOT	Cleared for Construction	9/11/2014	4/13/2015	6/2/2015	6/25/2015	9/1/2015		4/1/2016	\$42
109	7-11632	Gold Mountain Legacy LLC	306-06-308	2602 E Redwood Lane	SFR	Full	1	Y	R. Kloc	ADOT	Possession	9/11/2014	4/10/2015	5/22/2015	6/17/2015			4/1/2016	\$32
110	7-11633	Freo Arizona LLC	300-05-608	17015 S. 27th Drive	SFR	Full	1	N	L. Beatty	Tierra	Offer Made	9/11/2014	5/5/2015					4/1/2016	\$56
111	7-11636	Enrique Pena	300-04-017Y	4410 W Galveston St	SFR	Full	1	N		ORC	Offer Made	10/22/2014	7/2/2015					4/1/2016	\$3
112	7-11637	Perez Felipe/Lucia M	104-57-023	6206 W Pueblo Ave	SFR	Full	1	Y	D. Lopez	Tierra	Offer Made	10/6/2014	4/29/2015					4/1/2016	\$29
113	7-11638	Guadalupe Perez	103-25-015	6012 W Belleview St	SFR	Full	1	N		CEI	Offer Made	9/11/2014	4/14/2015					4/1/2016	\$15

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No.	Parcel No.	Owner's Name	APN	Site Address	Property Type	Full or Partial Take	Relos.	Retained Parcel	Appraiser	Acq. Agent	ROW Status	Appraisal Ordered	First Written Offer	Possession	Relo/ Vacate Date	Demo Status	Known Env. Site (Cultural; Haz Mat)	Est. Date Parcel Available for Developer's Use	Market Value (\$/sq. ft.)
114	7-11641	Pina-Benitez (Javier & Rogelio Robles)	103-25-224	1218 N. 62nd Ave	SFR	Full		N		CEI	Appraisal in Process	9/11/2014						10/1/2016	\$14
115	7-11642	Pino Horacio V	103-25-007	5918 W Belleview St	SFR	Full	1	Y		CEI	Possession	9/11/2014	4/15/2015	7/7/2015				4/1/2016	\$15
116	7-11643	Dennis & Cheryl Porter / Living trust	300-05-667	3044 W Cedarwood Lane	SFR	Full	1	Y	L. Beatty	ADOT	Possession	9/11/2014	4/7/2015	6/30/2015	8/31/2015			4/1/2016	\$80
117	7-11647	Felicia Molina	103-25-009	5926 W Belleview St	SFR	Full	1	Y		CEI	Possession	9/11/2014	4/6/2015	8/17/2015				4/1/2016	\$17
118	7-11648	Denaye & Chad Beckler	306-06-300	17015 S. 26th St	SFR	Full	1	Y	R. Kloc	ADOT	Cleared for Construction	9/11/2014	3/27/2015	6/1/2015	7/16/2015	9/3/2015		4/1/2016	\$47
119	7-11650	Eleazar & Guadalupe Ramirez; Ernesto Ramirez	300-04-054	14800 S. 45th Ave	SFR	Full	1	Y	D. Lopez	ORC	Offer Made	10/22/2014	4/7/2015					4/1/2016	\$2
120	7-11651	Ty Ramotarsingh & Pamela Connell	300-05-610	17014 S. 27th Ave	SFR	Full	1	Y	L. Beatty	ADOT	Cleared for Construction	9/11/2014	3/26/2015	4/30/2015	5/18/2015	9/4/2015		4/1/2016	\$45
121	7-11653	Redwood Holdings LLC	306-06-319	2648 E Redwood Lane	SFR	Full	1	Υ	R. Kloc	ADOT	Possession	9/11/2014	4/15/2015	8/6/2015				4/1/2016	\$50
122	7-11655	Salgado	103-25-012	5942 W Belleview St	SFR	Full	1	Y	D. Lopez	CEI	Possession	9/11/2014	4/27/2015	6/26/2015	8/4/2015			4/1/2016	\$14
123	7-11656	Sean Brooks	300-05-607	17019 S. 27th Drive	SFR	Full	1	Υ	L. Beatty	Tierra	Offer Made	9/11/2014	4/8/2015					4/1/2016	\$59
124	7-11660	Gary & Kelley Roberts	300-05-612	17022 S. 27th Ave	SFR	Full	1	Y	R. Kloc	ADOT	Possession	9/11/2014	4/1/2015	6/2/2015	6/17/2015			4/1/2016	\$31
125	7-11661	Gonzalez	103-25-232	6118 W Belleview St	SFR	Full	1	Y	D. Lopez	CEI	Possession	9/11/2014	4/10/2015	6/10/2015	6/22/2015			4/1/2016	\$17
126	7-11662	Robles Pedro Casas	103-25-233	6114 W Belleview St	SFR	Full	1	Υ	D. Lopez	CEI	Possession	9/11/2014	4/13/2015	6/11/2015	7/9/2015			4/1/2016	\$10
127	7-11663	Cecilia Rocha & Michael Hestrin	306-06-282	2709 E Redwood Lane	SFR	Full	1	Y	R. Kloc	Tierra	Possession	9/11/2014	4/7/2015	6/15/2015	7/13/2015			4/1/2016	\$42
128	7-11672	SS 1 Holding - 2 LLLP,	104-57-237	4235 S. 61st Avenue	SFR	Full	1	Υ	D. Lopez	Tierra	Possession	10/6/2014	3/31/2015	6/18/2015	4/30/2015			4/1/2016	\$23
129	7-11677	Timothy Schaetz	306-06-272	2749 E Redwood Lane	SFR	Full	1	Y	L. Beatty	Tierra	Possession	9/11/2014	4/3/2015	8/27/2015	5/20/2015			4/1/2016	\$41
130	7-11678	Yadimira Espinobarros	306-06-293	2627 E Redwood Lane	SFR	Full	1	Y	R. Kloc	ADOT	Possession	9/11/2014	4/21/2015	5/29/2015	6/29/2015			4/1/2016	\$50
131	7-11679	Ray & Carol Schumacher	300-05-677	3104 E Cedarwood	SFR	Full	1	Y	L. Beatty	ADOT	Possession	9/11/2014	3/26/2015	6/3/2015	8/9/2015			4/1/2016	\$72
132	7-11680	Louisa & Gaudalupe Garcia	306-06-324	2706 E Redwood Lane	SFR	Full	1	Y	L. Beatty	Tierra	Offer Made	9/11/2014	5/15/2015					4/1/2016	\$49
133	7-11681	Sepulveda Silviano	103-25-231	6122 W Belleview St	SFR	Full	1	Y		CEI	Possession	9/11/2014	4/15/2015	9/1/2015				4/1/2016	\$11

								Acqu	TP Attacl										
No.	Parcel No.	Owner's Name	APN	Site Address	Property Type	Full or Partial Take	Relos.	Retained Parcel	Appraiser	Acq. Agent	ROW Status	Appraisal Ordered	First Written Offer	Possession	Relo/ Vacate Date	Demo Status	Known Env. Site (Cultural; Haz Mat)	Est. Date Parcel Available for Developer's Use	Market Value (\$/sq. ft.)
134	7-11685	Reese & Laura Shirley	300-05-611	17018 S. 27th Ave	SFR	Full	1	Υ	L. Beatty	ADOT	Possession	9/11/2014	4/3/2015	8/14/2015				4/1/2016	\$48
135	7-11687	Ana Ramirez	103-25-022	1134 N 61st Ave	SFR	Full	1	Y		CEI	Possession	9/11/2014	4/7/2015	6/24/2015	8/19/2015			4/1/2016	\$6
136	7-11689	Simons Daniel L & Marcia L	103-25-005	1202 N 59th Ave	SFR	Full	1	Y		CEI	Possession	9/11/2014	4/3/2015	6/30/2015	7/29/2015			4/1/2016	\$10
137	7-11690	Gurmukh Singh & Jasvinder Kaur	306-06-298	2607 E Redwood Lane	SFR	Full	1	Y	L. Beatty	Tierra	Possession	9/11/2014	4/6/2015	8/14/2015	8/24/2015			4/1/2016	\$44
138	7-11693	C.A. Smith	103-25-006	5912 W Belleview St	SFR	Full	1	Y	D. Lopez	CEI	Possession	9/11/2014	4/1/2015	6/30/2015				4/1/2016	\$14
139	7-11694	Sorto Jose/Gallardo Maria J	104-86-001S	7407 S 61st Dr	SFR	Full	1	N		ORC	Offer Made	10/16/2014	6/14/2015					4/1/2016	\$2
140	7-11697	John Spearnock	306-06-306	17006 S. 26th St	SFR	Full	1	Y		Tierra	Offer Made	9/11/2014	4/3/2015					4/1/2016	\$43
141	7-11698	Joshua & Misty Rooney	306-06-320	2652 E Redwood Lane	SFR	Full	1	Y	R. Kloc	ADOT	Possession	9/11/2014	4/1/2015	5/18/2015	6/9/2015			4/1/2016	\$51
142	7-11703	Justin Tai	306-06-292	2631 E Redwood Lane	SFR	Full	1	Y		Tierra	Offer Made	9/11/2014	4/14/2015					4/1/2016	\$40
143	7-11706	Laura Gonzales & Estuardo Calderon	300-04-017H	4421 W Monterey St	SFR	Full	1	N		ORC	Appraisal in Process	10/22/2014						10/1/2016	\$3
144	7-11707	Tione LLC	306-06-332	2738 E Redwood Lane Mailing: 2431 E Goldenrod St. Phoenix 85048	SFR	Full	1	Y	R. Kloc	ADOT	Possession	9/11/2014	3/31/2015	4/30/2015	5/28/2015			4/1/2016	\$45
145	7-11709	Romero Reyna Viridiana Amparano	103-25-020	6036 W Belleview St	SFR	Full	1	Y		CEI	Possession	9/11/2014	4/14/2015	6/19/2015				4/1/2016	\$18
146	7-11710	Tri-Ranch Properties LLC	103-25-011	5936 W Belleview St	SFR	Full	1	N		CEI	Offer Made	9/11/2014	4/9/2015					4/1/2016	\$15
147	7-11711	Shayne Steven Tuchfarber	306-06-301	17019 S. 26th St	SFR	Full	1	Υ		ADOT	Offer Made	9/11/2014	4/1/2015					4/1/2016	\$40
148	7-11719	Marvin & Gwendolyn Spencer	103-25-004	1208 N 59th Ave	SFR	Full	1	Y		CEI	Possession	9/11/2014	4/1/2015	6/30/2015	7/7/2015			4/1/2016	\$14
149	7-11721	Larry Veasley	306-06-330	2730 E Redwood Lane	SFR	Full	1	Υ	R. Kloc	ADOT	Possession	9/11/2014	4/3/2015	4/30/2015	5/30/2015			4/1/2016	\$49
150	7-11722	David Sanchez	103-25-008	5922 W Belleview St	SFR	Full	1	Υ	D. Lopez	CEI	Possession	9/11/2014	4/8/2015	6/15/2015	8/18/2015			4/1/2016	\$17
151	7-11723	Victoria Jesus/Loeza Lorena	103-25-016	6016 W Belleview St	SFR	Full	1	Y		CEI	Possession	9/11/2014	4/7/2015	7/15/2015				4/1/2016	\$15
152	7-11724	Richard & Teresa Villa	300-04-053	14600 S. Dusty Lane	SFR	Full	1	Y	D. Lopez	ORC	Possession	10/22/2014	4/21/2015	5/28/2015	5/1/2015			4/1/2016	\$3

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No.	Parcel No.	Owner's Name	APN	Site Address	Property Type	Full or Partial Take	Relos.	Retained Parcel	Appraiser	Acq. Agent	ROW Status	Appraisal Ordered	First Written Offer	Possession	Relo/ Vacate Date	Demo Status	Known Env. Site (Cultural; Haz Mat)	Est. Date Parcel Available for Developer's Use	Market Value (\$/sq. ft.)
153	7-11725	Timaree Murphy / Vlasak	306-06-281	2711 E Redwood Lane	SFR	Full	1	Y	L. Beatty	Tierra	Possession	9/11/2014	4/1/2015	7/2/2015	7/23/2015			4/1/2016	\$43
154	7-11726	John Vukmanovic	306-06-266	17033 S. 27th Place	SFR	Full	1	Υ		Tierra	Offer Made	9/11/2014	4/3/2015					4/1/2016	\$48
155	7-11729	Christa Waltersdorf	306-06-321	2656 E Redwood Lane	SFR	Full	1	Y	R. Kloc	Tierra	Possession	9/11/2014	5/1/2015	8/21/2015	1/1/2015			4/1/2016	\$40
156	7-11730	Wen & Liju Wang	306-06-313	2622 E Redwood Lane	SFR	Full	1	Y		ADOT	Offer Made	9/11/2014	4/17/2015					4/1/2016	\$47
157	7-11733	Gary & Sherry Woodring	306-06-302	17022 S. 26th St	SFR	Full	1	N		Tierra	Offer Made	9/11/2014	4/22/2015					4/1/2016	\$52
158	7-11735	Stephen & Ellen Zalecki	300-04-021C	4545 W Sandy Lane Dr	SFR	Full	1	N		ORC	Offer Made	10/22/2014	7/21/2015					4/1/2016	\$2
159	7-11736	Jose Zamora & Cindy Linares	306-06-304	17014 S. 26th St	SFR	Full	1	Y	R. Kloc	ADOT	Cleared for Construction	9/11/2014	3/31/2015	5/29/2015	7/3/2015	8/27/2015		4/1/2016	\$43
160	7-11738	Torrez/Sanche z	104-86-003	6139 W. Vineyard	SFR	Full	1	N			No Activity							9/1/2016	\$68
161	7-11786	Daniel C. Kohn	300-03-016F	5919 West Elliot Road	SFR	Full	1	Y	D. Lopez	ADOT	Possession	10/16/2014	4/28/2015	6/17/2015	7/22/2015			4/1/2016	\$5
162	7-11911	Boyd & Brianna Johnson	300-05-617	17013 S 27th Ave	SFR	Full	1	Y	L. Beatty	ADOT	Cleared for Construction	11/14/2014	3/31/2015	6/19/2015	7/18/2015	9/4/2015		4/1/2016	\$74
163	7-11912	John and Sharon Cochran	300-05-697	16913 S. 32nd Lane	SFR	Full	1	Y	D. Lopez	ADOT	Possession	10/22/2014	5/21/2015	8/14/2015	8/14/2015			4/1/2016	\$8
164	7-10784-A	Berendo Property GP, et al	104-19-003A, 104-19-003D, 104-19-003C	435 S. 59th Ave	Warehou se complex	Partial		N			Appraisal in Process	5/4/2015						8/1/2017	\$3
165	7-11184	Mountain Park Church	301-70-009N, 301-70-009P	2408 E Pecos Rd	Church	Full		N	S. Nagy	ORC	Offer Made	9/9/2014	3/27/2015				С	3/1/2018	\$14
166	7-11323	ADC-Ridge at Sun Valley, LLC	103-28-004	801 N. 59th Avenue	Apartme nts	Full	264	Z	M. Clement	Univers al	Offer Made	11/10/2014	3/27/2015					10/1/2016	\$30
167	7-11369	Union Pacific Railroad	NA	Tracks	Railroad	Partial		N			No Activity								\$0
168	7-11369-S1	Clearchannel Billboard sign	N/A	UPRR ROW	Billboard Sign	Full		N			Appraisal in Process	5/28/2015						6/1/2016	\$0
169	7-11407	Bureau of Land Management	NA	River Bottom	River Bottom	Partial		Υ	NA	ADOT	Cleared for Construction	NA	6/2/2015	8/27/2015				4/1/2015	\$0
170	7-11410	40th St & Pecos Road LLC	301-69-030J		Commer cial	Partial		N			No Activity								\$15
171	7-11411	5879 Van Buren LLC	104-04-020	5879 W Van Buren St	Circle K	Full	1	N		ADOT	Offer Made	10/9/2014	7/17/2015					4/1/2016	\$61
172	7-11411-S1	CBS Billboard sign	104-04-020	5879 W Van Buren St	Billboard Sign	Full		N	S. Nagy		Appraisal in Process	10/9/2014						7/1/2016	\$0
173	7-11416	Alexander & Clayton, LLC,	104-19-009E	827 S. 59th Avenue	Semi Truck Repair	Partial		N			No Activity								\$0

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174	7-11418	Apodaca Wall Systems Inc	104-19-004E	5740 W Buckeye Rd	Manufact uring	Partial		N			No Activity								\$17
175	7-11419	Adrian & Ernestina Argon	300-04-052	47th Ave & Monterey Rd	Vacant	Full		N		ADOT	Appraisal in Process	10/22/2014						11/1/2016	\$1
176	7-11420	Arizona Sand & Rock Co	104-72-003B	5601 S 63rd Ave	River Bottom	Partial		N			No Activity								\$1
177	7-11421	State of AZ (ASLD)	300-96-374A, 300-96-375A, 300-96-376, 300-96-377A, 300-96-378, 300-96-379B,		Vacant	Partial		Y		ADOT	Appraisal in Process	11/3/2014					С	12/1/2016	\$3
178	7-11422	Maricopa County	301-70-972		Vacant	Full		N	D. Lopez		Appraisal in Process	4/17/2015						4/1/2016	\$0.03
179	7-11426	Azejm Land Holdings LLC	103-27-061	1202 N 54th Ave	Warehou se	Partial	3	N		ADOT	Offer Made	10/7/2014	7/15/2015					5/1/2017	\$25
180	7-11434	BBC Phoenix LLC	300-04-013E, 300-04-015X		Vacant	Full		Y		ADOT	Appraisal in Process	3/31/2015						4/1/2016	\$10
181	7-11438	Blue Beacon International Inc	103-27-062A	1235 N 57th Ave	Truck Wash	Full	1	N		ADOT	Offer Made	10/9/2014	8/13/2015				Н	6/1/2015	\$10
182	7-11438-S1	CBS Billboard sign	103-27-062A		Billboard Sign	Full		N	ATI		Appraisal in Process	10/9/2014						7/1/2016	\$0
183	7-11443	Cach Holdings LLC	300-04-011A		Vacant	Partial	1	N			Offer Made	3/10/2015	9/2/2015					6/1/2016	\$3
184	7-11445	Calabrea Homeowners Assoc.	300-05-739, 300-05-740, 300-05-741, 300-05-750, 300-05-751		Common Area HOA	Partial		N	D. Lopez		Appraisal in Process	5/1/2015						6/1/2016	\$5
185	7-11450	Marcelino Corona Sanchez & Micaela Vasquez	300-04-025A	15000 S. 43rd Ave	Vacant / well on parcel 2	Full		Y	D. Lopez	ADOT	Possession	10/16/2014	4/11/2015	7/29/2015	7/29/2015			4/1/2016	\$1
186	7-11451	Mark Clounch dba Mark_L Assoc. Profit Sharing Plan	300-05-004F	14645 S. 4th Ave	Vacant	Full		Y		ADOT	Possession	10/22/2014	4/28/2015	7/2/2015	7/2/2015			4/1/2016	\$1
187	7-11453	John and Sharon Cochran	300-05-664	3053 W Redwood Lane	Vacant	Full		Y	D. Lopez	ADOT	Possession	12/25/2014	5/21/2015	8/14/2015	8/14/2015			4/1/2016	\$13
188	7-11455	Buckeye 59th Avenue, LLC	104-05-009	2 N 59th Ave	Commer cial Bldg	Partial	1	N			No Activity								\$8
189	7-11459	Copper State Rubber of Arizona	104-18-004L, 104-18-004M, 104-18-008, 104-18-009, 104-18-010	740 S 59th Ave	Manuf Facility	Full	1	N	W. Montandon	ORC	Offer Made	10/14/2014	6/25/2015					5/1/2018	\$23

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190	7-11461	Country Gardens Educational Servicies, LLC (charter school)	104-82-001C, 104-82-026	6313 W. Southern Ave	Commer cial	Partial		N			No Activity								\$9
191	7-11466	Dairy 51.8 LLC	300-02-021K, 300-02-021L, 300-02-021M	61st Ave. & Dobbins Rd.	Dairy farm	Partial	1	N			Appraisal in Process	5/1/2015					С	8/1/2017	\$3
192	7-11469	Sharon and Emily Goldman Co-Trustees of Trust	301-70-009E, 301-70-012G	2508 E Pecos Rd & 2702 E Pecos Rd	Vacant	Partial		N			No Activity								\$0.09
193	7-11470	DBJ Buckeye 5800, L.L.C	104-19-007C, 104-19-008C, 104-19-009D, 104-19-006A	845 S. 59th Ave	Truck Repair	Partial/ Access Control		N			No Activity								\$200
194	7-11473	DW Homebuilding Corp successor to Del E. Webb	311-02-704		Vacant	Partial		N			No Activity								\$2
195	7-11475	Steven & Christine Danielson	300-04-048	14910 S. 43rd Ave	Vacant	Partial	1	N			No Activity								\$0
196	7-11476	Denio's Roseville Farmers Market and Auction, Inc	104-05-004Z	224 N. 59th Ave	Storage Yard	Full	1	N	T. Haskins	ORC	Possession	10/14/2014	5/5/2015		6/30/2015			4/1/2016	\$8
197	7-11478	DNZ Holdings LLC	104-72-003H	6024 W. Southern Ave	Machiner y sales/ser vc	Partial	1	N	R. Dunlap	ADOT	Offer Made	5/29/2015	7/10/2015				С	12/1/2016	\$4
198	7-11483	Lennar AZ	311-02-708		Vacant	Partial		N			No Activity								\$0.21
199	7-11484	Dolphin Inc	104-05-001J, 104-05-011, 104-05-010B, 104-05-005A, 104-18-003N, 104-18-006A, 104-18-004H, 104-18-004N, 104-18-015	350 S 59th Ave	Industrial Manufact uring	Full	1	N	W. Montandon	ORC	Offer Made	9/24/2014	7/17/2015					5/1/2018	\$13
200	7-11488	Drexler Enterprises Inc	104-86-001D		AG	Partial		N			No Activity								\$6
201	7-11490	Vivian Durazo; Gregorio Robles; Maria Martinez	300-04-049		Vacant	Full		Y	D. Lopez	ADOT	Possession	10/16/2014	4/24/2015	8/27/2015	8/27/2015			4/1/2016	\$1

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202	7-11491	Eastgroup	103-27- 059,103-27- 060	5750 W Roosevelt St	Office/ Warehou se suites	Full	8	N	T. Haskins	CEI	Appraisal in Process	10/7/2014						12/1/2016	\$22
203	7-11494	Erran Gary J/Shai	300-03-016H	10828 South 59th Avenue	Vacant	Full		Y	D. Lopez	ADOT	Possession	10/16/2014	4/13/2015	8/14/2015				4/1/2016	\$1
204	7-11495	Estrella Vista Commerce Center	103-25-272	Not Available	Vacant	Partial		N			No Activity								\$9
205	7-11500	59 NKW Properties LLC	104-04-045	249 S 59th Ave	Apache Rentals	Full	1	N	S. Nagy	Tierra	Offer Made	10/15/2014	6/23/2015					8/1/2017	\$17
206	7-11504	Foothills Community HOA	300-36-01C, 300-36-011C, 300-36-012C; 300-95-740, 300-95-749; 300-96-484, 300-96-485; 301-78-001C, 301-78-001D	2353 & 2340 & 1545 E Pecos Rd; 1303 W Pecos Rd & 817 E Glenhaven Dr	Well	Partial		N			Appraisal in Process	5/1/2015						10/1/2016	\$12
207	7-11505	Foothills Mountain Ranch HOA	306-06-253, 306-06-257A, 306-06-258		Common Area HOA	Partial		N			No Activity								\$7
208	7-11506	Foothills Reserve Master Owners Assoc Inc	300-05-496, 300-05-499, 300-05-500	Tract A: 3037 W Shaughnessey Rd Tract E: 17027 S. Coleman St	Common Area HOA	Partial		N			No Activity								\$19
209	7-11508	Foresight Group Holdings I, LLC	104-47-003J		AG - Irrigation	Partial		Y		ADOT	Appraisal in Process	10/23/2014					С	12/1/2016	\$3
210	7-11514	Goldman Ranch HOA	306-06-343, 306-06-344, 306-06-346, 306-06-347	Tract A: 3037 W Shaughnessey Rd Tract E: 17027 S. Coleman St	HOA Common Area	Partial		N			No Activity								\$76
211	7-11515	Gp Southwest	104-18-003G	842 S 59th Ave	Driver Training	Full	1	N	S. Nagy	ADOT	Offer Made	10/10/2014	7/13/2015					8/1/2016	\$20
212	7-11515-S1	CBS Billboard sign	104-18-003G	842 S 59th Ave	Billboard Sign	Full		N	S. Nagy		Appraisal in Process	10/10/2014						7/1/2016	\$0
213	7-11518	Randolph Dean Gross & Beth Deborah Gross Revocable Living Trust	300-05-004D	14801 S. 27th Ave	Vacant	Full		Y	K. Baltutat	ADOT	Cleared for Construction	10/22/2014	4/29/2015	7/20/2015	7/20/2015	NA		4/1/2016	\$1
214	7-11523	Ampj Hospitality Inc	103-27-028B	1242 N 53rd Ave	Motel	Full	1	N	CBRE	ADOT	Offer Made	10/22/2014	7/2/2015					6/1/2016	\$49

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215	7-11524	Headley George Vernon/Dennis Kevin	104-19-004D	5810 W Buckeye Rd	Vacant	Partial		N			No Activity								\$19
216	7-11525	CH Realty VI- WPC	103-26-003E, 103-26-003F, 103-26-003C, 103-26-003B	Not Available	Vacant	Partial		N			No Activity								\$20
217	7-11528	David & Carmen Hernandez	300-05-663	3049 W Redwood Lane	Vacant	Full		Y	D. Lopez	ADOT	Offer Made	10/16/2014	4/20/2015					4/1/2016	\$10
218	7-11537	Estes/ Glodman Limited Partnership	301-70-009M		Vacant	Full		N	D. Lopez	ADOT	Offer Made	1/27/2015	6/24/2015					4/1/2016	\$0.04
219	7-11541	Jewel Investment Co	104-04-039, 104-04-40, 104-04-041, 104-04-042	5723 W Washington St	Office Warehou se suites	Partial	3	N			Appraisal in Process	5/4/2015						8/1/2017	\$35
220	7-11542	JGZ Properties I LLC	104-18-003C	802 S 59th Ave	Drywall Supplies	Full	1	N		ORC	Offer Made	10/14/2014	7/17/2015					5/1/2017	\$12
221	7-11546	Laveen Baseline, LLC	300-02-017D, 300-02-017N, 300-02-017P		AG	Partial		Y		ADOT	Offer Made	11/5/2014	7/21/2015				С	9/1/2016	\$2
222	7-11547	Jones 80.3 LLC	300-03-011K		AG	Partial		N			No Activity								\$2
223	7-11548	June S Williams Trust/Williams John M Jr	300-02-022A, 300-02-023B, 300-02-023C, 300-02-023D		AG	Partial		Y		ADOT	Offer Made	11/5/2014	7/8/2015				С	9/1/2016	\$2
224	7-11549	JV Radfam LLC	104-04-012B	3 S 59th Ave	Commer cial Bldg	Full	1	Y	T. Haskins	ADOT	Possession	10/14/2014	3/27/2015	6/19/2015	7/31/2015			4/1/2016	\$16
225	7-11558	KS LLC	300-03-016E		AG	Full		Y	SW AG Services	ADOT	Offer Made	11/5/2014	7/2/2015					4/1/2016	\$2
226	7-11561	Lakewood Community Association	301-70-007C, 301-79-006T, 301-79-008H, 301-79-008J, 301-79-008K		Well / HOA	Partial		N			No Activity								\$91
227	7-11564	Lark Group LLC	104-05-004B	110 N 59th Ave	Commer cial Bldg	Partial	1	N			No Activity								\$35
228	7-11564-S1	CBS Billboard sign	104-05-004B		Billboard Sign	Full		N			No Activity								\$0
229	7-11571	Liberty Fuel	103-27-009, 103-27-010, 103-27-058	1201 S. 59th Ave.	Truck Stop	Full		N	J. Windle	ORC	Offer Made	10/9/2014	6/10/2015				Н	10/1/2016	\$33
230	7-11571-S1	Clearchannel Billboard sign	103-27-058	1201 S. 59th Ave.	Billboard Sign	Full		N	ATI		Appraisal in Process	10/9/2014						4/1/2016	\$0
231	7-11574	Lines Brothers Farms LLC	104-86-001B		AG	Partial		N			Appraisal in Process	11/14/2014						4/1/2016	\$1

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232	7-11575	Lines Brothers Land & Cattle LLC	104-86-002H	6015 W. Vineyard	AG	Partial		Y		ADOT	Appraisal in Process	11/14/2014					С	9/1/2016	\$2
233	7-11576	Lines (family)	300-03-019G, 300-03-20A, 300-03-023F; 300-07-002B, 300-07-010D, 300-07-011	12432 S. 51st Avenue	AG	Partial		Y		ADOT	Appraisal in Process	11/14/2014					С	12/1/2016	\$1
234	7-11578	Lines, John Westin	300-03-019C	5141 W. Estrella Drive	AG	Full		N		ADOT	Appraisal in Process	5/1/2015						4/1/2016	\$1
235	7-11585	Denny Elwell Family LC	104-05-021	5925 W. Van Buren	Ice Plant/ warehou se	Partial		N			No Activity								\$229
236	7-11585-S1	Molina billboard sign	104-05-021	5925 W. Van Buren	Billboard Sign			N			No Activity								\$0
237	7-11599	Massey	104-26-007C, 104-26-003Y	1401 S. 59th Ave	Truck Repair	Partial		N			No Activity								\$56
238	7-11600	Matmon LLC	300-04-011D, 300-04-013G, 300-04-015D, 300-04-015J, 300-04-015K		Vacant	Partial		N			Offer Made	3/10/2015	8/31/2015					7/1/2016	\$0.26
239	7-11607	Mival LLC	104-18-003E, 104-18-003F	5902 W Buckeye Rd	Storage Yard	Partial	1	N			No Activity								\$5
240	7-11607-S1	CBS Billboard sign	104-18-003F	5902 W Buckeye Rd	Billboard Sign			N			No Activity								\$0
241	7-11616	Nathan Family Trust / Stephen & Martha Nathan	300-07-003F	14801 S 27th Ave	Vacant	Partial		N	D. Lopez		Appraisal in Process	5/19/2015						4/1/2016	\$3
242	7-11617	National Christian Foundation Real Estate Inc	300-05-004E	14801 S 27th Ave	Vacant	Full		Y		ADOT	Cleared for Construction	2/25/2015	4/29/2015	7/2/2015	7/3/2015	NA		4/1/2016	\$1
243	7-11621	Newport Group 22 LLC	104-47-003C, 104-47-003D, 104-47-003K	3450 S 59th Ave	AG - Irrigation	Partial		Y		ADOT	Appraisal in Process	10/23/2014					С	12/1/2016	\$3
244	7-11622	The Newport Group 37, L.L.C.	104-47-001A	6235 W Lower Buckeye Road	AG - Irrigation	Partial		N	HQWest		Appraisal in Process	10/23/2014						7/1/2016	\$1
245	7-11630	Osprey LLC	301-78-962B		Vacant	Partial		N			No Activity								\$1
246	7-11634	JMD Hospitality, LLC	103-27-029B	1241 N 53rd Ave	Motel	Full	1	N	CBRE	ADOT	Offer Made	10/10/2014	7/1/2015					6/1/2016	\$114
247	7-11634-S1	Clearchannel Billboard sign	103-27-029B	1241 N 53rd Ave	Billboard Sign	Full		N	S. Nagy		Appraisal in Process	10/9/2014						4/13/2016	\$0
248	7-11635	Pecos Professional Plaza, LLC	301-69-030M	16611 S 40th St	COMME RCIAL	Partial		N			No Activity								\$0

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249	7-11639	Phoenix City Of	300-02-017M		AG			N			No Activity								\$0.04
250	7-11640	City of Phoenix	300-07-003L	4847 W Dusty Lane	Vacant	Full	1	N	D. Lopez		Offer Made	1/27/2015	7/14/2015					5/12/2016	\$6
251	7-11644	Glen Zilly	300-05-668	3040 W Cedarwood Lane	Vacant	Full	1	Y	D. Lopez	ADOT	Possession	10/16/2014	4/16/2015	8/31/2015	8/31/2015			4/1/2016	\$12
252	7-11645	Property Reserve Arizona LLC	104-38-001, 104-38-002A, 104-38-003A 104-27-001B	6103 W Buckeye Rd	AG & recycle yard	Partial	1	Y		ADOT	Offer Made	11/3/2014	8/5/2015				С	12/1/2016	\$2
253	7-11646	SRP	104-47-002E, 104-47-002F		Sub Station	Partial		Y		ADOT	Offer Made	10/14/2014	7/15/2015				С	12/1/2016	\$5
254	7-11649	Ram Bull, LLC	104-19-009B, 104-19-009C	811 S. 59th Avenue	Semi Truck Repair			N			No Activity								\$0
255	7-11652	Randal Allan DeMore Trust et al	104-18-004B 104-18-004Q	424 S 59th Ave	Auto Wrecking Yard	Full	1	N	R. Dunlap	ORC	Offer Made	10/10/2014	4/10/2015					8/15/2016	\$9
256	7-11654	Rexco LLC	104-81-001C		AG	Partial		Y	S. Pendleton	ADOT	Offer Made	11/5/2014	7/2/2015				С	9/1/2016	\$2
257	7-11657	Rio Del Rey Homeowners Association	parcel 1 104- 57-230, 104- 57-231, 104- 57-232; parcel 2 104- 57-489, 104- 57-490, 104- 57-491, 104- 57-494	6144 W Broadway Rd	Comm Area - HOA	Partial		Y			Appraisal in Process	4/27/2015					С	12/1/2016	\$1
258	7-11658	RMV Properties LLP	104-04-010, 104-04-011	125 S. 59th Ave.	Vacant	Full		Y	R. Dunlap	ADOT	Cleared for Construction	10/14/2014	3/30/2015	5/14/2015	5/14/2015	NA		4/1/2016	\$5
259	7-11666	Roosevelt Irrig Dist	104-04-002B	59th Ave & Van Buren	Well	Full	1	N		ADOT	No Activity								\$2,00 0
260	7-11667	Rovala Kari/Marja	104-04-012A	N. 59th Ave.	Vacant	Full		Y	R. Dunlap	ADOT	Cleared for Construction	10/14/2014	4/30/2015	7/29/2015	7/29/2015	NA		4/1/2016	\$5
261	7-11669	Ryder Truck Rental Inc	103-27-017B, 103-27-018, 103-27-019, 103-27-020, 103-27-021B	1239 N 56th Ave	Truck Rentals	Full	1	N		ORC	Appraisal in Process	10/7/2014					Н	10/30/2017	\$43
262	7-11670	APS, SRP, et.al.	300-03-023A, 300-04-011C, 300-04-013D, 300-04-013F, 300-04-014A		Vacant (pwr poles)	Partial		N			No Activity								\$0
263	7-11671	BRS Properties, LLC	103-30-293A	5152 W Latham St	Hotel	Partial		N			No Activity								\$12
264	7-11673	Salt River Pima-Maricopa Indian Comm	104-72-002A, 104-72-003E	6204 W Southern Ave	Sand/Ro ck operation	Partial	1	N	G. Halmbacher	ADOT	Offer Made	11/4/2014	7/24/2015				С	4/1/2017	\$0.41

Arizona Department of Transportation South Mountain Freeway Project Addendum #3 (9-15-2015)

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No.	Parcel No.	Owner's Name	APN	Site Address	Property Type	Full or Partial Take	Relos.	Retained Parcel	Appraiser	Acq. Agent	ROW Status	Appraisal Ordered	First Written Offer	Possession	Relo/ Vacate Date	Demo Status	Known Env. Site (Cultural; Haz Mat)	Est. Date Parcel Available for Developer's Use	Market Value (\$/sq. ft.)
265	7-11673-S1	Salt River Pima-Maricopa Indian Comm	104-72-002A, 104-72-003E	6204 W Southern Ave	Billboard Sign	Full		N			Appraisal in Process	5/1/2015							\$0
266	7-11675	San Riva Madison Ownership Company, LLC	301-85-648	2155 E Liberty Lane	Condos Common Area	Partial		N			No Activity								\$7
267	7-11676	Harry Sanaski	300-04-003H		Vacant/ Well	Full		N		ADOT	Offer Made	10/22/2014	7/16/2015					10/15/2015	\$1
268	7-11683	Sherwood Walter L	104-38-003C, 104-38-003D	2402 S 59th Ave	Semi- trailer storage	Full	1	N		Tierra	Offer Made	10/10/2014	6/16/2015					10/25/2016	\$7
269	7-11683-S1	Clearchannel billboard sign	104-38-003C	2402 S 59th Ave	Billboard Sign	Full		N	ATI		Appraisal in Process	10/10/2014						1/20/2016	\$0
270	7-11686	Sierra Foothills Condominium Assoc	300-96-706	2048 E Muirwood Dr	COMME RCIAL	Partial		N			No Activity								\$161
271	7-11691	SJW Land Company	104-04-013, 104-04-014, 104-04-015, 104-04-018	1 N 59th Ave	Refr. Warehou se	Full	1	N	CBRE	Tierra	Offer Made	10/10/2014	7/6/2015					12/12/2018	\$41
272	7-11692	Smith Clyde David/Marsha Lou Tr	300-03-012A, 300-03-014		AG	Partial		N			No Activity								\$1
273	7-11695	Southern Cross LLC	103-28-001G, 103-28-001H, 103-28-002A, 103-28-002B, 103-29-002E, 103-29-002F	777 N 59th Ave	AG	Partial		N			No Activity								\$3.5
274	7-11695-S1	Molina billboard sign	103-28-001G		Billboard Sign	Full		N			Appraisal in Process	5/18/2015						1/20/2016	\$0
275	7-11695-S2	CBS Billboard sign	103-28-001G		Billboard Sign	Full		N			No Activity								\$0
276	7-11695-S3	CBS Billboard sign	103-28-001G		Billboard Sign	Full		N			No Activity								\$0
277	7-11696	Southwest Village Apartments LLC	103-28-003K	777 N 59th Ave	Apartme nts	Full	416	N	M. Clement	ASL	Offer Made	10/7/2014	3/30/2015					8/14/2018	\$29
278	7-11700	Sun Belt Linens Inc	104-05-004X, 104-05-004Y	6025 W. Van Buren	Comm/In d Building	Partial		N			No Activity								\$743
279	7-11701	Sun Valley Investment Partnership	104-05-001Q	202 N. 59th Avenue	Commer cial Bldg	Partial	1	N			No Activity								\$221
280	7-11704	Taylor Morrison / Arizona, Inc	300-03-002A, 300-03-032, 300-03-037, 300-03-021		AG	Full		N	K. Baltutat	ADOT	Offer Made	10/14/2014	7/9/2015					4/1/2016	\$2

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281	7-11708	Toro Grande LLC	104-04-513	5825 W Van Buren St	Ross Equip Rental	Full	1	N	K. Baltutat	ORC	Offer Made	10/7/2014	6/22/2015					10/25/2016	\$17
282	7-11714	U S A Tr /For Gila Riv Indian Com/	300-03-018B	3801 E Pecos Rd	Well	Full		N	S. Pendleton	ADOT	Offer Made	10/10/2014	6/10/2015					10/30/2017	\$0
283	7-11716	Union Rock & Materials Co	104-65-001, 104-65-002D, 104-65-004B, 104-65-002C	4802 S 59th Ave	River Bottom	Partial		Y	G. Halmbacher	ADOT	Offer Made	11/4/2014	7/21/2015				С	12/1/2016	\$0.49
284	7-11718	USPS	300-96-657	16825 S Desert Foothills Pkwy	COMME RCIAL	Partial		N			No Activity								\$20
285	7-11720	V A H LLC	103-27-011B	1236 N 57th Ave	Parking Lot	Full	1	N		ORC	Offer Made	10/10/2014	7/7/2015				Н	2/8/2016	\$16
286	7-11727	Waffle House Inc	103-27-007E	1237 N 59th Ave	Restaura nt	Full	1	N	W. Montandon	ADOT	Offer Made	10/14/2014	4/30/2015					9/2/2016	\$28
287	7-11731	West Valley Storage Solutions LLC	103-27-027C	1239 N 54th Ave	Mini - Storage	Full	200	N	W. Montandon	CEI	Offer Made	10/14/2014	7/8/2015					10/30/2017	\$18
288	7-11732	Paul & Shelley Wiest	300-05-662	3045 W Redwood Lane	Vacant	Full		Υ	D. Lopez	ADOT	Possession	10/16/2014	3/20/2015	4/16/2015	4/16/2015			4/1/2016	\$11
289	7-11740	David Olivarez & Jack Strong. Jack Strong Revocable Trust	300-07-003R		Vacant	Full		Y	D. Lopez	ADOT	Possession	1/27/2015	4/16/2015	8/5/2015	8/5/2015			4/1/2016	\$3
290	7-11755	Rimex, Inc., a Nevada corporation	104-04-035	5801 W. Van Buren	Commer cial Bldg.	Full	1	N	W. Montandon	ADOT	Offer Made	10/14/2014	4/15/2015					8/18/2016	\$20
291	7-11756	Southwest Village Investments I, LLC	103-28-003J	N/A	vacant	Full		N		ADOT	Offer Made	10/7/2014	3/31/2015					3/21/2016	\$6
292	7-11758	City of Phx / Sth. Mtn Park	300-04-001, 300-07-001A, 300-07-001B, 300-07-003G, 300-07-003J, 300-07-005B, 300-07-010B, 300-07-017D, 300-07-022, 300-07-024, 25' easement north of 300- 07-003G		Vacant	Partial		Y	D. Lopez		Offer Made	3/5/2015	8/17/2015				С	12/1/2016	\$2
293	7-11759	SRP	103-30-003G	N/A	USA Fee			N			No Activity								\$0
294	7-11759-S1	Clearchannel Billboard sign	103-30-003G		Billboard Sign	Full		N			Appraisal in Process	5/1/2015						1/28/2016	\$0

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295	7-11764	D & K Partners L.L.C.	104-04-031	5701 W. Van Buren	Truck Servicing	Partial		N			No Activity								\$16
296	7-11766	Bureau of Reclamation	300-03-001A		Irrig facility	Partial		N			No Activity								\$0
297	7-11773	Foothills Club West Comm Assoc	300-97-470, 300-97-476		Vacant / HOA	Partial		N			No Activity								\$1
298	7-11781	P J J BROS LLC	103-30-308, 103-30-293B	5102 W Latham St	Greenbel t/Landsc ape area	Partial		N			No Activity								\$41
299	7-11784	Foothills Reserve Master Owners Assoc Inc	300-05-641, 300-05-642, 300-05-644	17014 S. 27th Lane (Tract A) & 2720 W Briarwood Terrace (Tract B)	Common Area HOA	Partial		Z			No Activity								\$1
300	7-11787	Maricopa County Community College District	301-69-030N	2411 W 14th St	COMME RCIAL	Partial		N			No Activity								\$11
301	7-11790	Williams Estate/William s Trust	300-02-030	6304 W Dobbins Rd	AG	Partial		N			No Activity								\$50
302	7-11835	Roosevelt Irrigation District	NA	R.I.D. Canal	Irrigation canal	Partial		N			No Activity								\$0.05
303	7-11904	John R. Shelton	104-72-003D	N/A	Well Site	Full		N			No Activity								\$92
304	7-11905	City of Phoenix	300-97-326		Pumping Station	Partial		N			No Activity								\$14
305	7-11909	Taylor Morrison Az Inc	300-04-014B, 300-04-016, 300-05-003B, 300-05-004C & part of 300- 05-006B		Vacant	Partial		Y	K. Baltutat	ADOT	Offer Made	10/2/2014	6/2/2015				С	12/1/2016	\$3
306	7-11913	City of Phoenix	300-04-017V, 300-04-050	14717 S 45th Ave	Vacant	Full		N	D. Lopez	ADOT	Offer Made	10/22/2014	7/14/2015					11/26/2015	\$1
307	7-11915	City of Phoenix	306-02-853	17010 S 40th St	Commer cial / Park & Ride	Partial		N			No Activity								\$0
308	7-11920	U S A Tr /For Gila Riv Indian Com	300-03-022		Well	Full		N	S. Pendleton	ADOT	Offer Made	10/10/2014	6/10/2015					10/30/2017	\$0
309	7-11921	U S A Tr /For Gila Riv Indian Com	300-03-023E		Well	Full		N	S. Pendleton	ADOT	Offer Made	10/10/2014	6/10/2015					10/30/2017	\$0

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310	7-11922	BLM	NA	Triangular parcel 1/4-mile south of Estrella Drive and west of 51st Avenue	Vacant (pwr poles)	Partial		Y		ADOT	Possession		6/4/2015	9/11/2015				4/1/2016	\$0
311	7-11923	Denio's Roseville Farmers Market and Auction, Inc	104-18-004V	430 S 59th Ave	Truck Trailer Repair	Full	1	N		ORC	Offer Made	10/14/2014	5/9/2015					9/13/2016	\$11
312	7-11925	Western Refining Wholesale, Inc.,	104-26-008, 104-26-006A	5821 W Buckeye Road	Fuel Depot	Partial		N			No Activity								\$72
313	7-11926	BBC Phoenix LLC	300-05-006B		Vacant	Full		Y	K. Baltutat	ADOT	Offer Made	10/10/2014	7/7/2015				С	9/1/2016	\$3
314	7-11936	SRP	104-38-004	N/A	Well Site	Full		N			No Activity								\$0
315	7-11938	Arizona Outdoor Advertisers,	104-39-003G	2555 S 59th Avenue	Billboard			N			No Activity								\$735
316	7-11939	Massey	104-39-003J	5810 W Lower Buckeye Road	Vacant	Partial		N			No Activity								\$5
317	7-11940	Arizona Becknell Investors 2007 LLC,	104-46-002G	5757 W Lower Buckeye Road	Vacant	Partial		N			No Activity								\$5
318	7-11948	Foresight Group Holdings VI, LLC,	104-47-001B		AG	Partial		Y			Appraisal in Process	4/1/2015					С	12/1/2016	\$3
319	7-11949	Foresight Group Holdings II, LLC	104-47-002C		AG	Partial		Y			Appraisal in Process	4/27/2015					С	12/1/2016	\$3
320	7-04226	ADOT	NA	Pecos Road surroundings 40th St to 28th St	Vacant	Full		Y			Possession	Х	Х	х				4/1/2016	
321	7-05060	ADOT	NA	Pecos Road surroundings 16th St to 17th Ave	Vacant	Full		Y			Possession	Х	12/12/198 6	х			С	9/1/2016	
322	7-05914	ADOT	104-47-002D		AG	Full		Υ			Possession	Х	Х	6/29/1988			С	12/1/2016	
323	7-05933	ADOT	104-26-009	5737 W Buckeye Rd		Full		Y			Possession	Х	Х	Х				4/1/2016	
324	7-06376	ADOT	300-04-003A	4717 W Ray Rd		Full		Υ			Possession	Х	Х	Х				4/1/2016	
325	7-07169	ADOT	300-07-003K			Full		Y			Possession	Х	X	X				4/1/2016	

Arizona Department of Transportation South Mountain Freeway Project Addendum #3 (9-15-2015)

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326	7-07577	ADOT	previously part of 300- 07-001A			Full		Y			Possession	Х	Х	1/23/1998				4/1/2016	
327	7-09912	ADOT	104-57-001K, 104-57-003B	NA	Vacant	Full		Y			Possession	Х	7/31/2001	11/9/2001			С	12/1/2016	
328	7-10463	ADOT	300-05-671, 300-05-673, 300-05-701, 300-05-702	3047 W Cedarwood Ln, 3101 W Cedarwood Ln, 17012 S 32nd Ln, 17008 S 32nd Ln	SFR	Full		Y			Possession	х	3/22/2006	4/19/2006				4/1/2016	
329	7-10465	ADOT	301-79-466	3429 E Cedarwood Ln	SFR	Full		Y			Possession	Х	Х	Х				4/1/2016	
330	7-10466	ADOT	301-70-121	2901 E Redwood Ln	SFR	Full		Y			Possession	Х	х	Х				4/1/2016	
331	7-10467	ADOT	301-78-001U	Pecos Road surroundings 24th St to 16th St	Vacant	Full		Y			Possession	Х	4/20/2006	6/15/2006				4/1/2016	
332	7-10489	ADOT	300-05-675	3109 W Cedarwood Ln	SFR	Full		Y			Possession	Х	4/27/2007	5/24/2007				4/1/2016	
333	7-10531	ADOT	301-79-461	3401 E Cedarwood Ln	SFR	Full		Y			Possession	Х	Х	Х				4/1/2016	
334	7-10534	ADOT	300-05-670	3043 W Cedarwood Ln	SFR	Full		Y			Possession	Х	5/4/2007	6/1/2007				4/1/2016	
335	7-10535	ADOT	300-05-678	17002 S 31st Ln	SFR	Full		Y			Possession	Х	5/23/2007	8/28/2007				4/1/2016	
336	7-10536	ADOT	300-05-698	17003 S 32nd Ln	SFR	Full		Y			Possession	Х	5/9/2007	6/22/2007				4/1/2016	
337	7-10537	ADOT	300-05-699, 300-05-705	17007 S 32nd Ln / 3209 W Redwood Ln	SFR	Full		Y			Possession	Х	4/27/2007	6/5/2007				4/1/2016	
338	7-10538	ADOT	300-05-703	17004 S 32nd Ln	SFR	Full		Y			Possession	Х	4/27/2007	6/14/2007				4/1/2016	
339	7-10539	ADOT	300-05-704	3205 W Redwood Ln	SFR	Full		Y			Possession	Х	4/27/2007	6/20/2007				4/1/2016	
340	7-10544	ADOT	306-06-325	2710 E. Redwood Ln	SFR	Full		Y			Possession	Х	2/28/2007	4/11/2007				4/1/2016	
341	7-10600	ADOT	104-04-007	210 S 57th Dr	Vacant	Full		Y			Possession	Х	5/4/2007	10/19/2007				4/1/2016	
342	7-10601	ADOT	300-05-676	3108 W Cedarwood Ln	SFR	Full		Y			Possession	Х	5/7/2007	6/8/2007	Х			4/1/2016	
343	7-10605	ADOT	300-05-614	17025 S 27th Ave	SFR	Full		Y			Cleared for Construction	Х	4/13/2007	7/3/2007		9/2/2015		4/1/2016	
344	7-10607	ADOT - Speedco	103-27-062B	5610 W Latham St	Commer cial	Full		Y			Possession	Х	7/12/2007	12/20/2007				4/1/2016	
345	7-10612	ADOT - Martinez	104-04-512	5715 W Van Buren St	Vacant	Full		Y			Possession	Х	6/27/2007	12/21/2007				4/1/2016	
346	7-10765	ADOT	300-05-672	3051 W Cedarwood Ln	SFR	Full		Y			Possession	Х	8/17/2007	10/9/2007	Х			4/1/2016	
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Arizona Department of Transportation South Mountain Freeway Project Addendum #3 (9-15-2015)

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347	7-10768	ADOT	300-05-609	17011 S. 27th Dr	SFR	Full		Y			Possession	Х	7/27/2007	8/29/2007	Х			4/1/2016	
348	7-10784	ADOT	104-19-003E	445 S 59th Ave	Vacant	Full		Y			Possession	Х	2/20/2008	5/8/2009				4/1/2016	
349	7-10796	ADOT	301-70-115	2925 E Rewood Ln	SFR	Full		Υ			Possession	Х	Х	Х				4/1/2016	
350	7-10802	ADOT	300-05-666	3048 W Cedarwood Ln	SFR	Full		Y			Possession	Х	3/18/2008	6/12/2008				4/1/2016	
351	7-10803	ADOT	306-06-286	2655 E Redwood Ln	SFR	Full		Y			Possession	Х	2/4/2008	2/4/2009	Х			4/1/2016	
352	7-10804	ADOT	300-05-669	3039 W Cedarwood Ln	SFR	Full		Υ			Possession	Х	1/25/2008	3/10/2008				4/1/2016	
353	7-10805	ADOT	301-70-119	2909 E Redwood Ln	SFR	Full		Υ			Possession	Х	Х	Х				4/1/2016	
354	7-10806	ADOT	301-70-746	3123 E Redwood Ct	SFR	Full		Υ			Possession	Х	Х	Х				4/1/2016	
355	7-10869	ADOT	306-06-305	17010 S 26th St	SFR	Full		Υ			Cleared for Construction	Х	4/25/2008	5/23/2008	Х	8/31/2015		4/1/2016	
356	7-10870	ADOT	300-05-602	17012 S 27th Dr	SFR	Full		Υ			Possession	Х	5/1/2008	5/30/2008	X			4/1/2016	
357	7-10871	ADOT	104-65-003, 104-65-004A, 104-65-002B	4802 S 59th Ave	Vacant	Full		Y			Possession	X	9/24/2008	12/18/2008			С	12/1/2016	
358	7-10888	ADOT	300-05-605	17024 S 27th Dr	SFR	Full		Υ			Possession	Х	9/4/2008	9/30/2008	X			4/1/2016	
359	7-10889	ADOT	306-06-271	2753 E Redwood Ln	SFR	Full		Υ			Possession	Х	9/17/2008	10/9/2008	X			4/1/2016	
360	7-10890	ADOT	306-06-327	2718 E Redwood Ln	SFR	Full		Υ			Possession	Х	9/11/2008	10/16/2008	X			4/1/2016	
361	7-10891	ADOT	301-79-455	3247 E Cedarwood Ln	SFR	Full		Υ			Possession	Х	Х	Х				4/1/2016	
362	7-10892	ADOT	300-05-665	3052 W Cedarwood Ln	SFR	Full		Y			Possession	Х	9/5/2008	9/28/2008				4/1/2016	
363	7-10906	ADOT	104-04-003	5727 W Van Buren St	Vacant	Full		Y			Possession	Х	8/27/2008	10/22/2008				4/1/2016	
364	7-10940	ADOT	306-06-326	2714 E Redwood Ln	SFR	Full		Υ			Possession	Х	9/10/2008	12/2/2008				4/1/2016	
365	7-10984	ADOT	301-70-750	3037 E Redwood Ln	SFR	Full		Y			Possession	Х	Х	Х				4/1/2016	
366	7-11182	ADOT - La Salvia	300-02-031A, 300-02-032A, 300-02-033, 300-02-037A, 300-02-037B, 300-02-041, 300-02-042		Agricultur al	Full		Y			Possession	Х	1/15/2010	4/28/2011				4/1/2016	
367	7-11316	ADOT	300-02-021G	NA	Vacant	Full		Y			Possession	Х	6/29/2010	9/20/2010			С	9/1/2016	

								Acqu	TP Attacl										
No.	Parcel No.	Owner's Name	APN	Site Address	Property Type	Full or Partial Take	Relos.	Retained Parcel	Appraiser	Acq. Agent	ROW Status	Appraisal Ordered	First Written Offer	Possession	Relo/ Vacate Date	Demo Status	Known Env. Site (Cultural; Haz Mat)	Est. Date Parcel Available for Developer's Use	Market Value (\$/sq. ft.)
368	T-11317 ADOT 306-06-317 2640 E Redwood Lane SFR Full Y Possession X 5/27/2010 7/6/2010 X 4/1/2016 C C C C C C C C C																		
369	7-11358	ADOT	306-06-270	2757 E Redwood Lane	SFR	Full		Y			Possession	Х	10/20/201 0	11/30/2010	Х			4/1/2016	
370	7-11439	ADOT	306-06-309	2606 E Redwood Lane	SFR	Full		Y			Cleared for Construction	Х	6/11/2014	9/30/2014	Х	9/4/2015		4/1/2016	
371	7-11538	ADOT - Inland Kenworth	103-27-049, 103-27-054B, 103-27-054A, 103-27-055	5801 W Latham St	Commer cial	Full		N			Possession	Х	6/8/2012	11/26/2012			Н	2/15/2016	
372	7-11699	ADOT	306-06-328	2722 E Redwood Lane	SFR	Full		Υ			Possession	Х	1/7/2014	2/21/2014	Х			4/1/2016	
373	7-11702	ADOT	300-04-028L	15030 S 43rd Ave	SFR	Full		Y			Possession	Х	3/21/2014	4/11/2014				4/1/2016	

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TP Attachment 500-1 – Maintenance Table

			TP Attachme Maintenance					
Ref.	Element	Performance Requirement		Response	Inspection	Inspection	Measurement	Target
			Temporary ¹	Permanent ²	Method	Frequency	Record	
1 – Pub	lic Appearance							
1.1	Debris and obstructions	PavedMaintain paved surfaces and roadside is free from debris and obstructions that presents a hazard to motorists.	N/A	2 hours <u>for</u> paved surfaces; <u>and</u> 48 hours <u>for</u> other areas.	Visual	Weekly	No debris on travelled way or roadside areas.	100%
1.2	Litter	Keep projectMaintain Project in neat condition. Remove and dispose of litter regularly.	N/A	1 week, except that significant incidents of litter deposited on paved surfaces require 2 hour response and all other significant incidents of litter on the Project require 248 hour response.	Visual — no more than 20 pieces of litter per mile, visible when travelling at highway speed. Visual.	Weekly	Inspection records showing complianceNo more than 20 pieces of litter per mile, visible when travelling at highway speed.	100%Less than 20 pieces of litter per mile
1.3	Sweeping	KeepMaintain all hard shoulders, gore areas, ramps, intersections, islands, and Developer maintained frontage roads in swept clean condition. Remove and dispose of all sweepings without stockpiling in the Project ROW. Use only PM-10 certified street sweepers in accordance with South Coast Air Quality Management District Rule 1186.	N/A	1 week except goresfor mainline; and ramps—2 weeks for ramps, gores, and frontage roads.	Visual No un-swept areas greater than 24 inches wide, 50 feet in length-Visual	Weekly	Inspection records showing complianceNo unswept areas greater than 24 inches wide or 50 feet in length.	100%
1.4	Graffiti	AllMaintain all surfaces within the right-of-way shall be maintainedProject ROW free of graffiti.	N/A	24 hours for profanity, areas visible to travelling public and for specific call outs-: and 1 week for other graffiti discovered in the course of Maintenance maintenance activities.	Visual /Inspection	Monthly1 month	Inspection records.No graffiti within the Project ROW.	100%.
1.5	Landscaped areas (Character Areas 1, 3, and 4)	AllMaintain all landscaped areas are maintained toin their originally constructed condition. Landscaped areas are as designated in the Plans. IrrigationEach of the following must be performed in accordance with the MMP: Perform irrigation system maintenance and maintain irrigation system operation; plant maintenance; pruning; insect, disease, and pest control; fertilization; and watering-are undertaken according to MMP.	N/A	24 hours for irrigation: 1 month for weeds: and 2 months for others.	Visual	Monthly	Inspection records showing compliance.	100%

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			TP Attachmer Maintenance					
Ref.	Element	Performance Requirement		Response	Inspection	Inspection	Measurement	Target
			Temporary ¹	Permanent ²	Method	Frequency	Record	1000/
		Granite Maintain granite mulch, rock mulch, and decomposed granite areas are kept free of weeds.			Backflow preventers: CertifiedSpecialty Inspection, certified by	Annually		100%
		A <u>Undertake a</u> program and to eliminate vegetation in pavement or concrete.			qualified inspectorSpecialty Inspector			
1		Mowing begins Begin mowing before vegetation reaches 18 in if applicable.						
		BackflowMaintain backflow preventers arein proper operating properlyconditiion.						
		DamagedRemove damaged or dead vegetation is removed. Replacements shallmust occur once survivability is less than the 80% criteria.						
1.6	Landscaped areas (Character Area 2)	Each of the following must be performed in accordance with the MMP: Plant maintenance; pruning; insect, disease, and pest control; fertilization; and watering are undertaken according to MMP.	N/A	3 month	Visual	Monthly	Inspection records showing compliance.	100%
		Vegetation removal Remove vegetation at intersections, ramps, or other areas maintains wisibility of appurtenances and sight distance.						
		Vegetation does <u>must</u> not encroach into or on paved shoulders, main lines, sidewalks, islands, riprap, traffic barriers, or curbs.						
		A program is undertaken to control weeds.						
		A program to eliminate vegetation in pavement or concrete.						
		The Maintain the height of grass and weeds vegetation within 10' of the shoulder is kept between 6 in. and 18 in. Mowing begins Begin mowing before vegetation reaches 18 in.						
		DamagedRemove damaged or dead vegetation is removed. Replacements shallmust occur once survivability is less than the 50% criteria.						

	TP Attachment 500-1 Maintenance Table										
Ref.	Element	Performance Requirement		esponse	Inspection	Inspection	Measurement	Target			
1.7	Landform graphics	Conform to the original design. Free of weeds and erosion. Maintain landform graphic areas free from weeds. Maintain consistent granite mulch reveal against all concrete headers/edging. Reveal shall be maintained at ½"-3/4" on both sides of header/edging. Maintain all landform graphic areas free from erosion, rilling, cutting and granite mulch contamination. Remove any contaminated granite mulch and replace in kind with granite mulch as necessary to maintain original design intent (Texture, gradation, color, depth). Maintain color/material separation between areas per original design. Repair any damaged header/edging to maintain original design layout. Replace-in-kind. Repair/replace all warped, sagging, bowing and up-lifting edging material.	N/A	Permanent ² 6 months	Visual	Monthly	Record Inspection records showing compliance.	100%			
2 -Pave	ment										
2.1	Shoulder/Edge drop offsPavement safety hazard	Pavement does not exhibit other pavement distress factors listed in FHWA Distress Identification Manual for the Long-Term Pavement Performance Program. This Ref. 2.1 is in addition to the Performance Requirements in Ref. 2.2 through 2.12. All roadways must not have vertical drop offs	2 hours for distress that presents a safety hazard to motorists on mainline lanes, ramps, crossroads, and frontage roads.	<u>1 year</u>	Physical measurement of edge drop-off level compared to adjacent unpaved surface. Visual	Monthly	Repair when: vertical differential between the shoulder and adjacent unpaved surface reaches 2	100%			
2.2	Delamination of AR-ACFCShoulder/Edge drop offs	between the shoulder and adjacent unpaved surface. All roadways have a smooth surface course.	N/A2 hours for distress that presents a safety hazard to motorists on mainline lanes, ramps, crossroads, and frontage roads.	1 year	Physical measurement-of edge drop-off level compared to adjacent unpaved surface.	Monthly	inches. Repair when: Abrupt-5 or more delamination areas, of 1 foot length or greater in any direction, within any 1 mile section per direction vertical differential between the cheulder and adjacent unpayed curface reaches 2 inches.	100%			

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Request for Proposals 202 MA 054 H882701C Volume II – Technical Provisions TP Attachment 500-1

			TP Attachment Maintenance						
Ref.	Element	Performance Requirement		Response	Inspection	Inspection	Measurement	Target	
			Temporary ¹	Permanent ²	Method	Frequency	Record		
2.3	Potholes Delamin ation of AR-ACFC	All roadways have a smooth surface course.	N/A2 hours for distress that presents a safety hazard to motorists on mainline lanes, ramps, crossroads, and frontage roads.	1 year	Physical -measurement	Monthly	Repair when: 5 or more areas within any 1 mile section per direction exhibit delaminationpothole s, of 1 inch depth or greater and a 1 foot length or greater in any direction-, within any 1 mile section per direction.	100%	
2.4	Base		N/A-2 hours for distress that	1 vear	,Visual Physical	Annually Monthly	Repair when:	100%	Formatted: Font color: Black
	Failures Petholos		presents a safety hazard to motorists on mainline lanes, ramps, crossroads, and frontage roads.		measurement		Occurrence of 5 or more potholes within any 1 mile section per direction of 1 inch depth or greater and a 1 foot length or greater in any direction.any base and/or subgrade failures of low severity or higher occurs.	100%	
2.5	Settlement/ Heave/ DistortionBase Failures	All roadways have a smooth surface course.	presents a safety hazard to motorists on mainline lanes, ramps, crossroads, and frontage roads.	1 year	Depth as measured using automated device in compliance with ADOT Standards Visual	Annually	Repair when: Occurrence of base and/or subgrade failures of low severity or higher.Surface deviations reach or exceed 1-1/2-inches in a length of 50 feet.		Merged Cells Merged Cells Merged Cells Merged Cells Formatted Table Merged Cells Formatted: Font color: Auto
2.6	Settlement/ Heave/ Distortion		N/A	1 your	10-feet straightedge used to measure rut depth in localized areas. Depth as measured using automated device in compliance with ADOT Standards.	Annually	Repair when: Surfacesurface deviations reachexceed 1-1/2- inches in a length of 50 feet inch	100%	

			TP Attachmen Maintenance						
Ref.	Element	Performance Requirement	Repair F	Response Permanent ²	Inspection Method	Inspection Frequency	Measurement Record	Target	
2.6 2.7	Joints Joints	All roadways have a smooth surface course.	2 hours for distress that presents a safety hazard to motorists on mainline lanes, ramps, crossroads, and frontage roads. N/A	1 year 1 year	Physical measurement feet straightedge used to measure rut depth in localized areas. Physical Measurement	Annually	Repair when: Surface deviationsjoint separations between concrete pavement and adjacent asphaltic concrete pavement exceed 1/2 inch between adjacent slabs. in width. Repair when: Joint separations between concrete pavement and adjacent asphaltic concrete pavement and adjacent asphaltic concrete pavementjoints exceed 1/2 inch in width.	100%	Merged Cells Merged Cells Formatted: Font color: Black
2.7	Spalling	All roadways have a smooth surface course.	2 hours for distress that presents a safety hazard to motorists on mainline lanes, ramps, crossroads, and frontage roads.	1 year	Physical measurement	Annually	Repair when: Concrete pavement joint width more than 1/2 inch.transverse spall exceeds 4 inches in length in the direction of travel.	100%	Split Cells Formatted: Font color: Auto
2.8	Spalling		N/A	1 year	Visual Physical Measurement	Annually	Repair when: Transverse spall which exceeds 4 inches in length in the direction of travel-longitudinal spall adversely affects ride quality.	100%	Formatted: Font color: Auto Formatted: Font color: Black
<u>2.8</u>	Pavement ride	All roadways have a smooth surface course.	30 days unless otherwise required by Ref. 2.1	<u>1 year</u>	Measurement of International Roughness Index (IRI) according to ADOT Standards, operating inertial profilers. (New construction is subject to construction standards in the Technical Provisions). Vicual	Annually	Repair when: Longitudinal spall which adversely affect ride quality.mainline lanes and ramps, 0.1 mile average IRI greater than or equal to 85 inches/mile.	0100%	Split Cells Formatted: Font color: Black Formatted: Font color: Auto

			TP Attachmen Maintenance					
Ref.	Element	Performance Requirement	Repair Response Temporary ¹ Permanent ²		Inspection Method	Inspection Frequency	Measurement Record	Target
2.9	RutsPavement ride for AC pavement only	All roadways have a smooth surface course-(including bridge decks).	30 days 2 hours for distress that presents a safety hazard to motorists on mainline lanes, ramps, crossroads, and frontage roads.	6 months4 year	10-feet straightedge used to measure rut depth in localized areas. Measurement of International Roughness Index (IRI) according to ADOT Standards, Operating Inertial Profilers.	Annually	Repair when: Mainline lanes and ramps, 0.1 mile average lRirut depth of any 1 mile section is greater than erequal to 100 inches/mile 1/2 inch.	0 100%
					(New Construction is subject to Construction Standards).		Repair when: Frontage roads and crossroads, 0.1 mile average IRlany rut depth is greater than or equal to 115 inches/mile1 inch.	
2.10	<u>Cracks</u> Rute	All readways have a smooth surface course (including bridge decks)Maintain cracks so they are sealed and watertight.	N/A2 hours for distress that presents a safety hazard to motorists on mainline lanes, ramps, crossroads, and frontage roads.	_1 Year year	Visual 10 feet straightedge used to measure rut depth in localized areas.	Annually	RepairClean and seal cracks when: 1 mile sections with average rut depth greater thanany individual crack is 1/2 inch wide or wider.	100%
2.11	Skid Resistance	Maintain skid resistance to required level.	2 hours for distress that presents a safety hazard to motorists on mainline lanes, ramps, crossroads, and frontage roads.	6 months	All pavement sections to be measured using ASTM E274/E274M-11 Standard Test Method for Skid Resistance Testing of Paved Surfaces at 50 MPH using a full scale smooth tire meeting the requirements of ASTM E524-08.	Annually	Repair when: Rut depthskid resistance throughout any 1 mile section is greater than 4 inchor equal to 30.	100%
3 – ADA	Ramps, Sidewalks	s, and Curbs				·		
3.1	ADA ramps and sidewalks	Concrete ramps and sidewalks aremust be ADA compliant and aremust not be displaced or damaged.	1 week for conditions affecting compliance with ADA requirements.	6 months	Physical Visual; and physical measurement if visual inspection reveals displacement or damage.	Every other year Monthly	Inspection records and physical measurements showing compliance.	100% for ADA requirements
3.2	Curb and gutter	Concrete curbs and gutters are must not be displaced or damaged.	N/A	1 year	Physical Visual; and physical measurement if visual inspection reveals displacement or damage.	MonthlyEvery other year	Inspection records and physical measurements showing compliance.	90% per mile for curb and gutter
4 – Safe	ty and Security							

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	TP Attachment 500-1 Maintenance Table									
Ref.	Element	Performance Requirement	Repair R Temporary ¹	esponse Permanent ²	Inspection Method	Inspection Frequency	Measurement Record	Target		
4.1	Safety Barriers, attenuators, barrier end treatments, and safety railing	All barriers, guard rail / bridge rail transitions, guard rail end treatments, and attenuators are fullymust be functional, not damaged or displaced and are in proper location and orientation with no damage that impairs their ability to perform.	2 hours to install safety measures	1 week for attenuators and barrier end treatments, and 30 days for other failures.	Visual	Annual Annually	Inspection records showing compliance.	100%		
4.2	Fence/gates and noise walls	All ROW fence and gates aremust be in good repair; except when in use, gates are closed and locked. Noise; and noise walls aremust be undamaged and functional.	24 hours for ROW fence and, gates, Repairs onand noise walls that function as ROW fence-must be within 24 hrs.; and 30 days for other noise wall; repairs.	1 week for ROW fences and gates; and 6 months for noise wallwalls.	Visual	Monthly	Inspection records showing compliance.	100%		
4.3	Signage and delineators	All signs and delineators are oriented properly, legiblefunction as designed, unauthorized signs are removed, obsolete signs are removed or replaced.	2 hours for safety critical signs (regulatory and warning); and 1 week for other signs.	2 weeks	Visual day and night	Annual Annually	Inspection records showing compliance.	100%		
4.4	Lighting	Luminaires are illuminated, free from defects, properly aligned function as designed; sign lighting is functional. Electrical supply is maintained from point of service provider	2 hours for restoration of electrical supply; 2 hours for sign lighting for safety critical signs; 24 hours for other sign lighting; and N/A for street lighting luminaires	1 month	Visual	Annual Annually	Percent of luminaires functioning Instance of 3 or more consecutive luminaires not	90%		
4.5	Pavement marking	Pavement markings are must be complete, and must be of correct color and configuration. Retroreflectivity is Retro-reflectivity for all preformed plastic pavement markings must be 100 mcd/m²/lux.	48 hours	3 months	Visual	Annual Annually	functioning Percent of pavement markings present	95%		
		Retro-reflectivity values for all other final pavement markings must be 100 mcd/m ² /ln.					Number of incorrect markings.	0		
					Testing with a retroreflectometer	Bi-annual <u>Every</u> other year	Percent of pavement markings compliant with retroreflectivity value.	90%		
4.6	Traffic Signals	All signals including cabinets, signal supports wiring, lenses, and detection loops are must be functional, aligned, structurally sound, and must have a continuous power supply is maintained. Cabinet electronics are not included.	2 hours	2 weeks	Visual	Monthly	Inspection records showing compliance.	100%		
5 – Stru	ictures									
5.1	Bridges	FHWA mandated inspections – these inspections are not delegated. ADOT will perform the required inspections. Developer will be required toshall carry out temporary and permanent repairs as indicated in the inspection reports	2 hours for conditions that affect life safety; and 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 with no condition rating below 7	100%		

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			TP Attachmen Maintenance					
Ref.	Element	Performance Requirement	Repair Response Temporary ¹ Permanent ²		Inspection Method	Inspection Frequency	Measurement Record	Target
		Visual inspections of bridgeBridge components: Substructures and superstructures are free of undesirable vegetation, debris, blocked drains, weep holes, defects in joint sealants, defects in pedestrian protection measures, settlement, scour, concrete spalls, and impact damage.	2 hours for conditions that affect life safety; and 1 weekmonth for other issues.	6 months	Visual	Annual Annually	No visually apparent defects	100%
		Expansion joints are free of dirt, debris, vegetation, and defects in joint seals. The deck drainage system is free of all obstructions and operates as intended. Cover plates are secure and free of damage. Bearings and bearing seats are clean.						
5.2	Retaining walls	Mechanically stabilized earth and other types of retaining walls aremust be free from impact damage, and dislocation, aremust drain properly-drained, must have no loose components, and nemust not have exposed reinforcing.	2 hours for conditions that affect life safety; and 30 days for other conditions.	6 months	Visual	Annual Annually	Inspection records showing compliance	100%
5.3	Sign and lighting supports	Sign and lighting supports are must be structurally sound, must have no loose hardware or anchorages, and are must be properly positioned and aligned.	2 hours for conditions that affect life safety, and 1 week for other conditions.	3 months	Visual	<u>Annual Annually</u>	Inspection records showing compliance	100%
6 – Pon	ding/Flooding, Drai	inage and Slopes						
6.1	Ponding and flooding	Roadway ismust be free from standing water after 50 year storm event	2 hours	1 month	Visual	Monthly and after storm event in compliance with SWPPP requirements	No areas of standing water within travel lanes. Areas of standing water on shoulders are less than 50 SYsquare yards in extent.	100%
6.2	Detention and retention basins	Detention and retention basins are substantiallymust be 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 SYsquare yards in extent.	100%
6.3	Drainage systems	All ditches, channels, culverts, piped drainage systems, including pressure or syphon drainage systems must work as designed to carry design flows. Catch basins, inlets, and culverts are substantiallymust be free from debris and obstructions in order to carry the design flows.	2 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 as appropriate.	Annual Annually	Drainage system to carry design flows	100%
6.4	Slopes	CutMaintain cut and fill slopes are maintained at design configuration without slope failures or erosion. ErosionRemove erosion debris is removed from roadway.	2 hours for failures that affect or threaten travelled way-; and 1 month for other issues.	6 months	Visual	Annual Annually	Erosion of materials or slope failures.	0

TP Attachment 500-1 Maintenance Table									
Ref.	Element	Performance Requirement	Repair Response		Inspection	Inspection	Measurement	Target	
			Temporary ¹	Permanent ²	Method	Frequency	Record		
Ninta.									

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A temporary repair response requires a safety remedy or repair that restores the Element at issue to a condition that protects the public and, as necessary, other Elements. A temporary repair response is not necessarily required to have the durability, aesthetic finish, or, to some extent, the full function of the Element as initially designed.
 A permanent repair response requires a remedy or repair that restores the Element at issue to a condition of full functionality, durability and appearance as initially designed.

TP Attachment 500-2 - Project Asset Condition ScorecardIntentionally Left Blank

	A		TP Attachment 500-2 et Condition Scorecard		Formatted: Left: 1", Right: 1", Top: 0.7", Bottom: 0.8", Width: 8.5", Height: 11"	
Maintenance Reference Category	Maintenance Element	Recorded Adjectival	Recorded Numeric Score (use	Recorded	Explanation for Adjectival	
(as shown in TP Attachment 500-1)		Rating (use Table 400-2)	Table 4 00-2)	Category Score	Ratting	
	2.1: Pavement safety hazard					
	2.2: Shoulder/edge drop offs					
	2.3: Delamination of AR-ACFC					
	2.4: Potholes					
	2.5: Base failures					
	2.6: Settlement / heave /distortion					
Roadway Pavement	2.7: Joints					
	2.8: Spalling					
	2.9: Pavement Ride for AC pavement only					
	2.10: Ruts					
	2.11: Cracks					
	2.12: Skid Resistance					
	Project Asset Score					
Maintenance Ma	nager	D	ate			

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Request for Proposals 202 MA 054 H882701C Volume II – Technical Provisions TP Attachment 500-2

1 TP Attachment 500-3 - Landscaping Preventative Maintenance Requireme	
11 Attachment 300-3 - Landscaping i reventative maintenance requireme	nts

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1 STAFF QUALIFICATIONS

1.1 Landscaping Supervisor

- 3 Landscaping Supervisor must be knowledgeable in the area of responsibility and have a
- 4 minimum of 12 months experience in the past 24 months, performing in the same capacity on
- 5 projects of similar size and scope. Supervisor must show continuing education in regards to the
- 6 landscape and irrigation industry (i.e. class and/or seminars). Supervisor must have completed
- 7 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

13 1.2 Irrigation Technician(s)

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

18 1.3 Backflow Prevention Certifiers

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

2 GENERAL PLANT MAINTENANCE

21 2.1 Tree and Plant Growth

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

27 2.2 General Trimming

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

33 2.3 Tree Trimming

- 34 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,
- 38 C. remove crossed limbs,
- 39 D. eliminate growth encroaching on roadway, and
- 40 E. raise the canopy.

- 1 Acceptable practices for pruning include:
- A. Crown cleaning,
- 3 B. crown thinning,
- C. crown raising,
- 5 D. vista pruning, and
- 6 E. crown reduction.
- 7 Unacceptable practices include:
- 8 A. Topping,
- 9 B. lion tailing, and
- 10 C. pollarding.

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2.4 Shrub Trimming

- 12 Shrubs shall be trimmed as necessary to:
- A. facilitate visual inspection of the irrigation system,
- 14 B. remove dead, diseased, or injured wood,
- 15 C. control or direct growth,
 - D. eliminate growth encroaching on roadway, and
- 17 E. raise the canopy as needed.
- 18 No shrubs will be sheared for aesthetic purposes.

19 2.5 Palm Tree Trimming

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

21 3 PLANT REMOVAL/REPLANTING

22 **3.1 Removal**

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

26 3.2 Replacement

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

32 3.3 Potential Survival and Growth

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

- 3 -

35 growth of the replacement plants.

1 4 WEED CONTROL

4.1 Non-Granite Areas/Native Vegetation

- 3 Developer's pesticide technician must be able to identify various wild flowers and desirable
- 4 native grasses versus noxious weeds.
- 5 Native grasses must be cut, as needed, after seed heads have matured and as directed by the
- 6 Project Manager or their Representative.
- 7 Native shrub species will be left to grow in a natural state and will not be trimmed, pruned, or
- 8 removed, unless impeding traffic or as directed by the Project Manager or their Representative.
- 9 Native shrubs must not be allowed to become invasive of one another and form dense thickets.
- 10 In the area around plants, Developer shall maintain free of weeds and grass, either a 5-foot
- 11 radius or the area to the outer edge of the canopy, whichever is greater. A 3-foot radius must be
- 12 maintained free of weeds and grass around the base of signs, delineators, utility poles,
- 13 quardrails, fence lines, cable barriers, and other highway fixtures.
- 14 All annual and perennial weeds within non-granite areas must be treated with an approved
- 15 herbicide before reaching 3 inches in height. All weeds and grasses in expansion joints of paved
- 16 slopes and sidewalks must also be treated with an approved herbicide before reaching 3 inches
- 17 in height.

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

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4.2 Granite Areas

- 23 All granite areas within the project must be treated with an approved, pre-emergent herbicide at
- 24 least once per year. This application will be shown on the annual and monthly schedules. Some
- 25 variability will be allowed for weather conditions.
- The entire granite area is to be maintained free of weeds and grasses. All annual and perennial
- 27 weeds within granite areas will be treated with an approved herbicide before reaching 3 inches
- 28 in height.
- 29 Disposal must be in a legal manner. All disturbed granite and earth must be restored to original
- 30 condition when manual weeding is completed.

4.3 Hardscape Areas

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

5 PESTICIDES AND PESTICIDE APPLICATION

- 35 Developer shall furnish all pesticides, equipment, and labor to provide pest control services.
- 36 Prior to pesticide application, Developer shall provide a listing of all materials and chemicals
- 37 annually at the maintenance meeting. All pesticides used must be labeled for landscape use.
- 38 Restricted use pesticides with an LD 50 number lower than 500 are NOT permitted on this
- 39 Project.
- 40 All pesticides used must be in the original manufacturers marked containers and tank-mixed on
- 41 site. Developer shall provide storage of chemicals at off-site locations, delivering to the work site
- 42 only sufficient equipment and materials to complete daily tasks.

- 1 Developer shall apply all pesticides in strict compliance with the manufacturer's instructions as
- 2 they appear on the label, and as approved by the rules and regulations of the agency issuing
- 3 Developer's pesticide license.
- 4 Developer shall maintain on site the Material Safety Data Sheets (MSDS) and current labels for
- 5 each product used on this contract for ready reference.
- 6 Gallons of water used from the irrigation system supply for spray mix must be recorded on the
- 7 daily work report.

8 6 OTHER PEST CONTROL

- 9 Developer shall control pests within the contracted area. Pests may include, but are not limited
- 10 to mosquitos, ants, bees, rodents, insects, gophers, and other pests which burrow, crawl, fly,
- 11 nest or otherwise reside within the contracted area. Pests which infest plants must be treated
- 12 with an approved pesticide.
- 13 Developer shall take all normal precautions common to the trade and institute proper
- 14 procedures for the control of insects, bees, pests, or disease, including clean-up and removal of
- 15 standing water or other mosquito vectors. Developer shall be responsible for all damages
- 16 resulting from improper procedures or the failure to take normal precautions.
- 17 Developer shall note on the Daily Work Report all pest intrusions by describing the location, the
- 18 pest to be controlled, and the method of control.

19 7 IRRIGATION

7.1 General Irrigation

21 Developer shall:

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- 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.

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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.
- 8 Irrigation systems in the Maintenance Service Limits shall be inspected when and as 9 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	ClenClean 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.			

10 **7.3 Not Used**

7.4 Irrigation Water Distribution

12 **7.4.1 Emitters**

- 13 Emitters must be kept properly positioned for even water distribution within the area of the
- 14 canopy. Check at random to determine the flow rate in gallons per hour during the monthly
- 15 irrigation Inspection. When the emitter shows that the flow rate is twice that of the designed
- 16 flow, the emitter must be replaced by Developer. When the tested emitters have failed, five
- 17 additional emitters must be checked to determine flow rates. When the majority of emitters fail,

- 1 the entire section for the tested valve will be replaced. Developer shall replace all failed emitters
- 2 as part of the Maintenance Services Work.

3 7.4.2 Irrigation Line

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

6 7.4.3 Water Efficiency

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

11 8 REPAIRS TO IRRIGATION SYSTEM

- 12 Developer shall furnish all labor, equipment, pipe, repair parts and kits, and supplies to make
- 13 repairs, replacements, and adjustments to the irrigation systems as part of the irrigation
- 14 maintenance service.
- 15 All replacement parts and installation procedures must be same as original unless otherwise
- 16 approved by the Project Manager's Representative.

17 9 HERBICIDES

18 Developer shall use the herbicides listed in Table 9-1 for weed control. Additional products may

19 be used upon request, evaluation, and approval 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			

20 All herbicides must have an approved dye added to facilitate inspection after application.

- 7 -

1	TP Attachment 500-4 - Photographic Examples of Adjectival Rating System

- 1 -

ADDENDUM #34





Cracking (Unacceptable)

- 3 -



Cracking (Unacceptable)

- 4 -



Delamination (Unacceptable)

- 5 -

AR-ACFC Rating Excellent



Pavement





AR-ACFC Rating Good Pavement



Average

- 9 -



Poor



AR-ACFC Rating Acceptable Pavement

AR-ACFC Rating
Unacceptable Pavement

3 4 5





AR-ACFC Rating Unacceptable Pavement



AR-ACFC Rating Unacceptable Pavement



AR-ACFC Rating
Unacceptable Pavement