SPECIAL INTEREST GROUP COMMENTS AND RESPONSES

Code	Comment Document

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The Shanker Law Firm, PLC

Toll Free: (877) 848-9300
Facsimile: (480) 838-9433
www.shankerlaw.net

HOWARD M. SHANKER
ADMITTED IN ARIZONA, WASHINGTON, D.C., PENNSYLVANIA (INACTIVE); HOPI AND PASCUA YAQUI TRIBAL COURTS; U.S. COURT OF FEDERAL CLAIMS; NINTH CIRCUIT; FEDERAL CIRCUIT COURT OF APPEALS; AND U.S. SUPREME COURT

TAMERA C. SHANKER
ADMITTED IN ARIZONA; HOPI, PASCUA YAQUI, AND TOHONO O'ODHAM TRIBAL COURTS; AZ FEDERAL DISTRICT COURT; NINTH CIRCUIT; AND U.S. SUPREME COURT

November 25, 2014

VIA HAND-DELIVERY

Arizona Dep't of Transportation
Environmental Planning Group
1655 W. Jackson Street
Phoenix, Arizona 85007
Attn: Brock Barnhart

Re: Comments on the Loop 202 South Mountain Freeway Final Environmental Impact Statement ("FEIS")

Dear Mr. Barnhart:

These comments on the FEIS, including this letter of transmission and all of the reports/attachments hereto, are submitted by and on behalf of:

Protecting Arizona Resources and Children, Inc. ("PARC")
The Foothills Community Association
The Foothills Club West Community Association
The Lakewood Community Association
The Calabrea Community Association
Don't Waste Arizona, Inc. ("DWAZ")
Gila River Alliance for a Clean Environment ("GRACE")
Gila River Environmental Youth ("GREY")
Patricia Lawlis; Timothy Lank; Chad Blostone; Michael Hinz;
Chris Boettcher; Hugh Mason; Patti Mason; Nicolai Kuminoff; Scott Herman
Phoenix Mountains Preservation Council ("PMPC")[1]

Commenters can be reached through counsel:

Howard M. Shanker
The Shanker Law Firm, PLC
700 E. Baseline Rd., Bldg. B
Tempe, Arizona 85283
(480) 838-9300

[1] PMPC has also filed comments to the FEIS under separate cover, which are incorporated herein by this reference.

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1		Introductory information.

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The National Environmental Policy Act ("NEPA") – the law that mandates the preparation of an Environmental Impact Statement ("EIS") in the instant case – "recognize[es] the profound impact of man's activity on the interrelations of all components of the natural environment" and sets out "to create and maintain conditions under which man and nature can exist in productive harmony." 42 U.S.C. § 4331(a). Clearly ADOT neither recognized, nor aspired to, this goal in the preparation of its NEPA documents for the South Mountain/Loop 202 Freeway ("SMF").

A NEPA analysis must be "be taken objectively and in good faith, not as an exercise in form over substance, and not as a subterfuge designed to rationalize a decision already made." *Metcalf v. Daley*, 214 F.3d, 1135,1142 (9th Cir. 2000). ADOT has been buying land in the right-of-way for the "preferred alternative" for over a decade. They have designed/constructed interchanges to match up with the "preferred alternative." ADOT has had a sign posted for over a decade identifying the "preferred alternative" as the future right-of-way for the SMF.

(Sign at the intersection of Pecos Road and 24th Street for well over a decade.)

ADOT, in its NEPA documents, makes clear that the "preferred alternative" was the preordained route that was considered in regional and municipal planning. They even

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2	**Alternatives**	As noted in text on page 3-53 of the Final Environmental Impact Statement, the Arizona Department of Transportation began acquiring land for the original alignment in 1988. Between 1988 and 2001, the Arizona Department of Transportation acquired approximately 293 acres. Most of this land (258 acres) is located in the Eastern Section along Pecos Road. In 2006, the Arizona Department of Transportation began protective and hardship land acquisition in the alignment right-of-way footprint for the W59 and E1 Alternatives. Between 2006 and October 2013, the Arizona Department of Transportation purchased 326 acres (303 in the Western Section and 23 in the Eastern Section). The comment suggests the environmental impact statement process was biased by a history of property acquisitions within the Study Area. More specifically, properties falling within the limits of the Preferred Alternative, as identified in the Final Environmental Impact Statement, were targeted for acquisition. Land acquisition and relocation assistance services for the project are available to all individuals in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended. The implementing regulations for federally funded highway projects are 49 Code of Federal Regulations Part 24. The process for hardship and advanced acquisitions is explained in text on page 4-50 of the Final Environmental Impact Statement. The comment infers that by taking such action, the objective equal consideration of the alternatives studied in detail in the Draft and Final Environmental Impact Statements is tainted. Advanced acquisitions in parallel to a National Environmental Policy Act environmental determination process is not unprecedented and is common practice. In this case, property acquisitions by the Arizona Department of Transportation for purposes of implementing the freeway are done at risk as communicated to the agency by the Federal Highway Administration. If another action alternative had been ultimately selected, the agency would have to place the acquired properties on the market for sale and purchase. The Arizona Department of Transportation attempts to balance the risk against its mission of timely delivery of transportation infrastructure to the traveling public. Further, Federal Highway Administration regulations do not allow the ownership of right-of-way to be a factor in the decision regarding the selection of an alternative.

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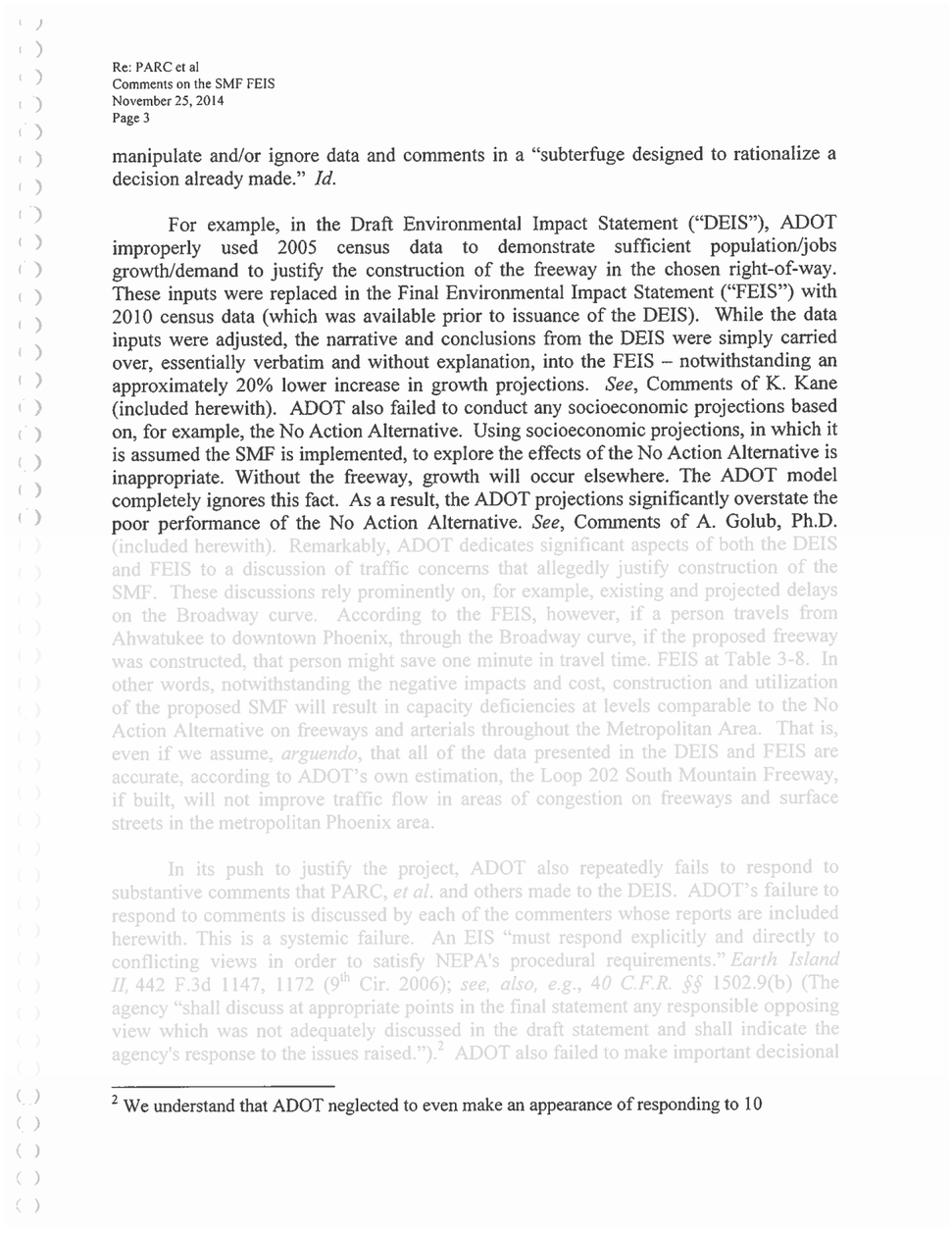

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manipulate and/or ignore data and comments in a "subterfuge designed to rationalize a decision already made." *Id.*

3

For example, in the Draft Environmental Impact Statement ("DEIS"), ADOT improperly used 2005 census data to demonstrate sufficient population/jobs growth/demand to justify the construction of the freeway in the chosen right-of-way. These inputs were replaced in the Final Environmental Impact Statement ("FEIS") with 2010 census data (which was available prior to issuance of the DEIS). While the data inputs were adjusted, the narrative and conclusions from the DEIS were simply carried over, essentially verbatim and without explanation, into the FEIS – notwithstanding an approximately 20% lower increase in growth projections. *See*, Comments of K. Kane (included herewith). ADOT also failed to conduct any socioeconomic projections based on, for example, the No Action Alternative. Using socioeconomic projections, in which it is assumed the SMF is implemented, to explore the effects of the No Action Alternative is inappropriate. Without the freeway, growth will occur elsewhere. The ADOT model completely ignores this fact. As a result, the ADOT projections significantly overstate the poor performance of the No Action Alternative. *See*, Comments of A. Golub, Ph.D. (included herewith). Remarkably, ADOT dedicates significant aspects of both the DEIS and FEIS to a discussion of traffic concerns that allegedly justify construction of the SMF. These discussions rely prominently on, for example, existing and projected delays on the Broadway curve. According to the FEIS, however, if a person travels from Ahwatukee to downtown Phoenix, through the Broadway curve, if the proposed freeway was constructed, that person might save one minute in travel time. FEIS at Table 3-8. In other words, notwithstanding the negative impacts and cost, construction and utilization of the proposed SMF will result in capacity deficiencies at levels comparable to the No Action Alternative on freeways and arterials throughout the Metropolitan Area. That is, even if we assume, *arguendo*, that all of the data presented in the DEIS and FEIS are accurate, according to ADOT's own estimation, the Loop 202 South Mountain Freeway, if built, will not improve traffic flow in areas of congestion on freeways and surface streets in the metropolitan Phoenix area.

4

In its push to justify the project, ADOT also repeatedly fails to respond to substantive comments that PARC, *et al*. and others made to the DEIS. ADOT's failure to respond to comments is discussed by each of the commenters whose reports are included herewith. This is a systemic failure. An EIS "must respond explicitly and directly to conflicting views in order to satisfy NEPA's procedural requirements." *Earth Island II,* 442 F.3d 1147, 1172 (9th Cir. 2006); *see, also, e.g.*, *40 C.F.R. §§* 1502.9(b) (The agency "shall discuss at appropriate points in the final statement any responsible opposing view which was not adequately discussed in the draft statement and shall indicate the agency's response to the issues raised.").[2] ADOT also failed to make important decisional

[2] We understand that ADOT neglected to even make an appearance of responding to 10

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3	**Purpose and Need**	The analyses in the Draft Environmental Impact Statement used socioeconomic and traffic projections at the regional analysis zone and traffic analysis zone levels. At the time of publication of the Draft Environmental Impact Statement, Census 2010-based socioeconomic data at the regional analysis zone and traffic analysis zone levels had not been adopted by the Maricopa Association of Governments and were not available to the project team. Therefore, the data used in the Draft Environmental Impact Statement were the most appropriate information available. The Maricopa Association of Governments approved new population, employment, and housing projections in June 2013, and the project team obtained new traffic projections based on the approved socioeconomic projections. The new data are presented in the Final Environmental Impact Statement beginning on page 1-11. The purpose and need and analysis of alternatives were updated and reevaluated using these new socioeconomic projections and corresponding projections related to regional traffic. While new projections based on the 2010 Census showed a lower projected population and vehicle miles traveled in 2035 than the previous projections, the conclusions reached in the Draft Environmental Impact Statement were validated in the Final Environmental Impact Statement (see Chapter 1, *Purpose and Need*, and Chapter 3, *Alternatives*). The traffic analysis demonstrated that the project is needed today and will continue to be needed into the future (see Final Environmental Impact Statement beginning on page 1-13). The traffic analysis used the Maricopa Association of Governments travel demand model (TransCAD software platform), as certified by the Federal Highway Administration and reviewed by the U.S. Environmental Protection Agency for air quality conformity (see Final Environmental Impact Statement page 3-27).
4	**Alternatives, No-Action Alternative**	The Arizona Department of Transportation and Federal Highway Administration appreciate the suggestion to use alternative methods to describe the No-Action Alternative and the possibility that future impacts could be different than those presented in the No-Action Alternative analysis in the Final Environmental Impact Statement (if these alternative methods were used). The comment assumes land use patterns, growth rates, and induced travel patterns would be different (from what is described in the Final Environmental Impact Statement) if the freeway were not in place. In essence, the comment is suggesting that the description of the No-Action Alternative (and its related impacts) in the Final Environmental Impact Statement is misleading. The Arizona Department of Transportation and Federal Highway Administration agree that scenario planning methods have application in some instances; however, in this case, the Arizona Department of Transportation and Federal Highway Administration believe that the methods used to describe the No-Action Alternative as presented in the Draft and Final Environmental Impact Statements are appropriate. At a basic level, the National Environmental Policy Act requires consideration of reasonable alternatives—meaning the No-Action Alternative should be reasonable as well. Speculation about what an alternative and the conditions surrounding the alternative in the future would look like is not appropriate; the effects of alternatives must be reasonably foreseeable. Under this premise, the description of the No-Action Alternative in the Final Environmental Impact Statement is appropriate. The description of this alternative is presented in the section, *Alternatives Studied in Detail*, in the Final Environmental Impact Statement on page 3-40. Its features include: not extending State Route 202L west of Interstate 10 (Maricopa Freeway), assuming all other projects in the *Regional*

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4 (cont.)		*Transportation Plan* are completed, and using population, employment, and housing projections officially approved by the Maricopa Association of Governments. The Arizona Department of Transportation and Federal Highway Administration believe that the depiction of impacts caused by the No-Action Alternative are, therefore, appropriate and correctly presented throughout the Final Environmental Impact Statement. In defining the transportation problem in Chapter 1, *Purpose and Need*, of the Final Environmental Impact Statement, the analysis illustrates the severity of the breakdown in the transportation network if no action were taken in the area. This is further supported by the impact analyses presented throughout Chapter 4, *Affected Environment, Environmental Consequences, and Mitigation*, of the Final Environmental Impact Statement. To summarize, durations and physical lengths of congestion would worsen, travel times would become longer over the same distances, congestion would continue to spill over into the arterial street network, and monetary costs to the State and its residents would increase. Further justification of why the No-Action Alternative description in the Final Environmental Impact Statement is most appropriate includes: · At certain points in the Phoenix metropolitan area's history, growth rates prior to planning for the region's freeway system exceeded growth rates after planning for and construction of the regional freeway system began. Chapter 1, *Purpose and Need*, and the sections, *Land Use* and *Economic Impacts*, in Chapter 4, establish cost of living, livability, mild climate, technological advancement (affordable air conditioning), employment opportunities, a development-oriented regulatory environment, and key location for industry as primary growth drivers in the Phoenix metropolitan area. Therefore, transportation is not the sole driver of growth. · As established in the Final Environmental Impact Statement, "pre-freeway" land use planning mimics "post-freeway" land use planning. In 1979, the *Phoenix Concept Plan 2000* was adopted by the City of Phoenix. The plan called for 25 Phoenix urban villages. Of those, it established 9 villages with instructions for village planning committees to prepare 25-year concept plans. The Laveen and Estrella Villages were included in the list of 25 suggested villages, although they were not among the 9 villages adopted in the initial plan. However, the intent was that Laveen and Estrella Villages would be developed at a later point in time. The freeway system considered in the plan included only Interstate 10, Interstate 17, and U.S. Route 60—it did not include the regional freeway system. The *Phoenix Concept Plan 2000* was replaced by the Phoenix *General Plan, 1985–2000*. The resolution adopting the *General Plan* directed the village planning committees to continue in the City of Phoenix's planning process. The resolution included Laveen and Estrella as villages. Planning for the Laveen and Estrella Villages was completed around the same time as the initial planning for the regional freeway system, including the South Mountain Freeway. Therefore, the land use planning and transportation planning were conducted in parallel, not with one effort depending on the other. To conclude that land use patterns would look different than they do today (as inferred in the U.S. Environmental Protection Agency's comment) is not consistent with past planning patterns. It is more reasonable to argue that the City of Phoenix would have continued to plan for the urban village core concept as has been envisioned since the late 1970s.

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		In this case, scenario planning would be speculative for the following reasons: · Factors affecting growth vary (see above), and to assume only transportation as a growth driver would be speculative. · Continuation of "pre-freeway" historical land use planning patterns is reasonable to expect. The section, *Land Use*, documents the growth scenario under the No-Action Alternative and notes that the area would develop in a similar fashion with or without the project. This is supported by: › The Study Area already has good connecting transportation infrastructure (although congested) to support continued development without the freeway. It is also close to downtown Phoenix. Existing infrastructure plus location would result in growth without the freeway as described in the *Purpose and Need* chapter. The freeway is not opening up the area to development because existing roads (for example, Pecos Road, Baseline Road, and 51st Avenue) provide access. › To date, approximately 67 percent of the land in the Study Area has already been developed in accordance with the City of Phoenix's *General Plan* and zoning ordinance. It is assumed that such development would not be torn down and land uses redistributed if the freeway were not built. As documented in the section, *Land Use*, in Chapter 4 of the Final Environmental Impact Statement, agricultural (22 percent) and open space (11 percent) land uses in the Study Area represent only 33 percent of land area (it should be noted the 11 percent of open space is mostly not developable because of topographic challenges and floodplain constraints), while the remainder of the area is in some form of "built" land use. Distribution of zoning further supports the conclusion—12 percent of the Study Area is zoned for agricultural and open space uses while 88 percent is zoned for other more intensive land uses. › Factors contributing to historical and projected growth are well-documented in the Final Environmental Impact Statement in Chapter 1, *Purpose and Need*, and in the Chapter 4 sections, *Land Use* and *Economic Impacts*. The freeway will be built in an area planned for urban growth as established in local jurisdictions' land use planning activities for at least the last 25 years (see the section, *Induced Growth*, beginning on page 4-182 of the Final Environmental Impact Statement). › The sections, *Induced Travel* and *Induced Growth*, beginning on pages 4-179 and 4-182, respectively, of the Final Environmental Impact Statement, establish that the freeway would contribute to minimal induced travel demand (which has, to a large degree, been accounted for in the Maricopa Association of Governments' model). › Section 93.110 of the U.S. Environmental Protection Agency's conformity rule requires that population and employment projections (which establish growth rates and distribution) used in a conformity analysis be the most recent estimates that have been officially approved by the Maricopa Association of Governments (as the metropolitan planning organization for the Maricopa County nonattainment and maintenance areas). In accordance with the Governor's Executive Order 2011-04, county-level population projections used for all State agency planning purposes were updated by the Arizona Department of Administration in December 2012, based on the 2010 U.S. Census. To use projections other than the approved demographic trends would be inconsistent with the projections required for use in the transportation conformity assessment. Even if one could argue the only reason the development has occurred as it has is because of the planned freeway (which is not the case—see above) for the last 30 years (in other words, if the freeway had not been planned, development would somehow have been different), the argument is irrelevant. Existing development is

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manipulate and/or ignore data and comments in a "subterfuge designed to rationalize a decision already made." *Id.*

For example, in the Draft Environmental Impact Statement ("DEIS"), ADOT improperly used 2005 census data to demonstrate sufficient population/jobs growth/demand to justify the construction of the freeway in the chosen right-of-way. These inputs were replaced in the Final Environmental Impact Statement ("FEIS") with 2010 census data (which was available prior to issuance of the DEIS). While the data inputs were adjusted, the narrative and conclusions from the DEIS were simply carried over, essentially verbatim and without explanation, into the FEIS – notwithstanding an approximately 20% lower increase in growth projections. *See*, Comments of K. Kane (included herewith). ADOT also failed to conduct any socioeconomic projections based on, for example, the No Action Alternative. Using socioeconomic projections, in which it is assumed the SMF is implemented, to explore the effects of the No Action Alternative is inappropriate. Without the freeway, growth will occur elsewhere. The ADOT model completely ignores this fact. As a result, the ADOT projections significantly overstate the poor performance of the No Action Alternative. *See*, Comments of A. Golub, Ph.D. (included herewith). Remarkably, ADOT dedicates significant aspects of both the DEIS and FEIS to a discussion of traffic concerns that allegedly justify construction of the SMF. These discussions rely prominently on, for example, existing and projected delays on the Broadway curve. According to the FEIS, however, if a person travels from Ahwatukee to downtown Phoenix, through the Broadway curve, if the proposed freeway was constructed, that person might save one minute in travel time. FEIS at Table 3-8. In other words, notwithstanding the negative impacts and cost, construction and utilization of the proposed SMF will result in capacity deficiencies at levels comparable to the No Action Alternative on freeways and arterials throughout the Metropolitan Area. That is, even if we assume, *arguendo*, that all of the data presented in the DEIS and FEIS are accurate, according to ADOT's own estimation, the Loop 202 South Mountain Freeway, if built, will not improve traffic flow in areas of congestion on freeways and surface streets in the metropolitan Phoenix area.

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4 (cont.)		now there and, therefore, it is reasonable to assume that the land use distribution and related development will be there in the future The analysis documented in the Final Environmental Impact Statement leads to the conclusion that the No-Action Alternative and action alternative land uses would be similar, and thus, no "scenario planning" is required. Scenario planning could have application if the area was not developed, but the manner in which the No-Action Alternative was determined and presented in the Final Environmental Impact Statement is "state-of-the-practice." Defining the No-Action Alternative as including all projected socioeconomic growth and planned transportation projects in the *Regional Transportation Plan* except the proposed action is common practice. The approach taken in the Final Environmental Impact Statement has standard application in the transportation industry. In Arizona, this method to describe the No-Action Alternative has been commonplace in National Environmental Policy Act documents dating back to at least 1990. Further, the environmental impact statements for Legacy Parkway and Mountain View Corridor in Utah had a similar approach of using local land use plans, growth projections, and interviews with City representatives to determine whether the No-Action Alternative land use would be different than with the proposed action. All of these projects were in similar high-growth regions, and the conclusions were that the areas would develop with or without the project, although the timing may change. The No-Action Alternative as defined in the Final Environmental Impact Statement is appropriate. It satisfies reasonableness, withstands a hard look, and was fully disclosed.
5	**Purpose and Need**	The comparison of traffic operational characteristics between the action alternative and the No-Action Alternative is presented in the Final Environmental Impact Statement, beginning on page 3-27. The analysis shows that the action alternative would: · reduce overall traffic on the arterial street system (see Figures 3-12 and 3-13) · optimize travel on the region's freeway system (see Figure 3-12) · reduce the capacity deficiency to levels better than experienced today (see Figures 1-12 and 3-14) · reduce the duration of level of service E or F conditions in key areas of the region's freeway system (see Figure 3-15) · improve travel times on trips within the Study Area and across the region (see Figure 3-17 and Table 3-8) · provide improved regional mobility for areas projected to experience growth in the next 25 years (see Figures 1-7 and 3-18) When all of this is considered in the realm of travel time savings for motorists in the region, the user benefits approximate $200 million per year (see Table 4-27).
6	**National Environmental Policy Act**	The Federal Highway Administration and the Arizona Department of Transportation carefully considered all comments received on the Draft Environmental Impact Statement and developed thoughtful and complete responses to those comments as documented in the Final Environmental Impact Statement and Errata. Specific comments will be addressed in the later pages of responses.
7	**National Environmental Policy Act**	The Federal Highway Administration and the Arizona Department of Transportation went to great lengths to fulfill any and all requests for information received in a timely manner. Specific comments will be addressed in the later pages of responses.

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data available for public review during the comment processes. *See, e.g.*, Comments of H. Basmaciyan, P.E. (included herewith). NEPA requires that the agency's "data and conclusions" be provided to the public for timely review. *Oregon Natural Desert Ass'n v. BLM*, 625 F.3d 1092, 1099 (9th Cir. 2008).

8

Federal regulations require that an EIS "rigorously explore and objectively evaluate all reasonable alternatives." 40 C.F.R. § 1502.14. ADOT, however, considers only one action alternative for the eastern portion of the project. Even if we assume, *arguendo*, that the eastern and western segments of the freeway were not preordained, ADOT's refusal to consider viable alternatives is yet another existential failure in the process otherwise required by law. ADOT rejects, for example, any light rail or commuter train alternative from detailed consideration because there are no logical termini on the preferred right-of-way. If, however, a light rail or commuter train alternative was considered along the existing I-10 right-of-way, it could have more of an impact on current and projected traffic conditions than the preferred alternative. In our comments on the DEIS (and reiterated in his report included herewith), traffic engineer H. Basmaciyan, P.E., proposed a number of alternatives, including a "hybrid" alternative that ADOT simply rejected without any consideration. The Gila River Indian Community proposed an eastern alignment north of South Mountain that would avoid impacts to South Mountain. These proposals were not rejected on their merits, rather ADOT simply refused to consider them. ADOT even refused to consider, without adequate explanation, a depressed freeway design along the preferred alternative route. *See*, Comments of C. Garrett, P.HGW (included herewith). ADOT similarly failed to give adequate consideration to the No Build Alternative.

This refusal to consider alternatives is not just a violation of NEPA. Section 4(f) of the Transportation Act prohibits the Secretary of Transportation from approving any project that requires the use of parkland (South Mountain) unless: (1) there is no prudent and feasible alternative to the use of the site; and (2) all possible planning has been taken to minimize harm to the site. 49 U.S.C. § 303(c). ADOT cannot demonstrate that it has conducted the thorough and probing analysis required by Section 4(f) and that it has met the above requisite elements. There are, as discussed in the comments included herewith, other aspects of Section 4(f) that ADOT has not met.

Indeed, ADOT essentially fails to adequately address all the issues/concerns we raised in our comments to the DEIS. Dr. Thurston reiterates his concerns with ADOT's refusal/failure to adequately consider potential health impacts associated with the project,

commenters, including the Sierra Club. We further understand that ADOT intends to issue some sort of errata. It would appear, however, that none of these neglected comments were considered in the issuance of the FEIS – as required by law. It also appears unlikely that any of these comments will be utilized to inform the agency's analysis.

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8	**Alternatives**	In accordance with the National Environmental Policy Act, a range of reasonable action alternatives to carry forward for further analysis was determined through application of multidisciplinary criteria in a logical, step-wise progression. Alternatives were not disposed of or dismissed without a thorough evaluation using the multidisciplinary criteria outlined in the alternatives development and screening process presented in Chapter 3 of the Draft Environmental Impact Statement. This process, which occurred early in the environmental impact statement process, was revisited and validated in the Final Environmental Impact Statement (see Figure 3-2 on page 3-4). Several action alternatives were subject to the alternatives development and screening process, not just the E1 Alternative and alternatives located on the Gila River Indian Community (Figure 3-6 on page 3-10 of the Final Environmental Impact Statement illustrates a representation of such alternatives). Alternatives that bisected Ahwatukee Foothills Village were eliminated because of their extraordinary community impacts. Alternatives located north of the mountains to avoid the protected resource would not meet the purpose and need of the project and would create impacts of extraordinary magnitude (see Table 3-5 on page 3-12 of the Final Environmental Impact Statement). Alternatives located south of the mountains would pass through Gila River Indian Community land. Any alternative on Gila River Indian Community land must consider tribal sovereignty. Tribal sovereignty is based on the inherent authority of Native American Tribes to govern themselves. While this notion of sovereignty is manifested in many areas, generally Native American land is held in trust by the United States. Native American communities have the authority to regulate land uses and activities on their land. States have very limited authority over activities within tribal land (see page 2-1 of the Final Environmental Impact Statement). From a practical standpoint, this means that the Arizona Department of Transportation and Federal Highway Administration do not have the authority to survey tribal land, make land use (including transportation) determinations directly affecting tribal land, or condemn tribal land for public benefit through an eminent domain process. The Gila River Indian Community has not granted permission to develop alternatives on its land (see Final Environmental Impact Statement page 3-25). Placing an alternative even farther south of the Gila River Indian Community land would not satisfy the purpose and need of the project. Therefore, there is no prudent and feasible alternative to avoid use of the mountains, and the E1 Alternative is the only action alternative available. The study has considered a variety of transportation modes: transportation system management/transportation demand management, mass transit (commuter rail, light rail, expanded bus service), arterial street improvements, land use controls, new freeways, and a No-Action Alternative. These alternatives alone or in combination would have limited effectiveness in reducing overall traffic congestion in the Study Area and, therefore, would not meet the purpose and need criteria; specifically, they would not adequately address projected capacity and mobility needs of the region. Mass transit modes such as light rail and an expanded bus system were reexamined in the Final Environmental Impact Statement and were eliminated from further study because even better-than-planned performance of transit would not adequately address the projected 2035 travel demand (see Final Environmental Impact Statement page 3-4). For example, the average daily ridership for the light rail system connecting downtown Phoenix and the Arizona State University campus was approximately 44,000 in 2014. This

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8 (cont.)		is only approximately 25 percent of the total daily vehicles projected to use the freeway in 2035. Two high-capacity transit corridors are being considered near the western and eastern extents of the Study Area, but such extensions would not adequately address the projected 2035 travel demand. A freeway/light rail combination would integrate a freeway and light rail system into a single transportation corridor (see Final Environmental Impact Statement page 3-6). Such a freeway/light rail system is planned at two locations: along Interstate 10 (Papago Freeway) and along State Route 51 (Piestewa Freeway). These two segments would connect to the light rail system currently in operation. With these two freeway/light rail segments already in planning stages, members of the public identified a similar opportunity along the freeway. Most freeway/light rail combinations, however, radiate from a central travel demand generator such as a business district or airport. No such systems are known to follow a circumferential route, as the South Mountain Freeway will. Furthermore, the additional right-of-way needed for light rail (generally, a 50-foot-wide corridor) would have substantial community impacts such as displaced residences and businesses and parkland impacts. Therefore, the light rail alternative and light rail and freeway combination would not be prudent and were eliminated from further study. The freeway mode was determined to be an appropriate response to the project's purpose and need. Based on the comment received from the Gila River Indian Community, the proposed alternative (U.S. Route 60 Extension to Interstate 10 [Papago Freeway]) was considered in the alternative screening process presented in the Final Environmental Impact Statement (see text beginning on page 3-7). The U.S. Route 60 Extension to Interstate 10 (Papago Freeway) would result in similar benefits and impacts as the U.S. Route 60 Extension to Interstate 17 and Interstate 10 Spur, which were presented in the Draft Environmental Impact Statement. The project team subjected the U.S. Route 60 Extension to Interstate 10 (Papago Freeway) to the screening process and criteria applied to other alternatives as described beginning on page 3-3 of the Final Environmental Impact Statement. The project team found the alternative would cause substantial traffic performance impacts on Interstate 10 (Maricopa Freeway) and U.S. Route 60 (Superstition Freeway); would not address the needs based on regional travel demand and existing and projected transportation system deficiencies (which were updated with Census 2010-based socioeconomic data presented in the Final Environmental Impact Statement beginning on page 1-11); would result in thousands of residential displacements and over one hundred business displacements; would adversely affect the communities in the South Mountain Village by constructing a barrier between schools, parks, and residences; and would not be consistent with local or regional planning. For these reasons, the U.S. Route 60 Extension to Interstate 10 (Papago Freeway) was eliminated from detailed study (see Table 3-5 on page 3-12 of the Final Environmental Impact Statement). A partial freeway from Interstate 10 (Papago Freeway) to Laveen Village is not reasonable because it would not meet the freeway's identified purpose and need. Construction of Carver Road between 59th and 51st avenues is included in the City of Phoenix *General Plan* transportation element. Improving 51st Avenue between Carver Road and Pecos Road would require permission of the Gila River Indian Community. Based on previous comments from the Gila River Indian Community related to pass-through traffic using 51st Avenue, the Gila River Indian Community would not support any activities that would increase unwanted traffic through its communities. Extending Pecos Road to 51st Avenue would not be feasible because

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Code	Comment Document

Code	Issue	Response
8 (cont.)		a portion would be located on Gila River Indian Community land, and the Gila River Indian Community has not provided permission to construct a facility on its land. Based on previous comments from the Gila River Indian Community related to pass-through traffic using 51st Avenue, the Gila River Indian Community would not support any activities that would increase unwanted traffic through its communities. Improvements to the arterial street system in the southwestern area (Laveen and Estrella Villages) are planned in the City of Phoenix *General Plan*. For these reasons, alternatives similar to the hybrid alternative proposed in the comment were eliminated from detailed study. Depressing the Pecos Road sections would entail installation of pump stations to drain the main line freeway. A depressed freeway would also need a drainage channel to capture the off-site flows to prevent their entering the freeway. Pump stations were not used because of the high cost of construction and maintenance needed for their operation. The recommended freeway configuration would have the E1 Alternative aboveground and the existing culverts extending to pass the drainage under the freeway. Pecos Road currently has numerous existing culvert crossings. Depressing the freeway in this area would eliminate the existing culvert crossings and potentially have adverse flooding impacts on adjacent properties. Extending the existing culverts or upsizing the culverts would maintain or improve drainage flows. This would ensure that there would be no adverse flooding impacts on adjacent properties. (See Final Environmental Impact Statement pages 3-15 and 3-18.) To reduce impacts by depressing the freeway in the Eastern Section, the Arizona Department of Transportation would: · need to spend an additional $400 million for right-of-way acquisition and construction · displace an additional 300 residences · maintain additional pump stations and detention basins for the life of the freeway · would still have noise-related impacts requiring mitigation (i.e., noise barriers and their associated costs and visual impacts) Because the below-ground option would result in substantially greater costs and residential displacements, this option was eliminated from further study. As stated on page 3-40 of the Final Environmental Impact Statement, the No-Action Alternative would not satisfy the purpose and need of the freeway because it would result in further difficulty in gaining access to adjacent land uses, increased difficulty in gaining access to Interstate and regional freeway systems from the local arterial street network, increased levels of congestion-related impacts, continued degradation in performance of regional freeway-dependent transit services, increased trip times, and higher user costs. Further, the No-Action Alternative would be inconsistent with Maricopa Association of Governments' and local jurisdictions' long-range planning and policies. The No-Action Alternative was included in the Draft and Final Environmental Impact Statements for detailed study to compare impacts of the action alternatives with the consequences of doing nothing (as impacts can result from choosing to do nothing). The impacts associated with the No-Action Alternative are discussed in each section of Chapter 4, *Affected Environment, Environmental Consequences, and Mitigation*, in the Final Environmental Impact Statement. These impacts are also summarized in Table S-3 on page S-10 of the *Summary* chapter of the Final Environmental Impact Statement.

Code	Comment Document

data available for public review during the comment processes. *See, e.g.*, Comments of H. Basmaciyan, P.E. (included herewith). NEPA requires that the agency's "data and conclusions" be provided to the public for timely review. *Oregon Natural Desert Ass'n v. BLM*, 625 F.3d 1092, 1099 (9th Cir. 2008).

Federal regulations require that an EIS "rigorously explore and objectively evaluate all reasonable alternatives." 40 C.F.R. § 1502.14. ADOT, however, considers only one action alternative for the eastern portion of the project. Even if we assume, *arguendo*, that the eastern and western segments of the freeway were not preordained, ADOT's refusal to consider viable alternatives is yet another existential failure in the process otherwise required by law. ADOT rejects, for example, any light rail or commuter train alternative from detailed consideration because there are no logical termini on the preferred right-of-way. If, however, a light rail or commuter train alternative was considered along the existing I-10 right-of-way, it could have more of an impact on current and projected traffic conditions than the preferred alternative. In our comments on the DEIS (and reiterated in his report included herewith), traffic engineer H. Basmaciyan, P.E., proposed a number of alternatives, including a "hybrid" alternative that ADOT simply rejected without any consideration. The Gila River Indian Community proposed an eastern alignment north of South Mountain that would avoid impacts to South Mountain. These proposals were not rejected on their merits, rather ADOT simply refused to consider them. ADOT even refused to consider, without adequate explanation, a depressed freeway design along the preferred alternative route. *See*, Comments of C. Garrett, P.HGW (included herewith). ADOT similarly failed to give adequate consideration to the No Build Alternative.

9 This refusal to consider alternatives is not just a violation of NEPA. Section 4(f) of the Transportation Act prohibits the Secretary of Transportation from approving any project that requires the use of parkland (South Mountain) unless: (1) there is no prudent and feasible alternative to the use of the site; and (2) all possible planning has been taken to minimize harm to the site. 49 U.S.C. § 303(c). ADOT cannot demonstrate that it has conducted the thorough and probing analysis required by Section 4(f) and that it has met the above requisite elements. There are, as discussed in the comments included herewith, other aspects of Section 4(f) that ADOT has not met.

10 Indeed, ADOT essentially fails to adequately address all the issues/concerns we raised in our comments to the DEIS. Dr. Thurston reiterates his concerns with ADOT's refusal/failure to adequately consider potential health impacts associated with the project,

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commenters, including the Sierra Club. We further understand that ADOT intends to issue some sort of errata. It would appear, however, that none of these neglected comments were considered in the issuance of the FEIS – as required by law. It also appears unlikely that any of these comments will be utilized to inform the agency's analysis.

Code	Issue	Response
9	**Alternatives**	If feasible, avoidance of Section 4(f) resources is always the Federal Highway Administration and Arizona Department of Transportation's first option. As summarized in Figure 5-2 on page 5-4 of the Final Environmental Impact Statement, numerous alignment adjustments were made to avoid use of existing and planned Section 4(f) resources. As discussed on page 5-18 of the Final Environmental Impact Statement, many alternatives were examined to avoid the use of the South Mountains; however, none of these alternatives are prudent and feasible. The Department of the Interior reviewed the Final Environmental Impact Statement and commented, "The Department agrees that the South Mountain Park and Preserve (SMPP) is a Land and Water Conservation Fund (LWCF) assisted site that will be directly impacted by the subject project. These documents assess the direct use of park land for freeway purposes to be 31.3 acres. We agree with the conclusions stated. We note that the "*Measures to Minimize Harm*" on the Section 4(f) Statement pages 5-23, 5-24, and 5-25 have annotated a commitment to provide replacement land for the converted park land. The Department concurs with the assessment of the impacts to the LWCF-assisted resource and acknowledges the mitigation commitment." The complete letter can be found in page A5 of this Appendix A.
10	**Health Assessment**	The analyses for carbon monoxide and particulate matter (PM_{10}) indicated that concentrations for these pollutants will be in compliance with (or below) the U.S. Environmental Protection Agency's health-based standards for these pollutants. As explained in the Final Environmental Impact Statement, the Federal Highway Administration does not conduct comparable analysis for mobile source air toxic pollutants, in part because the U.S. Environmental Protection Agency's health risk guidelines for these pollutants are based on 70-year exposure, and it is extremely unlikely that anyone would be at a fixed located near the project for 70 continuous years. Instead, the Federal Highway Administration conducted a mobile source air toxic emissions analysis for the area affected by the project, and found that emissions in the project design year will be roughly 80 percent lower than current emissions, and that the difference between building and not building the project is only about 1 percent. Emissions will increase in the immediate vicinity of the project corridor if the project is built; to address this, the Final Environmental Impact Statement includes a summary of past health risk studies for similar projects, all of which identified very low health risk, well below the U.S. Environmental Protection Agency's "Action Level" for addressing risk. Responses to specific comments are provided on the following pages.

Code	Comment Document

even though the U.S. EPA recommended that ADOT do a Health Assessment. *See*, Comments of G. Thurston, Sc.D. (included herewith). In a related commentary, Richard Haddow expands on his prior discussion of ADOT's manipulation and misapplication of air modeling techniques/data to support construction of the project. *See*, Comments of R. Haddow (included herewith); *see, also*, Ex. 1 (Resolutions of the Tempe Union High School District and the Kyrene Elementary School District opposing construction of the SMF). ADOT also failed to comply with its obligations under Section 106 of the National Historic Preservation Act. South Mountain is a Traditional Cultural Property that is sacred to a number of tribes in the area. Notwithstanding, ADOT has, in part, failed to adequately consult and coordinate with the interested tribes throughout this process. ADOT has also failed to finalize a Programmatic Agreement with the tribes – which must be complete prior to conclusion of the NEPA process. *See*, Comments of S. Skenandore, J.D. (included herewith). As a practical matter it is impossible to mitigate desecration.

This cover letter is not intended as a comprehensive dissertation vis-à-vis all of the problems associated with the project. Nor is it intended to identify all of the applicable legal requirements that ADOT has ignored in its quest to build the SMF. These shortcomings are discussed in greater detail in the Comments/Reports included herewith (and incorporated herein by this reference). As we pointed out previously, ADOT's efforts to champion the SMF amount to a gross abuse of the public trust and an approximately $3 billion waste of taxpayers' money. The South Mountain Freeway will have a significant negative impact on the health of thousands of people, including children, who live and/or go to school near the proposed right-of-way. It will require the relocation of hundreds of homes, and dry up lakes and golf courses in the Ahwatukee area. The project will pollute the air, bombard residents with noise, negatively impact recreational opportunities, devalue homes, re-route large numbers of commercial trucks through an historic bedroom community, and destroy a large segment of the South Mountain Park – a valuable natural resource that is sacred to the Gila River Indian Community and other tribes in the area. This is a significant price to pay to achieve capacity deficiencies at levels comparable to the No Action Alternative on freeways and arterials throughout the Metropolitan Area.

A more comprehensive Table of Contents follows this letter. The following people/organizations, *inter alia*, have, however, provided Comments on behalf of the "Commenters" that are attached hereto:

1. Herman Basmaciyan, P.E.: Mr. Basmaciyan is a Registered Civil and Traffic Engineer in the State of California and a Registered Engineer (in retired status) in the states of Washington, Arizona, and Florida. He has over 50 years of experience in traffic and transportation engineering, traffic modeling and forecasting, and the preparation of traffic impact studies. Mr. Basmaciyan identifies myriad deficiencies in the

Code	Issue	Response
11	**Air Quality**	Since the release of the Draft Environmental Impact Statement, the Arizona Department of Transportation and the Federal Highway Administration have consulted extensively with the U.S. Environmental Protection Agency on the air quality analytical approach and methods used in the Final Environmental Impact Statement. This consultation has resulted in agreement on the analysis methodologies and the results of these analyses. The carbon monoxide and particulate matter (PM_{10}) analyses demonstrated that the freeway will not contribute to any new localized violations, increase the frequency or severity of any existing violation, or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones.
12	**Cultural Resources**	Section 106 of the National Historic Preservation Act requires a government-to-government relationship between the federal government and Native American Tribes as described beginning on page 4-140 of the Final Environmental Impact Statement. Section 106 requires that federal agencies take into account the effects of their undertakings on historic properties. Consultation has occurred with Gila River Indian Community government officials, the Tribal Historic Preservation Officer, the Cultural Resource Management Program, many different tribal authorities, and the State Historic Preservation Office. The consultation has resulted in concurrence from the Gila River Indian Community Tribal Historic Preservation Office, other tribal authorities, and the State Historic Preservation Office on National Register of Historic Places eligibility recommendations (including traditional cultural properties), project effects, and proposed mitigation and measures to minimize harm. This consultation has been ongoing and will continue until the commitments in the Record of Decision are completed. As noted in Table 4-47 on pages 4-151 through 4-153 of the Final Environmental Impact Statement, the Programmatic Agreement for the project was executed in 2006 (see Appendix 4-6 on page A674 in Volume II of the Final Environmental Impact Statement) by the signatories, the Federal Highway Administration and the Arizona State Historic Preservation Officer. The Tribes were invited to participate, but because the project is not located on tribal land, no Tribes are required to sign for the Programmatic Agreement to be executed in compliance with the National Historic Preservation Act or the National Environmental Policy Act. However, the Yavapai-Apache Nation, Fort McDowell Yavapai Nation, and Tonto Apache Tribe signed the Programmatic Agreement in 2007. The Gila River Indian Community was offered several opportunities to sign the Programmatic Agreement as a concurring party, but elected not to do so. However, as noted above, the Gila River Indian Community and other Tribes have been consulted throughout the environmental impact statement process.

Code	Comment Document

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13

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1. Herman Basmaciyan, P.E.: Mr. Basmaciyan is a Registered Civil and Traffic Engineer in the State of California and a Registered Engineer (in retired status) in the states of Washington, Arizona, and Florida. He has over 50 years of experience in traffic and transportation engineering, traffic modeling and forecasting, and the preparation of traffic impact studies. Mr. Basmaciyan identifies myriad deficiencies in the

Code	Issue	Response
13	**Summary Information**	Specific responses to comments on the Final Environmental Impact Statement will be addressed as they appear later in this submission. In summary, however, the Federal Highway Administration and the Arizona Department of Transportation have produced the comprehensive multidisciplinary analysis of the effects of the South Mountain Freeway required by the National Environmental Policy Act; therefore, the project is not an abuse of public trust or a waste of taxpayer money. Council on Environmental Quality regulations [40 Code of Federal Regulations Section 1505.2(b)] require the Record of Decision to identify the environmentally preferable alternative. The environmentally preferable alternative is defined as the alternative that causes the least damage to the biological and physical environment and best protects, preserves, and enhances historic, cultural, and natural resources. Designation of the environmentally preferable alternative typically involves judgment and the balancing of some environmental values against others. The Council on Environmental Quality notes that comments on draft environmental documents (such as the Draft and Final Environmental Impact Statements for this project) can assist the lead agency in developing and determining environmentally preferable alternatives. Although the No-Action Alternative might have less environmental impact, this alternative does not meet the project's purpose and need. Many mitigation measures have been added to the Record of Decision based on comments received on the Draft and Final Environmental Impact Statements. The Selected Alternative is the environmentally preferable alternative that satisfies the project's purpose and need. Although the Selected Alternative does not have the least impact in every environmental discipline, the Arizona Department of Transportation believes that this alternative best balances environmental effects and benefits. The Selected Alternative will meet the project needs as well as or better than the other alternatives, and, in the case of the E1 Alternative, was determined to be the only prudent and feasible alternative in the Eastern Section of the Study Area. The Selected Alternative will have similar environmental effects on natural resources, cultural resources, hazardous materials, and noise; will displace fewer residences; will have the lowest impact on total tax revenues of local governments; will have lower construction costs; will result in less construction disruption overall to Interstate 10 (Papago Freeway); will mitigate and provide measures to minimize harm; represents all possible planning to minimize harm to resources afforded protection under Section 4(f); is favored by the majority of local governments; and will meet regulatory permitting requirements.

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DEIS and FEIS. He also identifies various alternatives that should have been considered but were not. He also discusses ADOT's failure to respond to his prior comments, as well as ADOT's failure to make decisional data available for timely public review.

2. SWCA Environmental Consultants: The SWCA team reviewed the DEIS and the FEIS for its discussion on water, air, and noise and provided a comment "matrix." The conclusions included in the matrix are too voluminous to outline here. SWCA did, however, confirm, in part, that: (1) there is no technical or scientific rationale or justification for why the "Study Area" is defined the way it is; (2) otherwise viable alternatives were eliminated simply because they did not fit into the arbitrarily defined "Study Area"; (3) ADOT failed to adequately respond to their prior comments; and (4) there is essentially no discussion of the impact construction would have on the wells that currently serve the Lakewood and Foothills communities – this project will likely dry up the lakes and golf courses in Ahwatukee.

3. Kevin Kane: Mr. Kane is a Ph.D. candidate and instructor at Arizona State University's School of Geographical Sciences and Urban Planning. Mr. Kane addresses the agency's utilization of faulty population projections to support the very purpose and need for the Freeway and ADOT's failure to provide any analysis or justification for reaching the same conclusions based on significantly different census data.

4. George Thurston, Sc.D: Dr. Thurston is a full professor at the New York University Medical School. Dr. Thurston identifies, in part, ADOT's continued failure to adequately address the public health risks associated with this project, as well as the agency's failure to adequately address his prior comments.

5. Richard Haddow: Mr. Haddow is a former District Environmental Coordinator with the Arizona Department of Transportation (ADOT). According to Mr. Haddow, in part, the use of data, the methodology employed, and the conclusions presented in the DEIS and FEIS are absolutely without technical merit and do not comply with the fundamental concepts and purpose of an environmental impact statement. Neither the DEIS nor the FEIS protect or properly inform the citizens of the level of risk to public health by building the freeway. The agency also failed to adequately respond to comments provided previously by Mr. Haddow.

6. Aaron Golub, Ph.D: Dr. Golub is an associate professor at the School of Geographical Sciences and Urban Planning and School of Sustainability at Arizona State University. He has his Ph.D. from the Department of Civil and Environmental Engineering, U.C. Berkeley and his M.S. in Mechanical Engineering from MIT. According to Dr. Golub, ADOT failed to consider growth inducing affects necessarily associated with the construction of the SMF. ADOT also failed to adequately address issues raised vis-a-vis projections of Vehicle Miles Traveled ("VMT").

Code	Issue	Response
14	**Summary Information**	Specific responses to comments on the Final Environmental Impact Statement will be addressed as they appear later in this submission.

Code	Comment Document

14 7. Stephen Brittle: Mr. Brittle is the President and Co-Founder of Don't Waste Arizona, Inc. ("DWAZ"), a statewide non-profit environmental organization that was formed in 1990. Mr. Brittle was a member of Maricopa County Local Emergency Planning Committee for ten years. He is also a private sector consultant who has worked on various environmental and hazardous materials issues. Mr. Brittle essentially outlines the fact that ADOT simply failed to respond to his comments to the DEIS.

Thank you for your consideration. As outlined herein and supported through the attached reports/comments, there is no valid justification for the construction of the South Mountain Loop 202 Freeway.

13 NEPA requires a fully informed decisional process through, in part, the preparation of a FEIS. The FEIS, however, treats the crucial decision to proceed with a $3 billion tax payers' funded project, not as an impending choice to be pondered, but as a foregone conclusion to be rationalized. The FEIS provides flawed analyses, generalities, and heavy-handed self-justifications. This is a direct violation of applicable law and a gross abuse of the public trust. No reasoned decision could be made on the basis of the FEIS that, for example, improvements to existing highways and arterials would not better serve regional transportation needs; that public transportation alternatives are not viable; or that abandonment of the project is impractical.

If you have any questions or concerns, please feel free to contact me directly.

Sincerely,

THE SHANKER LAW FIRM, PLC

Howard M. Shanker
For the Firm

Code	Issue	Response

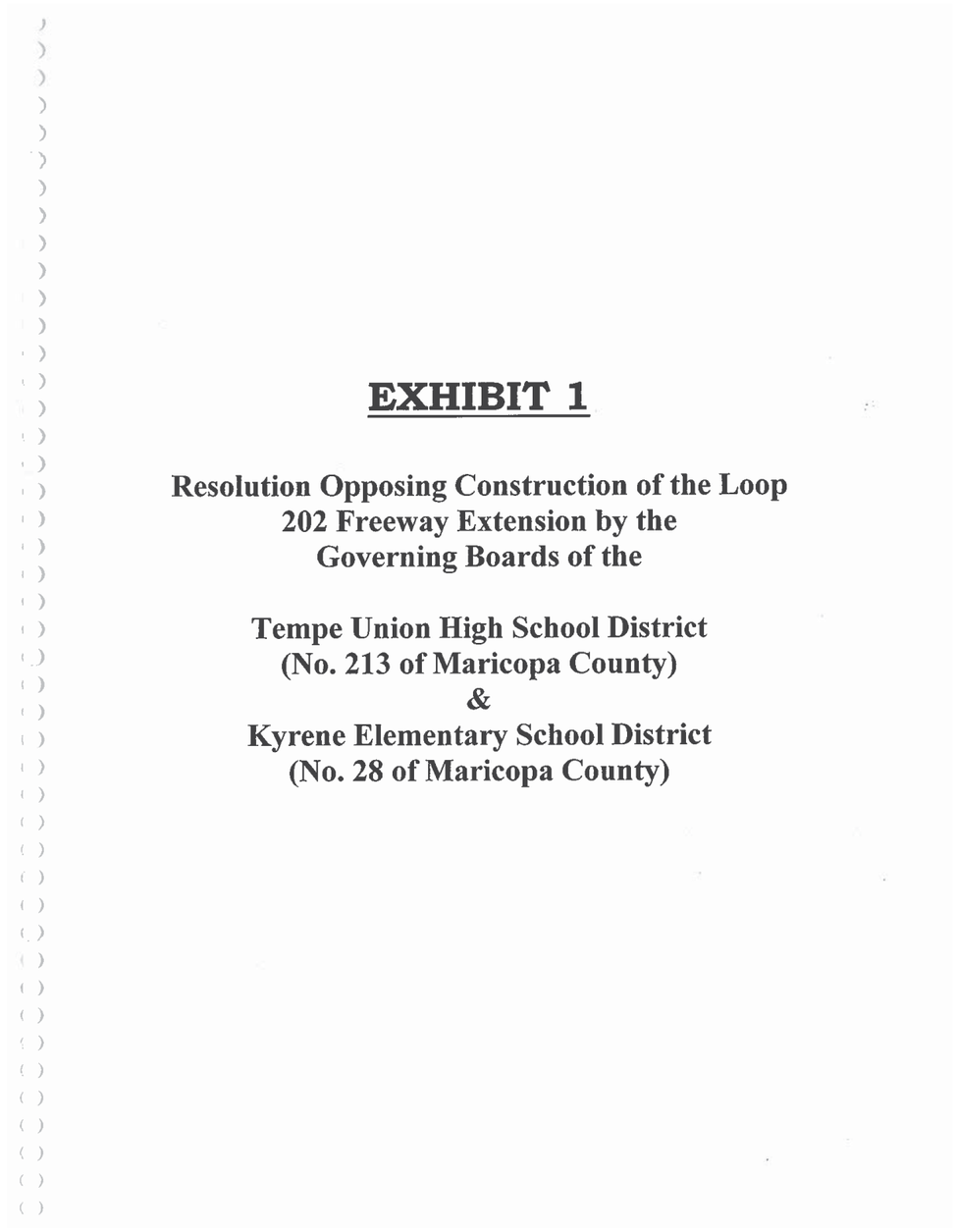
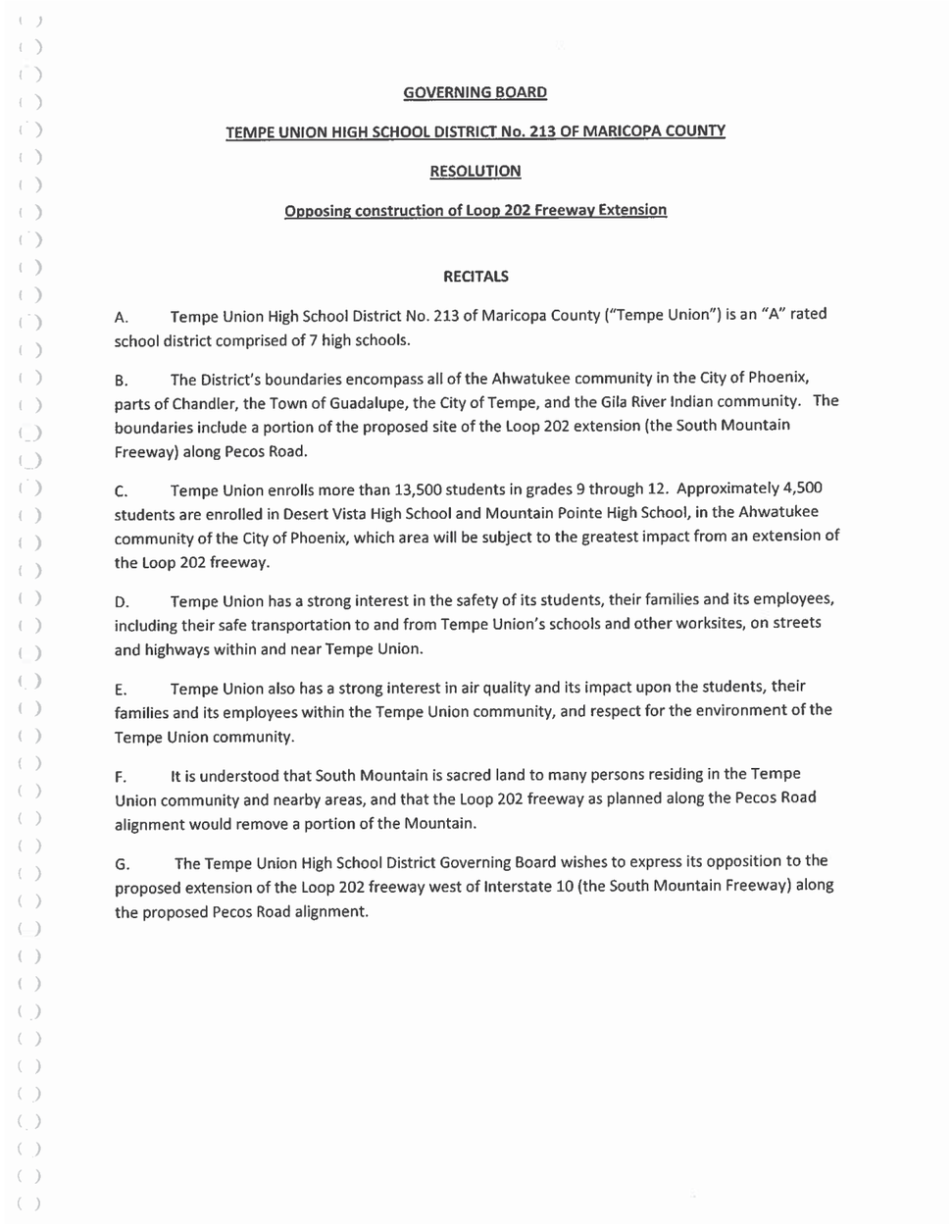
Code	Comment Document
15	

EXHIBIT 1

Resolution Opposing Construction of the Loop 202 Freeway Extension by the Governing Boards of the

Tempe Union High School District (No. 213 of Maricopa County) & Kyrene Elementary School District (No. 28 of Maricopa County)

Code	Issue	Response
15		Title page.

Code	Comment Document
16	

GOVERNING BOARD

TEMPE UNION HIGH SCHOOL DISTRICT No. 213 OF MARICOPA COUNTY

RESOLUTION

Opposing construction of Loop 202 Freeway Extension

RECITALS

A. Tempe Union High School District No. 213 of Maricopa County ("Tempe Union") is an "A" rated school district comprised of 7 high schools.

B. The District's boundaries encompass all of the Ahwatukee community in the City of Phoenix, parts of Chandler, the Town of Guadalupe, the City of Tempe, and the Gila River Indian community. The boundaries include a portion of the proposed site of the Loop 202 extension (the South Mountain Freeway) along Pecos Road.

C. Tempe Union enrolls more than 13,500 students in grades 9 through 12. Approximately 4,500 students are enrolled in Desert Vista High School and Mountain Pointe High School, in the Ahwatukee community of the City of Phoenix, which area will be subject to the greatest impact from an extension of the Loop 202 freeway.

D. Tempe Union has a strong interest in the safety of its students, their families and its employees, including their safe transportation to and from Tempe Union's schools and other worksites, on streets and highways within and near Tempe Union.

E. Tempe Union also has a strong interest in air quality and its impact upon the students, their families and its employees within the Tempe Union community, and respect for the environment of the Tempe Union community.

F. It is understood that South Mountain is sacred land to many persons residing in the Tempe Union community and nearby areas, and that the Loop 202 freeway as planned along the Pecos Road alignment would remove a portion of the Mountain.

G. The Tempe Union High School District Governing Board wishes to express its opposition to the proposed extension of the Loop 202 freeway west of Interstate 10 (the South Mountain Freeway) along the proposed Pecos Road alignment.

Code	Issue	Response
16		Resolution reviewed.

Code	Comment Document

RESOLUTION

NOW, THEREFORE BE IT RESOLVED by the Governing Board of Tempe Union High School District No. 213 of Maricopa County:

The Governing Board recognizes that:

- Through a public study and comment process, a route along Pecos Road was identified.
- The environmental impact study indicates pollution resulting from this route will increase air pollution in the Tempe Union community. Levels of carbon monoxide near the proposed interchanges are projected to increase, and a meaningful evaluation of ozone concentrations at the project level is not possible, all according to the Arizona Department of Transportation. (17)
- The Arizona Department of Transportation has stated that it is likely that construction of the proposed South Mountain Freeway along the Pecos Road alignment would include the need to acquire a number of existing homes and/or businesses, disrupting the lives of Tempe Union community residents and merchants and affecting attendance patterns in Tempe Union schools in the nearby areas. (18)
- The increase in noise and traffic and impact on air quality will negatively impact the Tempe Union community and create new hazards and burdens for Tempe Union's schools in the vicinity of the South Mountain freeway. (19)

Therefore, with community questions and concerns surrounding the construction of the South Mountain Freeway, and particularly its impact on the health and safety of Tempe Union students, their families and its employees residing and working in the Ahwatukee community, including Desert Vista High School and Mountain Pointe High School, the Governing Board opposes the extension of the Loop 202 freeway west of Interstate 10 (the South Mountain Freeway) along the Pecos Road alignment at this time, and urges the Arizona Department of Transportation and all other interested parties to select the "No Build" alternative as to this alignment. (20)

Adopted by the Governing Board of Tempe Union High School District No. 213 of Maricopa County this 6th day of November, 2013.

_____

Michelle Helm
Governing Board President

Attest:

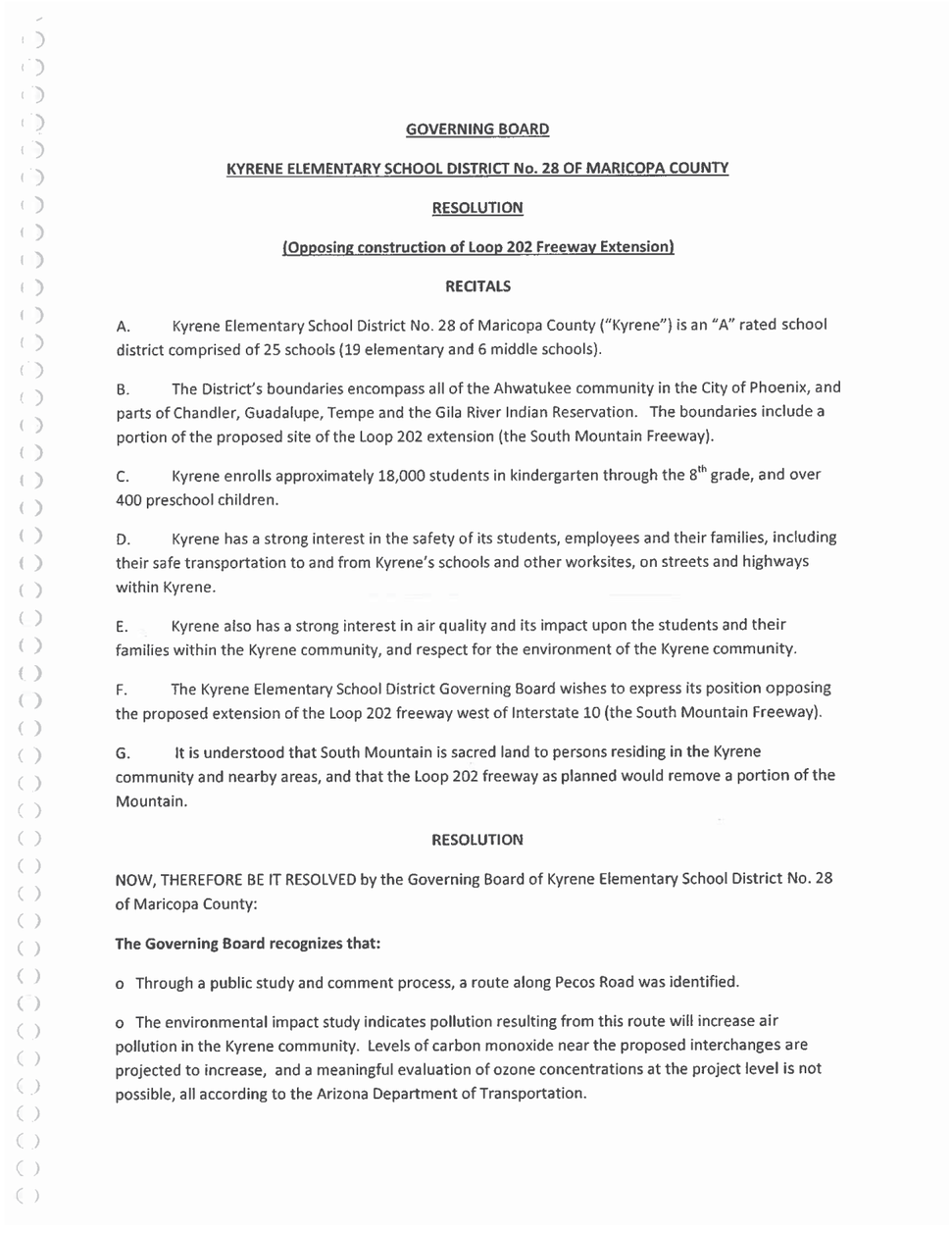
_____

Mary Lou Taylor
Governing Board Vice President

Code	Issue	Response
17	**Air Quality**	Although carbon monoxide levels will increase in an area where there is presently no freeway, they will be well below the U.S. Environmental Protection Agency's health-based National Ambient Air Quality Standard. The carbon monoxide and particulate matter (PM_{10}) analyses demonstrated that the freeway will not contribute to any new localized violations, increase the frequency or severity of any existing violation, or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones. Potential ozone impacts are addressed through including the project in the Maricopa Association of Government's long-range transportation plan and transportation improvement program, which meet all Clean Air Act requirements related to conformity for the ozone National Ambient Air Quality Standards. As long as projects are included in a conforming plan, as is the case for the South Mountain Freeway, then they are considered to have complied with the Clean Air Act requirements applicable to ozone.
18	**Acquisitions and Relocations**	As noted on page 4-46 of the Final Environmental Impact Statement, no businesses will be acquired along the E1 (Pecos Road) Alternative. The impact on existing homes from the project are disclosed in the Final Environmental Impact Statement (see page 4-46).
19	**Noise, Air Quality**	With regard to noise impacts, schools were included in the categories of activities considered in the noise pollution analysis for the project in keeping with 23 Code of Federal Regulations Part 772 (see page 4-88 of the Final Environmental Impact Statement). As stated in the Final Environmental Impact Statement, sensitive receivers, including schools, will be affected by implementation of the project. These impacts, however, will be mitigated as discussed beginning on page 4-91 of the Final Environmental Impact Statement. These commitments are confirmed in Table 3, beginning on page 38, of the Record of Decision. The noise analysis was updated for the Final Environmental Impact Statement (beginning on page 4-88). No substantial differences between the analyses in the Draft and Final Environmental Impact Statements resulted from the update. With regard to air quality, although carbon monoxide levels will increase in an area where there is presently no freeway, they will be well below the U.S. Environmental Protection Agency's health-based National Ambient Air Quality Standard. The carbon monoxide and particulate matter (PM_{10}) analyses demonstrated that the freeway will not contribute to any new localized violations, increase the frequency or severity of any existing violation, or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones. Potential ozone impacts are addressed through including the project in the Maricopa Association of Government's long-range transportation plan and transportation improvement program, which meet all Clean Air Act requirements related to conformity for the ozone National Ambient Air Quality Standards. As long as projects are included in a conforming plan, as is the case for the South Mountain Freeway, then they are considered to have complied with the Clean Air Act requirements applicable to ozone. To address the fact that emissions will increase along the project corridor, the Final Environmental Impact Statement includes a summary of past health risk studies for similar projects. The Federal Highway Administration considers this information more relevant and meaningful for communicating likely health risk than simply reporting an emissions number for the corridor. As explained in the Final Environmental Impact Statement and air quality technical report, all of these studies identified very low health risk, well below the U.S. Environmental Protection Agency's "Action Level" for addressing risk.
20		Comment noted.

Code	Comment Document

21



GOVERNING BOARD

KYRENE ELEMENTARY SCHOOL DISTRICT No. 28 OF MARICOPA COUNTY

RESOLUTION

(Opposing construction of Loop 202 Freeway Extension)

RECITALS

A. Kyrene Elementary School District No. 28 of Maricopa County ("Kyrene") is an "A" rated school district comprised of 25 schools (19 elementary and 6 middle schools).

B. The District's boundaries encompass all of the Ahwatukee community in the City of Phoenix, and parts of Chandler, Guadalupe, Tempe and the Gila River Indian Reservation. The boundaries include a portion of the proposed site of the Loop 202 extension (the South Mountain Freeway).

C. Kyrene enrolls approximately 18,000 students in kindergarten through the 8th grade, and over 400 preschool children.

D. Kyrene has a strong interest in the safety of its students, employees and their families, including their safe transportation to and from Kyrene's schools and other worksites, on streets and highways within Kyrene.

E. Kyrene also has a strong interest in air quality and its impact upon the students and their families within the Kyrene community, and respect for the environment of the Kyrene community.

F. The Kyrene Elementary School District Governing Board wishes to express its position opposing the proposed extension of the Loop 202 freeway west of Interstate 10 (the South Mountain Freeway).

G. It is understood that South Mountain is sacred land to persons residing in the Kyrene community and nearby areas, and that the Loop 202 freeway as planned would remove a portion of the Mountain.

RESOLUTION

NOW, THEREFORE BE IT RESOLVED by the Governing Board of Kyrene Elementary School District No. 28 of Maricopa County:

The Governing Board recognizes that:

o Through a public study and comment process, a route along Pecos Road was identified.

22

o The environmental impact study indicates pollution resulting from this route will increase air pollution in the Kyrene community. Levels of carbon monoxide near the proposed interchanges are projected to increase, and a meaningful evaluation of ozone concentrations at the project level is not possible, all according to the Arizona Department of Transportation.

Code	Issue	Response
21		Resolution reviewed.
22	**Air Quality**	Although carbon monoxide levels will increase in an area where there is presently no freeway, they will be well below the U.S. Environmental Protection Agency's health-based National Ambient Air Quality Standard. The carbon monoxide and particulate matter (PM_{10}) analyses demonstrated that the freeway will not contribute to any new localized violations, increase the frequency or severity of any existing violation, or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones. Potential ozone impacts are addressed through including the project in the Maricopa Association of Government's long-range transportation plan and transportation improvement program, which meet all Clean Air Act requirements related to conformity for the ozone National Ambient Air Quality Standards. As long as projects are included in a conforming plan, as is the case for the South Mountain Freeway, then they are considered to have complied with the Clean Air Act requirements applicable to ozone.

Code	Comment Document
23	o The Governing Board opposes the alignment of the Loop 202 freeway along the present route of Pecos Road.
24	o The Arizona Department of Transportation has stated that it is likely that the proposed South Mountain Freeway would include the need to acquire a number of existing homes and/or businesses, disrupting the lives of Kyrene community residents and merchants and affecting attendance patterns in Kyrene schools in the nearby areas.
25	o The increase in noise and traffic and impact on air quality will negatively impact the Kyrene community and create new hazards and burdens for Kyrene's schools in the vicinity of the Loop 202 freeway.
26	Therefore the Governing Board opposes the extension of the Loop 202 freeway west of Interstate 10 (the South Mountain Freeway) along the Pecos Road alignment, and urges the Arizona Department of Transportation and all other interested parties to select the "No Build" alternative as to this alignment. Adopted by the Governing Board of Kyrene Elementary School District No. 28 of Maricopa County this ____ day of _____, 2013. _____ Beth Brizel Governing Board President _____ Bernadette Coggins Governing Board Vice President _____ Ross Robb Governing Board Member _____ Michelle Hirsch Governing Board Member _____ John King Governing Board Member

Code	Issue	Response
23		Comment noted.
24	**Acquisitions and Relocations**	As noted on page 4-46 of the Final Environmental Impact Statement, no businesses will be acquired along the E1 (Pecos Road) Alternative. The impact on existing homes from the project are disclosed in the Final Environmental Impact Statement (see page 4-46).
25	**Noise, Air Quality**	With regard to noise impacts, schools were included in the categories of activities considered in the noise pollution analysis for the project in keeping with 23 Code of Federal Regulations Part 772 (see page 4-88 of the Final Environmental Impact Statement). As stated in the Final Environmental Impact Statement, sensitive receivers, including schools, will be affected by implementation of the project. These impacts, however, will be mitigated as discussed beginning on page 4-91 of the Final Environmental Impact Statement. These commitments are confirmed in Table 3, beginning on page 38, of the Record of Decision. The noise analysis was updated for the Final Environmental Impact Statement (beginning on page 4-88). No substantial differences between the analyses in the Draft and Final Environmental Impact Statements resulted from the update. With regard to air quality, although carbon monoxide levels will increase in an area where there is presently no freeway, they will be well below the U.S. Environmental Protection Agency's health-based National Ambient Air Quality Standard. The carbon monoxide and particulate matter (PM_{10}) analyses demonstrated that the freeway will not contribute to any new localized violations, increase the frequency or severity of any existing violation, or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones. Potential ozone impacts are addressed through including the project in the Maricopa Association of Government's long-range transportation plan and transportation improvement program, which meet all Clean Air Act requirements related to conformity for the ozone National Ambient Air Quality Standards. As long as projects are included in a conforming plan, as is the case for the South Mountain Freeway, then they are considered to have complied with the Clean Air Act requirements applicable to ozone. To address the fact that emissions will increase along the project corridor, the Final Environmental Impact Statement includes a summary of past health risk studies for similar projects. The Federal Highway Administration considers this information more relevant and meaningful for communicating likely health risk than simply reporting an emissions number for the corridor. As explained in the Final Environmental Impact Statement and air quality technical report, all of these studies identified very low health risk, well below the U.S. Environmental Protection Agency's "Action Level" for addressing risk.
26		Comment noted.

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(November 25, 2014)

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3	Comment from Chris Garret, B.S., P. HGW, at SWCA regarding South Mountain Freeway (Loop 202) EIS Depressed Freeway Alternative;
4	Response to Final Environmental Impact Statement (FEIS) Socioeconomic Factors by Kevin Kane;
5	Response to ADOT 10/2014 Response to Comments on the Loop 202 South Mountain Freeway by George D. Thurston, Sc.D.;
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8	Comments on the South Mountain Freeway Final Environmental Impact Statement (FEIS) and Section 4(F) Evaluation Issued September 2014 Regarding Impacts to Cultural Resources by Samantha Skenadore, Of Counsel, The Shanker Law Firm, PLC;
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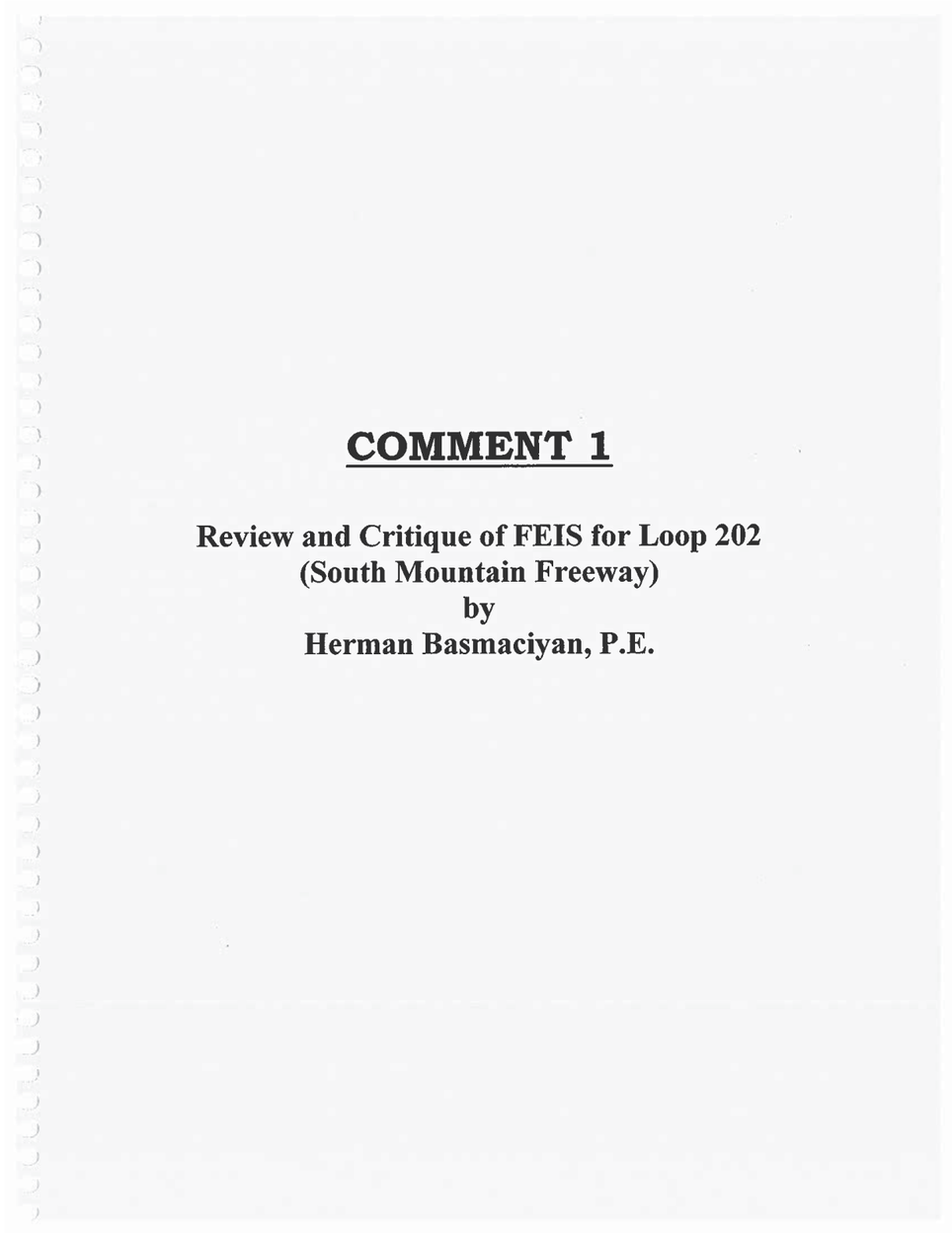
28	

COMMENT 1

Review and Critique of FEIS for Loop 202
(South Mountain Freeway)
by
Herman Basmaciyan, P.E.

Code	Issue	Response
28		Title page.

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29	HERMAN BASMACIYAN, P.E. Traffic, Transportation, Parking Expert Witness and Consulting Services 701 Marguerite Avenue Corona del Mar, CA 92625 Tel: 949-903-5738 herman.b@roadrunner.com November 20, 2014 Ms. Pat Lawlis President, Protecting Arizona's Resources and Children (PARC) P.O.Box 50455 Phoenix, Arizona 85076-0455 Proj. No. 130601 Subject: Review of FEIS for Loop 202, South Mountain Freeway Dear Ms. Lawlis: Per your request, I have reviewed, in addition to my prior review of the DEIS, the Final Environmental Impact Statement (FEIS) for Loop 202, South Mountain Freeway (SMF) and related documents pertaining to travel modeling, traffic, circulation, and transportation and traffic engineering/planning. Based on my review of the documents cited above and my education, professional knowledge and many years of experience, I have identified deficiencies and/or omissions in the NEPA documentation for the Loop 202 South Mountain Freeway project. These deficiencies and/or omissions are discussed in my report, attached. In view of these deficiencies and/or omissions, I have concluded that the FEIS leads to the selection of a Preliminarily Preferred Action Alternative, improperly. Please contact me if I can provide further details or clarification about any matters covered in this letter and the attached report. Sincerely, Herman Basmaciyan Herman Basmaciyan. P.E.

Code	Issue	Response
29		Introductory comments. Specific comments are addressed below.

Code	Comment Document
30	**REVIEW AND CRITIQUE** **of** **FEIS FOR LOOP 202 (SOUTH MOUNTAIN FREEWAY)** **Prepared for** **Protect Arizona's Resources and Children (PARC), et al.** **Phoenix, Arizona** **by** **Herman Basmaciyan, P.E.** **November 20, 2014** 2

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30		Title page.

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32		Section heading.

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LOOP 202 SOUTH MOUNTAIN FREEWAY

COMMENTS ON THE FEIS RESPONSES

November 21, 2014

INTRODUCTION

The FEIS contains responses to the comments about the DEIS I submitted in my report "Review and Critique of DEIS For Loop 202 (South Mountain Freeway)," prepared for Protect Arizona's Resources and Children (PARC), et al., and dated July 17, 2013. Following are my comments about the responses presented in the FEIS. The Comment Numbers are those used by ADOT in the Responses to Comments in the FEIS, Volume III Special Interest Groups, Pages 447 through 474. Direct quotes from the responses or from other documents are presented in *italics* throughout this report. Similarly to the FEIS, the Gila River Indian Community is referred to as "the Community."

COMMENTS ON THE FEIS RESPONSES

Comments 111 through 120, as identified by ADOT, were submitted in the "Summary" section of the comments submitted in July 2013. They are followed by comments submitted as "Supporting Information" and numbered by ADOT as comments 121 through 218.

33 **Comment 111**–The response is inadequate for the reasons set forth in Comment 121.

34 **Comment 112-** The point of the comment is that VMT would increase at a higher rate than increases in population, households, and employment, and that higher rate of increase is contrary to national trends. The response fails to address this point.

35 **Comment 113-**The the response fails to address the point that the Purpose and Need is oriented primarily to regional deficiencies and problems and does not focus on the needs of the Southwest area. The Purpose and Need identified a need based on growth in the Southwest Area but none of the evaluations were directed at the Southwest Area; rather all evaluations were based on Regional comparisons that were dominated by current and forecasted congestion in the Central Area.

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Code	Issue	Response
33	**Purpose and Need**	The 2007 Maricopa Association of Governments socioeconomic projections were based on the 2005 special Census survey and were approved in May 2007. This projection series was developed using Maricopa County and State control totals from the Arizona State Demographer's Office. The projections incorporated the current known development projects, adopted land use plans, and assumptions based on conditions at that time, but growth patterns at all levels (state, county, and sub-county) were affected by the housing boom of the early 2000s. These projections were the current adopted projection series at the time of publication of the Draft Environmental Impact Statement. The 2013 Maricopa Association of Governments socioeconomic projections were based on the 2010 Census and were approved in June 2013, after the Draft Environmental Impact Statement was published. This projection series reflected the impacts of the economic downturn and the housing market bust that started in 2008. The updated series took into account the housing foreclosure crisis and the numerous known development projects from the 2007 projection series that were canceled or altered, along with new development projects, updated land use plans, and assumptions, which were incorporated into the 2013 projections. Socioeconomic projections are updated every 3 to 5 years by the Arizona State Demographer's Office. The projections by the Arizona State Demographer's Office were produced at the county level and were approved in December 2012. The Maricopa Association of Governments is tasked with producing the sub-county level projections, and those were approved in June 2013 after the Draft Environmental Impact Statement was published but before the Final Environmental Impact Statement was issued. The new data are presented in the Final Environmental Impact Statement beginning on page 1-11. The purpose and need and analysis of alternatives were updated and reevaluated using these new socioeconomic projections and corresponding projections related to regional traffic. While new projections based on the 2010 Census showed a lower projected population and vehicle miles traveled in 2035 than the previous projections, the conclusions reached in the Draft Environmental Impact Statement were validated in the Final Environmental Impact Statement (see Chapter 1, *Purpose and Need*, and Chapter 3, *Alternatives*). The traffic analysis demonstrated that the project is needed today and will continue to be needed into the future (see Final Environmental Impact Statement beginning on page 1-13).
34	**Traffic**	The point of the comment is understood; however, the point of the response is that the local conditions and setting of the Phoenix metropolitan area are not consistent with areas of high-density cities in other parts of the country. In Maricopa County, daily vehicle miles traveled levels increased by almost 2 percent between 2011 and 2012, and the 2012 daily vehicle miles traveled are approaching the prerecession peak in 2007. (Source: the Arizona Department of Transportation's Multimodal Planning Division's Highway Performance Monitoring System Data for calendar years 2011 and 2012).
35	**Purpose and Need**	The actual need defined in Chapter 1 of the Draft and Final Environmental Impact Statements is based on both socioeconomic factors (see page 1-11) and on regional transportation demand and existing and projected transportation system deficiencies (see page 1-13). Geographic distribution of projected growth by subregion is presented on page 1-12 of the Final Environmental Impact Statement.

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36	**Comment 114-**The response is inadequate because of the reasons set forth in Comments 146 through 150.
37	**Comment 115-**The response re-iterates statements from the DEIS and does not add any new information.
38	**Comment 116-**The response is adequate and explains that the socio-economic forecasts developed in 2013 were used in the traffic forecasting process.
39	**Comment 117-**This is an introductory statement to the subsequent itemized comments; appropriately, the response directs the reader to the subsequent comments.
40	**Comment 118-**While it is true that the Proposed Action would add freeway capacity in the region, the reductions in congestion on specific facilities are minor. Travel time reductions are minor except for travel between some specific pairs of origin/destination combinations. There does not appear to be an overwhelming need for a freeway in the eastern portion of Loop 202 SMF. All things considered, the expenditure of $2 billion does not appear to accomplish much based on the information presented,
39	**Comment 119-**Considering that the comment is not specific in this summary statement, the response is adequate. Please refer to Item 210 for additional information.
37	**Comment 120-**The response repeats statements from the DEIS. It does not offer new informative and is not adequate.
33	**Comment 121-** As indicated in MAG Publication "Socioeconomic Projections, Population, Housing, and Employment by Municipal Planning Area and Regional Analysis Zone" dated June 2013, population and employment projections for 2020, 2030, and 2040 were available as early as May 2012 and were adopted by the MAG Regional Council in December 2012. The adoption was for the Countywide total, at the level of Municipal Planning Areas (MPA), and at the level of Regional Analysis Zones (RAZ). Therefore, the preparers of the DEIS were, or should have been, aware that new projections were available and that the 2035 population projection in the DEIS exceeded the "new" 2040 projections (6,545,000 for 2035 in the DEIS, compared to 6,175,000 adopted for 2040). Likewise, in the DEIS the 2035 Countywide projection for employment was 3,600,000, compared to the adopted 2040 employment projection of 3,096,600. These large differences in the population and employment forecasts were known to the preparers but were not disclosed at the time the DEIS was circulated for comment. Since this information was not disclosed, the stakeholders and the

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Code	Issue	Response
36	**Purpose and Need**	The original comment draws conclusions from summarized information. As pointed out on page S-1, in the sidebar, "*What you will find in the Summary chapter*," the text in the *Summary* chapter is not the "final word," and readers are urged to turn to the main text when questions about *Summary* chapter content arise.
37	**Alternatives**	As stated in the response to comments, a range of reasonable action alternatives to carry forward for further analysis was determined through application of multidisciplinary criteria in a logical, step-wise progression in accordance with the National Environmental Policy Act. Alternatives were not disposed of or dismissed without a thorough evaluation using the multidisciplinary criteria outlined in the alternatives development and screening process presented in Chapter 3 of the Final Environmental Impact Statement. This process, which occurred early in the environmental impact statement process, was revisited and validated in the Final Environmental Impact Statement (see page 3-2).
38	**Traffic**	Comment noted.
39		Comment noted.
40	**Purpose and Need**	The need for the project is based on socioeconomic factors and regional transportation demand and existing and projected transportation system capacity deficiencies (see text beginning on page 1-11 of the Final Environmental Impact Statement). The analysis of the responsiveness of the freeway to the purpose and need criteria is presented in the Final Environmental Impact Statement, beginning on page 3-27. The analysis shows that the action alternative would: · reduce overall traffic on the arterial street system (see Figures 3-12 and 3-13) · optimize travel on the region's freeway system (see Figure 3-12) · reduce the capacity deficiency to levels better than experienced today (see Figures 1-12 and 3-14) · reduce the duration of level of service E or F conditions in key areas of the region's freeway system (see Figure 3-15) · improve travel times on trips within the Study Area and across the region (see Figure 3-17 and Table 3-8) · provide improved regional mobility for areas projected to experience growth in the next 25 years (see Figures 1-7 and 3-18) When all of this is considered in the realm of travel time savings for motorists in the region, the user benefits approximate $200 million per year (see Table 4-27).

Code	Comment Document

public were deprived of the opportunity to make informed judgments. Even now, the population and employment forecasts at the Traffic Analysis Zone (TAZ) level are not readily available to the stakeholders and the public. Also, the FEIS does not state by whom 2035 population and employment forecasts at the level of Traffic Analysis Zones (TAZ) were approved in June of 2013 is not stated in the FEIS.

Comment 122 –ADOT failed to provide a satisfactory response. No substantive new information was added to the response given to Comment 121.

Comment 123 – The last sentence states that the proposed project is needed today. An analysis of the benefits of the proposed action under current conditions is not presented in the DEIS or the FEIS. Incidentally, the analysis of current problems and solutions is not dependent on socio-economic forecasts. The DEIS and FEIS present current/recent traffic counts that indicate that congestion exists now on some segments of the freeway system in the region. However, no analysis is presented as to how the proposed action would help alleviate these problems and how much traffic there would be on the Loop 202 SMF under today's conditions. Also, no response is provided to the comments about the national trends of reductions in VMT per household.

Comment 124-- ADOT failed to provide adequate response. The response rejects the statement in the comment that growth will likely occur in cyclical fashion, and then expresses the same thought in terms of smoothing out the projected growth. The main point is missed, which is that the 2035 forecasts will be lower than what is shown in the DEIS when the 2010 Census information is taken into consideration.

Comment 125 – ADOT erred in stating that *"Nowhere in the Draft Environmental Impact Statement is reference made that the proposed action is needed to comply with the Regional Transportation Plan."* The following quote (from Page 1-21 of the DEIS and the FEIS) makes it clear that the completion of the loop system is needed:

"Major points establishing the need for a major transportation facility are:

"Regional plans have recognized the need for completing the loop system around the Phoenix metropolitan area for over 25 years. The Southwest Loop Highway, a major element of the region's freeway loop, or beltway, system was integral to the Regional Freeway and Highway System approved by Maricopa County voters in 1985. In 1988, this plan was carried forward as a State-level EA and DCR for the Southwest Loop Highway (now known as the South Mountain Freeway). The same route was approved by the STB in the same year. Although other facilities were considered a higher priority

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Code	Issue	Response
41	**Purpose and Need**	Information used in the completion of the Final Environmental Impact Statement may be found in the *Traffic Overview* report. The traffic analysis zones were approved by the Maricopa Association of Governments.
42	**Purpose and Need**	The purpose and need and analysis of alternatives were updated and reevaluated using these new socioeconomic projections and corresponding projections related to regional traffic. While new projections based on the 2010 Census showed a lower projected population and vehicle miles traveled in 2035 than the previous projections, the conclusions reached in the Draft Environmental Impact Statement were validated in the Final Environmental Impact Statement (see Chapter 1, *Purpose and Need*, and Chapter 3, *Alternatives*). The traffic analysis demonstrated that the project is needed today and will continue to be needed into the future (see Final Environmental Impact Statement beginning on page 1-13).
43	**Purpose and Need**	The point made was that the freeway, if constructed today, would result in reductions in congestion and traffic operational improvements. These reductions in congestion and traffic operational improvements will be even more pronounced in the future with additional regional population growth. Based on Maricopa Association of Governments traffic projections, the freeway will carry between 70,000 and 129,000 vehicles per day in 2020 when operational. In Maricopa County, daily vehicle miles traveled levels increased by almost 2 percent between 2011 and 2012 and the 2012 daily vehicle miles traveled is approaching the prerecession peak in 2007. (Source: Arizona Department of Transportation Multimodal Planning Division Highway Performance Monitoring System Data for calendar years 2011 and 2012). Even if the trend of vehicle miles traveled "per capita" decreasing continues, the total vehicle miles traveled in the region will still increase along with increases in total population.
44	**Purpose and Need**	The purpose and need and analysis of alternatives were updated and reevaluated using these new socioeconomic projections and corresponding projections related to regional traffic. While new projections based on the 2010 Census showed a lower projected population and vehicle miles traveled in 2035 than the previous projections, the conclusions reached in the Draft Environmental Impact Statement were validated in the Final Environmental Impact Statement (see Chapter 1, *Purpose and Need*, and Chapter 3, *Alternatives*). The traffic analysis demonstrated that the project is needed today and will continue to be needed into the future (see Final Environmental Impact Statement beginning on page 1-13).
45	**Purpose and Need**	The response is stating that the purpose and need for the project is not based only on the fact that the project is in the *Regional Transportation Plan*. The needs for the South Mountain Freeway are identified in Chapter 1 of the Final Environmental Impact Statement.

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	early in the Regional Freeway and Highway System, the South Mountain Freeway was a part of the initial Regional Freeway and Highway System in 1985 and has been included in every subsequent update. In 2004, Maricopa County voters approved Proposition 400, which was designed to fund completion of the remaining segments of the Regional Freeway and Highway System, including the South Mountain Freeway. A major transportation facility in the Study Area would implement the facility recognized in over 25 years of planning."
46	The response misses the main point of the comment that some alternatives may not have been included in the range of reasonable alternatives because of the emphasis placed on the historical context. The Purpose and Need does not include more specific needs for the Proposed Action, in addition to region-wide issues. This lack of specificity for the Study Area and the Southwest area in general, precludes the inclusion of some alternatives in the range of reasonable alternatives.
47	**Comment 126 –** ADOT failed to provide adequate response. The comment was that some alternatives were dismissed too early or without due consideration. The FEIS states that alternatives were dismissed only after careful consideration, but does not add any new explanation as to the nature and scope of the careful considerations beyond what is included in the DEIS or FEIS.
	Comment 127, Comment 128, and Comment 129 – Inadequate response to the comment is provided and no supporting data is presented.
	Comment 130 and Comment 131 – These are introductory statements leading to the specific comments that follow. No response is needed and none was provided.
	Comment 132 – The response in the FEIS states that *"The noted duplicate criterion has been deleted from the Final Environmental Impact Statement."* However, in the FEIS the "duplicate criterion" is not deleted; it is woven into the 1st bullet item. No further explanation is provided. Following is quoted from the DEIS: *The following general categories reflect the criteria established for the screening process (Alternatives Screening Report [2003]):* ➢ *ability to satisfy purpose and need* ➢ *ability to minimize impacts on the human and natural environments* ➢ *ability to improve operational characteristics of the region's transportation system* ➢ *degree of public and political acceptability* ➢ *consideration of overall conceptual cost estimates*
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Code	Issue	Response
46	**Purpose and Need, Alternatives**	The need for the project is based on socioeconomic factors and regional transportation demand and existing and projected transportation system capacity deficiencies (see text beginning on page 1-11 of the Final Environmental Impact Statement). Socioeconomic forecasts show population, housing, and employment increasing at high rates. Projections for 2035 are of a population of 5.8 million, housing of 2.3 million dwelling units, and an employment level of 2.9 million jobs. Increases in vehicle miles traveled are expected to meet or exceed growth of the three socioeconomic trends. Almost 50 percent of the projected regional growth is expected to occur in areas that will be immediately served by the freeway. The identified Study Area is an appropriate area for assessing the need for a major new transportation infrastructure project when considering past and existing regional transportation planning and in the context of projected socioeconomic trends in the southwestern Maricopa Association of Governments region. Without a major transportation facility in the Study Area, the region will suffer even greater congestion, travel delays, and limited options for moving people and goods safely through the Phoenix metropolitan region. In accordance with the National Environmental Policy Act, a range of reasonable action alternatives to carry forward for further analysis was determined through application of multidisciplinary criteria in a logical, step-wise progression. Alternatives were not disposed of or dismissed without a thorough evaluation using the multidisciplinary criteria outlined in the systematic alternatives development and screening process presented in Chapter 3 of the Draft and Final Environmental Impact Statements. This process, which occurred early in the environmental impact statement process, was revisited and validated in the Final Environmental Impact Statement (see page 3-2). The alternatives development and screening process considered the ability of an alternative to minimize impacts on the human and natural environments (see page 3-3 of the Final Environmental Impact Statement). Throughout the process described beginning on page 3-3, environmental impacts are used to eliminate alternatives. In the evaluation of action alternatives (see text beginning on page 3-62 of the Final Environmental Impact Statement), environmental and societal impacts play a substantial role in the identification of the W59 and E1 Alternatives as the Preferred Alternative. In comparison to the other action alternatives studied in detail, the Preferred Alternative is the least harmful alternative. The Final Environmental Impact Statement considers all alternatives brought forward during the National Environmental Policy Act process. The comment suggests no alternatives that were not fully considered.
47	**Alternatives**	As noted on page 3-1 of the Final Environmental Impact Statement, the document *Validation of the Alternatives Screening Process at the FEIS Stage* (2014) provided a reassessment and validation of the alternatives screening process for the Final Environmental Impact Statement, including the revised traffic projections. This document was available for public review. Therefore, the information presented in the Final Environmental Impact Statement addressed the reconsideration and elimination of alternatives adequately, and no additional information is deemed necessary.

Code	Comment Document

early in the Regional Freeway and Highway System, the South Mountain Freeway was a part of the initial Regional Freeway and Highway System in 1985 and has been included in every subsequent update. In 2004, Maricopa County voters approved Proposition 400, which was designed to fund completion of the remaining segments of the Regional Freeway and Highway System, including the South Mountain Freeway. A major transportation facility in the Study Area would implement the facility recognized in over 25 years of planning."

The response misses the main point of the comment that some alternatives may not have been included in the range of reasonable alternatives because of the emphasis placed on the historical context. The Purpose and Need does not include more specific needs for the Proposed Action, in addition to region-wide issues. This lack of specificity for the Study Area and the Southwest area in general, precludes the inclusion of some alternatives in the range of reasonable alternatives.

Comment 126 – ADOT failed to provide adequate response. The comment was that some alternatives were dismissed too early or without due consideration. The FEIS states that alternatives were dismissed only after careful consideration, but does not add any new explanation as to the nature and scope of the careful considerations beyond what is included in the DEIS or FEIS.

48

Comment 127, Comment 128, and Comment 129 – Inadequate response to the comment is provided and no supporting data is presented.

49

Comment 130 and Comment 131 – These are introductory statements leading to the specific comments that follow. No response is needed and none was provided.

50

Comment 132 – The response in the FEIS states that *"The noted duplicate criterion has been deleted from the Final Environmental Impact Statement."* However, in the FEIS the "duplicate criterion" is not deleted; it is woven into the 1st bullet item. No further explanation is provided.
Following is quoted from the DEIS:

The following general categories reflect the criteria established for the screening process (Alternatives Screening Report [2003]):
- *ability to satisfy purpose and need*
- *ability to minimize impacts on the human and natural environments*
- *ability to improve operational characteristics of the region's transportation system*
- *degree of public and political acceptability*
- *consideration of overall conceptual cost estimates*

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Code	Issue	Response
48	**Purpose and Need, Alternatives**	As noted in the responses to comments, supporting data are presented in the Final Environmental Impact Statement in Chapters 1 and 3. The document *Validation of the Alternatives Screening Process at the FEIS Stage* (2014) provided a reassessment and validation of the alternatives screening process for the Final Environmental Impact Statement, including the revised traffic projections (see page 3-1 of the Final Environmental Impact Statement). This document was available for public review.
49		Comment noted.
50	**Purpose and Need**	Because improving operational characteristics of the region's transportation system was an identified need for the freeway, listing both the ability to satisfy purpose and need and improving operational characteristics implied that they were separate screening criteria. They were not separate screening criteria; therefore, combining them into the first criterion clarified that issue.

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The wording in the FEIS is:

The following general categories reflect the criteria established for the screening process (Alternatives Screening Report [2003], see sidebar on page 3-2):

- *ability to satisfy purpose and need, namely by improving operational characteristics of the region's transportation system*
- *ability to minimize impacts on the human and natural environments*
- *degree of public and political acceptability*
- *consideration of overall conceptual cost estimates*

This rewording creates the appearance of responding to the comment while it changes nothing.

51 **Comment 133** – This is an introductory statement leading to specific comments that follow. No response is needed and none was provided.

52 **Comment 134** –This comment was made in the context that some alternatives, including the "No Action" alternative, were dismissed without thorough analysis and due consideration. The response misses the point that sufficient back-up information is not provided for the dismissal of any of the alternatives.

53 **Comment 135**- The last sentence in the 1st paragraph of the response states that *"A partial freeway from Interstate 10 (Papago Freeway) to Laveen Village is not feasible because it would not meet the proposed freeway's identified purpose and need."* This sentence is incorrect because this segment would not be a partial freeway but would be part of a series improvements that would connect the logical termini identified in the Purpose and Need. This sentence is also incorrect because the freeway, although shorter than the "Proposed Action" would, in fact, add freeway capacity to the region's freeway system, thus it would be consistent with the Purpose and Need.

In the 2nd paragraph of the Response it is stated that *"Construction of Carver Road between 59th and 51st avenues is included in the City of Phoenix General Plan transportation element."* Accordingly, its construction should present no major obstacles and this segment can be incorporated into the system connecting the logical termini.

In the 3rd paragraph of the response, the problems associated with improvements of the segment along 51st Avenue between Carver Road and a westerly extension of Pecos Road is rejected on the basis of the sovereign rights of the Community and the speculation that these improvements would not be acceptable to the Community. The word "speculation"

Code	Issue	Response
51		Comment noted.
52	**Alternatives**	40 Code of Federal Regulations Section 1502.21 states that agencies shall incorporate material into an environmental impact statement by reference when the effect will be to cut down on bulk without impeding agency and public review of the action. The incorporated material shall be cited in the statement and its content briefly described. No material may be incorporated by reference unless it is reasonably available for inspection by potentially interested persons within the time allowed for comment. The individual alternatives screening documents were referenced throughout Chapter 3 of the Draft Environmental Impact Statement, and these documents were provided when requested. In addition, as noted on page 3-1 of the Final Environmental Impact Statement, the document *Validation of the Alternatives Screening Process at the FEIS Stage* (2014) provided a reassessment and validation of the alternatives screening process for the Final Environmental Impact Statement, including the revised traffic projections. This document was also available for public review.
53	**Alternatives**	As stated on page 3-19 of the Final Environmental Impact Statement, lower-capacity roadways (Arizona Parkway) were considered as alternatives to the full freeway. These lower-capacity roadways would lack sufficient capacity to meet the projected travel demand. Therefore, the combination of roadways mentioned using a partial freeway, Pecos Road, Carver Road, and 51st Avenue, would not meet the projected travel demand and would, therefore, not meet the project's stated purpose and need. The anticipated Gila River Indian Community objections to improvements of 51st Avenue are not as speculative as the comment states. As stated on page 2-10 of the Final Environmental Impact Statement, the Gila River Indian Community expressed concerns about increasing traffic through residential areas along 51st Avenue, such as increased traffic, noise, and safety issues related to speeding vehicles in pedestrian-oriented areas.

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is used in the previous sentence because the response does not state that arterial improvements along 51st Avenue were presented to the Community in the context of this hybrid alternative. If the hybrid alternative had been presented to the Community with appropriate explanations, it might have been viewed more favorably by the Community than an eight-lane freeway on Community lands. The Community was not presented with this option in comparison to the 8-lane freeway option, therefore did not have the opportunity to make an informed decision.

The 4th paragraph of the response states that *"Extending Pecos Road to 51st Avenue would not be feasible because a portion would be located on Gila River Indian Community land, and the Gila River Indian Community has not provided permission to construct a facility on its land."* Similarly to the segment involving arterial improvements along 51st Avenue, the option of constructing an arterial extension of Pecos Road was not presented to the Community and the public, thus depriving the Community of the opportunity to evaluate this option in comparison to the 8-lane freeway option. The Community did not have the opportunity to make an informed decision on this alternative that did not affect SMF. This is critical not only because of NEPA requirements but the requirements of Section 4(f) of the Transportation act.

54 The addition of the arterials as planned will add substantial capacity to the transportation network and will help meet the needs identified in the Purpose and Need.

53 In the response any potential advantages/benefits of the hybrid alternative are not considered. The response ends with the following statement in the 6th paragraph *"For these reasons, alternatives similar to the hybrid alternative proposed in the comment were eliminated from detailed study."* The hybrid alternative is dismissed without due evaluation along with "other similar alternatives." Since the "other similar alternatives are not identified, it is appropriate to consider carefully some of the distinguishing attributes of the hybrid alternative:

- ✓ It would provide a connection, with higher speeds than an arterial between the logical termini identified in the FEIS.
- ✓ It would add freeway capacity where it is needed the most, along the 59th Avenue segment, along the same alignment and design standards as the Proposed Action.
- ✓ The new arterial segments would have limited role in serving abutting property because there is no existing development along these segments, and opportunities for future development are few. By appropriate design standards, access to future developments can be confined to very few locations, and continuous traffic flow at high arterial speeds can be maintained.

10

Code	Issue	Response
54	**Purpose and Need**	The improvements to the arterial street network as included in the *Regional Transportation Plan* are included in the travel demand modeling performed for the South Mountain Freeway. Despite this additional capacity, the capacity is insufficient for the projected demand.

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- ✓ Advanced traffic control methods using Intelligent Transportation Systems (ITS) technologies can be very effective in achieving good signal progression and maintaining traffic flow along the arterials with little or no delay at traffic signals.
- ✓ There would be no impacts on South Mountain.
- ✓ The cost of developing the hybrid alternative would be substantially less than the Preferred Action because of the elimination of freeway construction along the FEIS E1 segment.

For these reasons, the hybrid alternative should receive serious consideration and should not be dismissed along with unidentified similar alternatives.

55 **Comment 136** – NEPA requires consideration of alternatives, even if outside the jurisdiction of the agency. Refusal to consider alternatives that may impact Gila River Indian Community land deprives the Community, and others, of the ability to reach fully informed decisions about the impacts of any proposed alignment. As a practical matter, the Community does not appear to have been presented, even preliminary/superficial data on any other potential alternative alignments that might impact their property. A good example is the hybrid alternative discussed in detail in Comment 135.

56 **Comment 137** – Response misses the point of the comment. It is stated on Page 3-18 that the depressed alternative would be 150 acres more than the rolling profile. But it was and still remains unclear if this difference is estimated for the 8-lane or 10-lane freeway. More importantly, if the number of parcels to be taken would be any less with the 8-lane compared to the 10-lane freeway. The ambiguity arises because the decision of the 8-lane v. 10-lane freeway was made in the Tier 4 screening, which is presented starting on Pages 3-19, after the discussion of the right-of-way differences. The Depressed Alternative was dismissed in Tier 3.

57 **Comment 138** – This is a quote from the DEIS and introductory to Comment 139. No response is needed and none was provided.

58 **Comment 139** - The response clouds the issue rather than clarifying it because it does not answer the main issue in the comment which is whether the right-of-way need for a depressed 8-lane freeway would be less than the right-of-way need for an 8-lane freeway with a rolling profile.

59 **Comment 140** – The response cites Table 3-5 on Page 3-12 as supporting information, and states that *"As noted in Table 3-5 on page 3-12 of the Draft Environmental Impact Statement, the Ray Road and Chandler Boulevard alternatives would result in hundreds of residential and business displacements and would split the Ahwatukee Foothills*

Code	Issue	Response
55	**Alternatives**	Dismissal of all alternatives affecting Gila River Indian Community land is appropriate. The resolution by the Gila River Indian Community of not allowing alternatives on its land is sufficient evaluation. The Gila River Indian Community has consistently stated (beginning in 2000, with a Community Council resolution) that it is not interested in an alternative on its land. See Final Environmental Impact Statement Chapter 2, *Gila River Indian Community Coordination*. As stated earlier, provision of alternatives without sufficient capacity would not meet the project's stated purpose and need.
56	**Alternatives**	The estimate assumes an eight-lane facility. The alternative analysis process is iterative. Although a depressed freeway was analyzed earlier, it was reexamined when consideration of an eight-lane facility was conducted (this reevaluation is documented in the memorandum, *Validation of Alternatives Screening Process at the FEIS Stage* [2014], available on the project Web site at <azdot.gov/southmountainfreeway>).
57		Comment noted.
58	**Alternatives**	The right-of-way needs for a depressed eight-lane freeway would be approximately 150 acres greater than those for a rolling profile eight-lane freeway.
59	**Alternatives**	The comment is correct that this alternative was eliminated prior to the detailed analysis of alternatives as documented in Chapter 4 of the Final Environmental Impact Statement. Potential displacements under the Ray Road and Chandler Boulevard alternatives would range between 500 and 1,000, depending on the alignment (see the document *Validation of Alternatives Screening Process at the FEIS Stage* [2014], available on the project Web site at <azdot.gov/southmountainfreeway>).

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Village." The expression "hundreds of residential and business displacements" is indicative of a cursory analysis, rather than a reasonably thorough quantitative analysis. Certainly stakeholders should know if this would result in, for example, 200 or 1500 residential and business displacements.

60

Comment 141 and Comment 142 – ADOT failed to provide adequate response. The reports cited in DEIS are dated 2002 (Sidebar on Page 3-2) and 2003 (Page 3-1, second column, last line). These 10-year old reports are outdated and do not reflect current conditions. Moreover, the documents were not readily available to stakeholders and the public during the DEIS review process. During the FEIS review period, these reports are still not readily available, depriving the stakeholders and the public of the opportunity to make informed judgments. They are available only by appointment with ADOT as stated in the following statement in the sidebar on Page 3-2: *"Technical reports, predecisional reports, and memorandums can be made available for review by appointment at ADOT Environmental Planning Group,1611 W. Jackson St., Phoenix, AZ 85007 [(602) 712-7767]."*

For some information in the DEIS and FEIS, such as the traffic volume forecasts presented in Figure 3-12, the cut line analysis presented in Figure 3-13, the regional capacity deficiencies presented in Figure 3-14, congestion levels presented in Figures 3-15 and 3-16, and others, the source is cited as *"MAG, date of data, extrapolated analysis."* The specific MAG documents are not identified. The MAG source data were not readily available to stakeholders and the public during the DEIS review process. During the FEIS review period, these reports are still not readily available, depriving the stakeholders and the public of the opportunity to make informed judgments.

61

Comment 143-This comment was made within the context that the rejection of the alternative was based on not meeting the Purpose and Need. If the Purpose and Need was faulty due to the incorrect socio-economic data projections, then rejection solely on the basis of not meeting the Purpose and Need is not appropriate. The fact that the population and employment forecasts would need to be reduced in view of the 2010 U.S. Census results was known to the preparers but were not disclosed at the time the DEIS was circulated for comment. Since this information was not disclosed, the stakeholders and the public were deprived of the opportunity to make informed judgments. Please refer to Comment 121 for further details. In addition, the response misses the primary point of the comment by stating that the conclusion in the DEIS was re-confirmed, without providing any supporting information as requested. The DEIS and the FEIS do not even contain basic information such as daily traffic counts, let alone any figures to indicate how many through traffic (trucks as well as passenger vehicles) the I-8/SR 185 route to by-pass the Phoenix Metropolitan Area.

12

Code	Issue	Response
60	**Alternatives**	40 Code of Federal Regulations Section 1502.21 states that agencies shall incorporate material into an environmental impact statement by reference when the effect will be to cut down on bulk without impeding agency and public review of the action. The incorporated material shall be cited in the statement and its content briefly described. No material may be incorporated by reference unless it is reasonably available for inspection by potentially interested persons within the time allowed for comment. The individual alternatives screening documents were referenced throughout Chapter 3 of the Draft Environmental Impact Statement, and these documents were provided when requested. In addition, as noted on page 3-1 of the Final Environmental Impact Statement, the document *Validation of the Alternatives Screening Process at the FEIS Stage* (2014) provided a reassessment and validation of the alternatives screening process for the Final Environmental Impact Statement, including the revised traffic projections. This document was also available for public review on the project Web site at <azdot.gov/southmountainfreeway>. The citation provided for these figures is the Maricopa Association of Governments regional travel demand model output. The nomenclature for referencing data obtained from the Maricopa Association of Governments is explained on page 1-4 of the Final Environmental Impact Statement. For instances where "extrapolated analysis" is noted, the explanation is that the citation is used when analysis was performed using Maricopa Association of Governments data as input. Additional details related to the data inputs are provided in the *Traffic Overview* report available for public review on the project Web site at <azdot.gov/southmountainfreeway>.
61	**Purpose and Need**	The 2007 Maricopa Association of Governments socioeconomic projections were based on the 2005 special Census survey and were approved in May 2007. This projection series was developed using Maricopa County and State control totals from the Arizona State Demographer's Office. The projections incorporated the current known development projects, adopted land use plans, and assumptions based on conditions at that time, but growth patterns at all levels (state, county, and sub-county) were affected by the housing boom of the early 2000s. These projections were the current adopted projection series at the time of publication of the Draft Environmental Impact Statement. The 2013 Maricopa Association of Governments socioeconomic projections were based on the 2010 Census and were approved in June 2013, after the Draft Environmental Impact Statement was published. This projection series reflected the impacts of the economic downturn and the housing market bust that started in 2008. The updated series took into account the housing foreclosure crisis and the numerous known development projects from the 2007 projection series that were canceled or altered, along with new development projects, updated land use plans, and assumptions, which were incorporated into the 2013 projections. Socioeconomic projections are updated every 3 to 5 years by the Arizona State Demographer's Office. The projections by the Arizona State Demographer's Office were produced at the county level and were approved in December 2012. The Maricopa Association of Governments is tasked with producing the sub-county level projections, and those were approved in June 2013 after the Draft Environmental Impact Statement was published but before the Final Environmental Impact Statement was issued. The new data are presented in the Final Environmental Impact Statement beginning on page 1-11. While new projections based on the 2010 Census showed a lower projected

(Response 61 continues on next page)

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Code	Issue	Response
61 (cont.)		population and vehicle miles traveled in 2035 than the previous projections, the need for the freeway has not changed. The traffic analysis demonstrated that the project is needed today and will continue to be needed into the future (see Final Environmental Impact Statement beginning on page 1-13). As noted on page xi of the Prologue to the Final Environmental Impact Statement, the purpose and need for the project was reevaluated using the new socioeconomic projections related to regional traffic and the conclusions reached in the Draft Environmental Impact Statement were reconfirmed in the Final Environmental Impact Statement. The road network in the Maricopa Association of Governments travel demand model includes the Interstate 8 and State Route 85 corridor. So, while the roads are not in the Study Area for the project, traffic and trip distributions along the corridor are included in the traffic analysis for the project. Any traffic, including trucks, that would shift from the Interstate 8 and State Route 85 corridor to the South Mountain Freeway were included in the vehicle mix considered in the analysis. Traffic projections, not counts, are provided throughout Chapters 1 and 3 of the Final Environmental Impact Statement (see for example Figure 1-8) and vehicle miles traveled are noted in the *Air Quality* section of Chapter 4.

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62

Comment 144 - Please see Comment 121. The revised projections were adopted in December 2012. The primary point of the comment was whether or not the arterials were included in the modeled network in the TransCad Model, not whether or not they would be built. No answer is provided to this main point in the comment.

63

Comment 145 – ADOT failed to provide adequate response because the response does not offer any new information; it merely repeats what is in the DEIS.

64

Comment 146 – It is agreed that the Summary Chapter in the FEIS has the cited statement. If the Summary Chapter does not contain a concise but complete description of the proposed action, stakeholders must go through the entire document to find key information. Does this not negate the purpose and need for a summary? Under "Description of the Proposed Action" in the FEIS, the only reference is to Figure S-4, a two-part depiction of the Proposition 300 Freeway Plan and the MAG Regional Transportation Plan Freeway Program as depicted in 2003. The "Description of the Proposed Action" in the FEIS presents some historical perspective and describes the South Mountain Freeway as one of the "missing" segments of the Regional Freeway and Highway System. The "Description of the Proposed Action" in the FEIS concludes with the following statement *"ADOT has opted to seek federal highway funds to assist in completing the proposed freeway. For this reason, FHWA is required to ensure that the proposed action complies with the provisions of NEPA and other federal environmental laws. Study of the proposed freeway in the FEIS is based on logical termini, sufficient length, independent utility, construction priorities associated with the Regional Freeway and Highway System, and projected traffic needs."*
Since the FEIS concludes that the preferred alternative emerges as an 8-lane freeway, the characteristics of the freeway should have been presented, or at the very least, the reader directed to the appropriate text and Figures to find that information.

65

Comment 147– ADOT failed to provide adequate response to this comment. This comment is a sub-item under Comment 146, and it refers to the lack of information in the Project Description in the Summary Chapter. In addition, the comment suggested that typical dimensions for the cross-sections be provided. Dimensions are not given in the cross-sections presented in the Summary and in the Alternatives Chapter.

66

Comment 148– This comment was introductory and a lead-in to Comment 149. No response was needed, and none was provided.

67

Comment 149– This comment is a sub-item under Comment 146, and it refers to the lack of information about the Proposed Action under Project Description in the Summary

13

Code	Issue	Response
62	**Alternatives**	Socioeconomic projections are updated every 3 to 5 years by the Arizona State Demographer's Office. The projections by the Arizona State Demographer's Office are produced at the county level and were approved in December 2012. The Maricopa Association of Governments is tasked with producing the sub-county level projections, and those were approved in June 2013 after the Draft Environmental Impact Statement was published, but before the Final Environmental Impact Statement was issued. The key model inputs of the TransCAD model are presented on page 1-5 of the Final Environmental Impact Statement. The final bullet states that the model uses *Regional Transportation Plan*-planned projects and improvements and known arterial street network improvements.
63	**Alternatives**	The information presented in the Final Environmental Impact Statement addressed the lack of prudent and feasible alternatives to the use of the South Mountains adequately, and no additional information is deemed necessary.
64	**Purpose and Need**	The information contained in the *Summary* chapter is concise, but not complete; otherwise, it would not be a summary. The summary follows the organization of the Final Environmental Impact Statement; therefore, those seeking more information on any topic may refer to the appropriate chapter to find the detail missing from the *Summary* chapter. The *Summary* chapter of the Final Environmental Impact Statement included a basic description of the Preferred Alternative including alignment location within the Study Area, cost, proposed service traffic interchange locations (see Figure S-8 on page S-8), and typical freeway section including number of lanes and basic configuration (see Figure S-9 on page S-10).
65	**Design**	The typical freeway section is presented in Figure 3-34 of the Final Environmental Impact Statement. The lane widths are described in narrative on the same page (page 3-58).
66		Comment noted.
67		The information contained in the *Summary* chapter is concise, but not complete; otherwise, it would not be a summary. The summary follows the organization of the Final Environmental Impact Statement; therefore, those seeking more information on any topic may refer to the appropriate chapter to find the detail missing from the *Summary* chapter.

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Chapter. The response is inadequate because it does not explain why the information is not included in the Summary Chapter.

68 **Comment 150–** This comment is a sub-item under Comment 146, and it refers to the lack of information in the Project Description in the Summary Chapter. Also see Comment 149.

68 **Comment 151–** This comment is a sub-item under Comment 146, and it refers to the lack of information in the Project Description in the Summary Chapter. Also see Comment 149.

69 The response raises some ambiguities. Part of the FEIS response to this comment is: *"The inclusion of park-and-ride lots is not part of the scope of the proposed action. No new park-and-ride lots are proposed as part of the proposed action. Locations of future park-and-ride lots would be determined by the City of Phoenix and Valley Metro."* If this is true, the No Action Alternative would not preclude the development of park-and-ride lots and developing bus routes on other HOV facilities, arterials, or on dedicated rights-of-way.

70 The following appears in Figure 3-8 (in the DEIS and FEIS): *"Right-of-way limits modified to accomodate future expansion plans for the 40th Street Park-and-Ride lot."* If the park-and-ride lot expansion is part of the Proposed Action, this should be acknowledged. If not, there is no reason for the presence of this text on Figure 3-8. The ambiguity remains in the FEIS. A related question is if Federal funds were, or will be, used for the acquisition of the right-of-way necessary to accommodate the expansion.

In the discussion of the No Action alternative, the FEIS (Page 3-40) states that "The No-Action Alternative would not adequately serve transit opportunities because it would preclude future development of HOV lanes, express bus service, and park-and-ride lots adjacent to the proposed action. This statement contradicts the statement that park-and-ride lots and bus routes are in the purview of City of Phoenix and Valley Metro.

71 It is stated on Page 3-40 of the DEIS that: *"Identification of the No-Action Alternative as the Selected Alternative would not preclude a project similar to the proposed action from being proposed."* The significance of this statement is unclear. It may mean that ADOT is prepared to propose another freeway, similar to the Proposed Action, if the ultimate decision of the current NEPA process is to select the No Action alternative. Or, it may mean that ADOT or some other implementing agency is prepared to come forth with a proposed action that includes transit in a "similar" corridor as the presently Proposed

Code	Issue	Response
68		The information contained in the *Summary* chapter is concise, but not complete; otherwise, it would not be a summary. The summary follows the organization of the Final Environmental Impact Statement; therefore, those seeking more information on any topic may refer to the appropriate chapter to find the detail missing from the *Summary* chapter.
69	**Design**	We agree that the No-Action Alternative would not preclude the development of park-and-ride lots and implementation of bus routes on other high-occupancy vehicle facilities, arterials, or on dedicated rights-of-way. As stated on page 3-60 of the Final Environmental Impact Statement, however, the project may produce excess right-of-way that may be suitable for other public infrastructure projects such as park-and-ride lots or bicycle/multiuse paths.
70	**Design**	The statement is not a contradiction. The expansion of the park-and-ride lot occurred in 2010. The freeway footprint was adjusted so that it would not affect the expanded lot. There are no plans to expand the lot beyond its current limits. Figure 3-8 is intended to show that efforts were successfully made to avoid existing and planned infrastructure wherever possible. The caption on the figure states that adjustments were made to the action alternative in the Eastern Section to avoid or reduce impacts on residential areas and to avoid resources protected by Section 4(f). Without the freeway, there would be no opportunity to provide high-occupancy vehicle lanes or other services adjacent to the freeway as stated. The earlier portion of the comment states that these facilities could be constructed on other high-occupancy vehicle facilities, arterials, or on dedicated rights-of-way. However, without the freeway, the need to construct these facilities in the project area would be reduced. To construct these facilities where they are not needed is not a wise use of public funds.
71	**Alternatives**	The statement on page 3-40 of the Final Environmental Impact Statement means that if the No-Action Alternative were the Selected Alternative, a project similar to the South Mountain Freeway could be proposed at a later time.

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Action. Or, it may have some other meaning that this reader cannot discern. This ambiguity remains in the FEIS.

72 **Comment 152–** As indicated in **Attachment 1** to this report, population and employment projections for 2020, 2030, and 2040 were available as early as May 2012 and were adopted by the MAG Regional Council in December 2012. The adoption was for the Countywide total, at the level of Municipal Planning Areas (MPA), and at the level of Regional Analysis Zones (RAZ). Therefore, the preparers of the DEIS were, or should have been, aware that new projections were available and that the 2035 population projection in the DEIS exceeded the "new" 2040 projections (6,545,000 for 2035 in the DEIS, compared to 6,175,000 adopted for 2040). Likewise, in the DEIS the 2035 Countywide projection for employment was 3,600,000, compared to the adopted 2040 employment projection of 3,096,600. These large differences in the population and employment forecasts were known to the preparers but were not disclosed at the time the DEIS was circulated for comment. Since this information was not disclosed, the stakeholders and the public were deprived of the opportunity to make informed judgments. Even now, the population and employment forecasts at the Traffic Analysis Zone (TAZ) level are not readily available to the stakeholders and the public. Also, the FEIS does not state by whom 2035 population and employment forecasts at the level of Traffic Analysis Zones (TAZ) were approved in June of 2013.

73 **Comment 153–**This is an introductory lead-in paragraph to detailed comments. No response was needed and none was provided.

74 **Comment 154–** The DEIS comment acknowledges that an interchange at 32nd Street is not proposed. The City of Phoenix Memorandum cited in the response is dated 2006 and is based on 2030 daily traffic forecasts, and merely presents daily traffic volumes on Chandler Boulevard and the streets connecting Chandler Boulevard and Pecos Road. The response completely misses the point which is local circulation within the neighborhoods and access for the residents in the area south of Chandler Boulevard. The response also misses the point that the 2030 traffic volume projections in the City's memorandum are on the basis that the 32nd Street interchange would be constructed. Since the 32nd Street interchange will not be constructed as part of the Proposed Action (as stated in the DEIS and the FEIS), the City's memorandum is irrelevant and there is no evidence of bona fide analysis of local circulation.

75 The second part of this comment is in reference to the loss of access at 27th Avenue. The response is completely silent on this point.

Code	Issue	Response
72	**Purpose and Need**	Socioeconomic projections are updated every 3 to 5 years by the Arizona State Demographer's Office. The projections by the Arizona State Demographer's Office are produced at the county level and were approved in December 2012. The Maricopa Association of Governments is tasked with producing the sub-county level projections, and those were approved in June 2013 after the Draft Environmental Impact Statement was published, but before the Final Environmental Impact Statement was issued. The new data are presented in the Final Environmental Impact Statement beginning on page 1-11. While new projections based on the 2010 Census showed a lower projected population and vehicle miles traveled in 2035 than the previous projections, the need for the freeway has not changed. The traffic analysis demonstrated that the project is needed today and will continue to be needed into the future (see Final Environmental Impact Statement beginning on page 1-13). As noted on page xi of the Prologue to the Final Environmental Impact Statement, the purpose and need for the project was reevaluated using the new socioeconomic projections related to regional traffic, and the conclusions reached in the Draft Environmental Impact Statement were reconfirmed in the Final Environmental Impact Statement. Information used in the completion of the Final Environmental Impact Statement may be found in the *Traffic Overview* report. The Maricopa Association of Governments socioeconomic projections are reviewed with the Maricopa Association of Governments Population Technical Advisory Committee by traffic analysis zone. While the dataset for 2035 from the 2013 Maricopa Association of Governments socioeconomic projections was not adopted, the dataset was produced using the AZ-SMART model, which operates on an annual basis, in line with the approved datasets for 2030 and 2040. The 2035 dataset conforms to the population control totals contained in the Arizona State Demographer's Office projections approved in December 2012. A detailed time line for the Maricopa Association of Governments 2013 socioeconomic projections can be found in the documentation available at <azmag.gov/Documents/IS_2013-06-25_MAG-Socioeconomic-Projections-Documentation-June-2013.pdf>.
73		Comment noted.
74	**Traffic**	There is no reason to assume that traffic conditions have changed substantially since 2006 because no additional developments have been approved in the area. The City of Phoenix study found no adverse effects on the local street system from the freeway in the 2006 study. The comment is incorrect in that there is not a connection (on- and off-ramps) between 32nd Street and the freeway in the future traffic projection network considered by the City of Phoenix. In Figure 3 of the memorandum in Appendix 3-1 of the Final Environmental Statement, interchange connections are shown with diamonds representing the on- and off-ramps from the freeway to the local arterial street. No diamond is shown at 32nd Street and, therefore, no interchange will be located there.
75	**Traffic**	The 27th Avenue interchange was evaluated but ultimately eliminated because of increased residential displacements and cost. The extension of Chandler Boulevard west of 19th Avenue is included in this project because reasonable access must be maintained to the neighborhoods at the west end of Pecos Road.

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76	**Comment 155–**It is commendable that the City of Phoenix and ADOT are cooperating on the matter of the extension of Chandler Boulevard. The response is not complete because nothing is said about the number of lanes to be provided on the extended segments of Chandler Boulevard.
77	**Comment 156–**It is understood that local streets would be provided to serve the proposed developments. The points raised were the amount of traffic to be added by these developments and how the added traffic would affect Chandler Boulevard and other surface streets. No response to these points is provided. Based on the information available, about 15,000 or more daily vehicular trips would be generated by the proposed developments described in Comments 155 and 156.
78	**Comment 157**– The FEIS contains no analysis to support the response. If a detailed analysis had been made, the FEIS would not have to use words such as "reasonable" and "likely." Sufficient information should have been provided to enable residents to assess how emergency response times for their neighborhoods might be affected. This matter should not be deferred to a subsequent determination by emergency service providers.
79	**Comment 158**–The response does not state what cross-section (or number of lanes) will be provided by ADOT on the arterial streets in the interchange areas. Also, because, as proposed, the freeway will be above grade, modification of the grade on the cross streets will need to be modified. Existing and proposed profiles of the cross streets should be shown and any potential effects discussed. Of specific interest to PARC would be the interchanges at 40th Street, 24th Street, Desert Foothills Parkway, and 17th Avenue. Since the response does not direct the reader to a specific source document (s), such information is not available or not being released to the public.
80	**Comment 159–**The explanation in the response is adequate.
81	**Comment 160**–The response is inadequate because the City traffic volume map presents daily traffic volumes only, many of the counts along and near Pecos Road taken in 2010, 2011, or 2012. No peak hourly or turning movement information is provided, nor 2035 forecasts presented. The inapplicability of the 2006 City Memorandum was discussed in Comment 154.
82	**Comment 161**–The comment specifically addresses the change in emergency response time for the areas now served by the signalized intersection of Pecos Road/32nd Street when the Freeway is built. The response is general and does not address a local issue. Therefore, the response is not adequate.

16

Code	Issue	Response
76	**Design**	Initially, two lanes will be provided on the extended segment of Chandler Boulevard.
77	**Design**	No plans to develop this land have been submitted to plan approval authorities. Development of this land would not occur unless the approval authorities were satisfied that traffic impacts of the development were adequately addressed.
78	**Design**	The Arizona Department of Transportation is required to provide reasonable access to developments. As stated in the response, emergency response times should be approximately the same as before the change in access.
79	**Design**	The cross section, or number of lanes, along the arterial streets in the interchange will match the current configuration or the City of Phoenix's street classification designation for the arterial street. Because the freeway will go over the arterial streets, the profiles of the arterial streets will not need to be changed from their current elevation. As noted on page 3-51 of the Final Environmental Impact Statement, the final configuration of the service traffic interchanges will be determined during the final design phase.
80		Comment noted.
81	**Traffic**	There is no reason to assume that traffic conditions have changed substantially since 2006 because no additional developments have been approved in the area. Additionally, as previously noted by the commenter, the 2030 traffic projections used in the City of Phoenix analysis in 2006 are likely higher than the current traffic projections for 2035. The City of Phoenix study found no adverse effects on the local street system from the freeway in the 2006 study.
82	**Traffic**	The following response, although general, is appropriate at this level of preliminary design. Emergency responders will address the construction of the freeway by amending the local emergency response plan to include the facility. This will include emergency response on the freeway and alternative routes for diversion of traffic in the event that an incident occurred along the freeway. As concluded in the section, *Social Conditions*, in Chapter 4 of the Final Environmental Impact Statement, response times for police, fire, and medical emergency services will be faster when compared with response times under the No-Action Alternative. Circulation on major arterial streets will be improved through better distribution of traffic onto the overall transportation network, the provision of alternative routes, and through localized operational improvements such as grade separations and planned interchanges.

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Comment 162–If the park-and-ride lot is not to be expanded, what is the significance of the following quote which is in the form of a note in Figure 3-8 in the FEIS, *"Right-of-way limits modified to accomodate future expansion plans for the 40th Street Park-and-Ride lot?"* In addition, less than satisfactory response is provided for bus access; the operational issues raised in the DEIS comments are not addressed; and no traffic volume forecasts are presented for 40th Street. The building of complete typical interchanges along the E1 Alternative implies that there will be development on the south side of Pecos Road on Community land. Depending on the magnitude of development additional traffic will be placed on the crossing arterials on the north side of Pecos Road, including 40th Street, at the park-and-ride lot access points. A conclusion about traffic operational issues on 40th Street is presented without the supporting analysis.

84

Comment 163–Satisfactory response is provided.

85

Comment 164--Informing the public after all details are known is expected, but would be merely "informational." At the time all details are known and construction is scheduled to start, some "details" may be deemed unacceptable by the public. It is not stated to what extent the public will be able to alter the details presented by ADOT. Once the NEPA process is completed, there will be no requirement for ADOT to seek input from other stakeholders and the public. So there would be no, or very little, opportunity to influence construction period activities. This would be the case especially if a design/build process is used because design reviews and decisions often follow very tight schedules that do not allow much time to devote to public input.

86

Comment 165–Satisfactory response is provided.

86

Comment 166–Satisfactory response is provided.

86

Comment 167–Satisfactory response is provided.

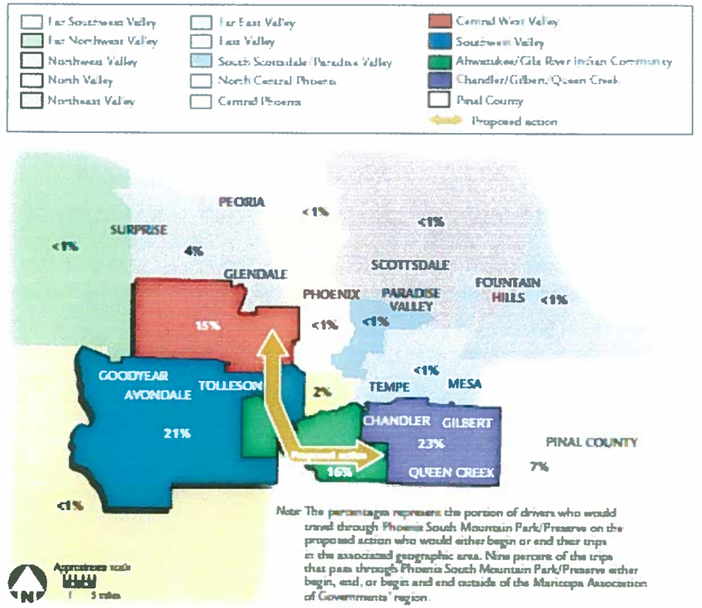
87

Comment 168–The additional details provided in FEIS Figure 3-18 and the response help alleviate some of the "misleading" aspects of the DEIS. Ambiguity remains, however, because of the following quote from the footnote in Figure 3-18*: "Seventy-five percent of travelers anticipated to use the proposed action would be involved in trips beginning or ending in the Study Area itself or in the areas immediately surrounding it."* In reference to FEIS Figure 3-18, reproduced on the next page, 75% is the sum of the percentages in the entire area shown in red, blue, green, and purple. Characterizing points in the red, blue, and purple areas that are 20 or more miles removed from the Study Area as *"immediately surrounding it"* is inappropriate.

Code	Issue	Response
83	**Traffic**	Figure 3-8 is intended to show that efforts were successfully made to avoid existing and planned infrastructure wherever possible. The expansion of the park-and-ride lot has occurred and was accommodated by the freeway design. The building of complete typical interchanges will provide the reasonable access the Arizona Department of Transportation is required to provide. Any plans to develop Gila River Indian Community land south of Pecos Road are unknown. Without additional information, existing traffic on 40th Street was used.
84		Comment noted.
85	**Construction**	The Arizona Department of Transportation typically holds an information meeting at the beginning of construction activities regarding the upcoming improvements and work schedules. The contractor's required activities are established by contractual documents with the Arizona Department of Transportation.
86		Comment noted.
87	**Traffic**	The precision of the origins and destinations study does not allow a more finite detail of analysis than presented in the Final Environmental Impact Statement.

Code	Comment Document

Figure 3-18 Select Link Analysis, Origins and Destinations within and outside the Region, 2035



Note: The percentages represent the portion of drivers who would travel through Phoenix South Mountain Park/Preserve on the proposed action who would either begin or end their trips in the associated geographic area. Nine percent of the trips that pass through Phoenix South Mountain Park/Preserve either begin, end, or begin and end outside of the Maricopa Association of Governments' region.

Source: Maricopa Association of Governments, 2013c; extrapolated analysis

By estimating where travelers in a given location are coming from and where they are going, the project team was able to project 1) the types of trips future users of the proposed freeway might undertake and 2) the distribution of these trips. Seventy five percent of travelers anticipated to use the proposed action would be involved in trips beginning or ending in the Study Area itself or in the areas immediately surrounding it.

88 **Comment 169**–Explanation does not address the issue of why the cut lines could not have been sub-totaled for the Study Area.

89 **Comment 170**–It is acknowledged that the details of the cut-line analysis are added to the Traffic Overview Report. This information is very helpful in understanding the changes in traffic patterns.

Code	Issue	Response
88	**Purpose and Need**	The response presented the justification for the limits of the cut lines presented in the Draft and Final Environmental Impact Statements. The detailed cut-line data are provided in the *Traffic Overview* report and can be subtotaled by the reviewer for any subsegment of the area.
89		Comment noted.

Code	Comment Document

90

Comment 171–The response to this introductory and lead in comment is not adequate because of the specific points addressed in Comments 172 and 173.

91

Comment 172– This comment was intended to add specificity to the results; the two crossings of the Salt River are 10 to 15 miles apart and represent different travel corridors. Cutline 6 is a much better indicator of the crossings of the Salt River on the east side, since both I-10 and Loop 202 (Red Mountain) are in the same travel corridor and both cross the Salt River. Likewise, on the West side, Cutline 1 is a better indicator because it includes both I-10 (Papago) and SR 30.

92

Comment 173–If the cut lines had been subdivided and sub-totals presented, the total of the entire cut line could also have been included. The usefulness of the cut lines to evaluate regional traffic; to the contrary the usefulness of the cutline analysis would have been enhanced by offering the capability to evaluate the travel corridors where the Loop 202 SMF would be most effective.

93

Comment 174–The response to this comment states that: *"The project development process includes detailed analyses of the freeway operational characteristics, including weaving areas along the entire freeway. Basic level of service information is presented in Figure 3-39 on page 3-63 of the Draft Environmental Impact Statement. In the figure, the noted section is shown to experience less than 2 hours of level of service E or F conditions during the morning and evening commuting periods."* No evidence is presented in the DEIS or the FEIS that in fact any detailed analyses of weaving areas was made for the entire freeway. The Level of Service indicated in Figure 3-29 is based solely on volume to capacity ratios, which is considered the basic level of service analysis for the freeway.

94

Comment 174 and Comment 175–Assuming that the response means that a westbound auxiliary lane will be added between the end of the ramp from I-10 and the beginning of the exit ramp to 40th Street and perhaps beyond), it is agreed that the weaving problem in this section would be mitigated.

93

Comment 176–T he response is inadequate because it does not provide any evidence that *"The analyses to support the environmental impact statement process included weaving considerations in the operational performance of the action alternatives."* The response is inadequate. Also refer to Item 174 above.

Comment 177–The response to this comment is inadequate. When the Community granted the State permission to conduct studies for an alignment on Community land, the Community expressed four concerns, one of which was the following quote on Page 3-24

Code	Issue	Response
90		Comment noted.
91	**Traffic**	The response presented the justification for the limits of the cut lines presented in the Draft and Final Environmental Impact Statements. The detailed cut-line data are provided in the *Traffic Overview* report and can be subtotaled by the reviewer for any desired area.
92	**Traffic**	The response presented the justification for the limits of the cut lines presented in the Draft and Final Environmental Impact Statements. The detailed cut-line data are provided in the *Traffic Overview* report and can be subtotaled by the reviewer for any desired area.
93	**Traffic**	The reviewer is correct that the level of service information presented in the Draft and Final Environmental Impact Statements is based on volume-to-capacity ratios, which is appropriate at this level of design to support the planning phase. To clarify, the detailed analysis of the freeway operational characteristics will be completed during the final design phase of project development as the specific design elements, including weaving distances, are finalized.
94		Comment noted.

Code	Comment Document
95	of the DEIS and the FEIS: "*reduction of truck and commuter traffic on 51st Avenue and Beltline Road.*" The Community Alignment, identified in brown in Figure 3-11 in the DEIS and the FEIS, is entirely in the Eastern Segment. It would have a bearing on traffic on 51st Avenue, only if it were to be paired with any of the alignment alternatives in the Western Segment. Regardless of which alignment is selected in the Western Segment and regardless of whether the Community Alignment or the Proposed E1 alignment is selected in the Eastern Segment the result would be a reduction of commuter and truck traffic on 51st Avenue. Thus, the criterion of reducing truck and commuter traffic on Beltline Road becomes, in essence, a criterion to evaluate the entire Proposed Action vis-à-vis the No Action Alternative. Without the Western Section of the Proposed Action, the Community Alignment would end at 51st Avenue and would not serve to relieve traffic on 51st Avenue; on the contrary, without the Western Section of the Proposed Action, the Community Alignment would increase traffic on 51st Avenue.
96	**Comment 178**–The trucks using Beltline Road and 51st Avenue to avoid the Phoenix Metropolitan Area would shift to Loop 202 SMF. To call this shift "redistribution of traffic" is not appropriate.
97	**Comment 179**–The response is not satisfactory. The FEIS does not state if the MAG Travel Model supports the contention that trucks that now use bypass routes will continue to do so. With the proposed action, trucks would have the option of using Loop 202 SMF because the route would consist entirely of freeways, rather than the existing route via I-8 and SR 85, portions of which are non-freeway. To travel between the starting point of the Junction of I-10/I-8 and the ending point of the Junction of I-10/SR 85, truckers now have the option of using I-10 which is about 10 miles shorter than the I-8/SR-85 route and takes about 5 minutes less time during periods when there is no traffic congestion. When the Proposed Action is implemented, the option of using Loop 202 SMF will have about the same travel distance as the I-10 route; in addition, it will take at least 5 minutes less than the I-8 option. Despite signage indicating that I-8/SR 85 is the by-pass route, a trucker would not choose to incur extra travel distance and extra travel time by using the I-8/SR 85 alternative when a shorter, faster, all-freeway route is available.
98	A loaded network file in TransCAD format was received from MAG late during the FEIS review period. An initial evaluation revealed that, the MAG Travel Forecasting Model estimates that in 2035, there would be about 65,000 to 70,000 daily trucks on Loop 202 SMF between I-10 (Maricopa) and 40th Street. Of the total number of trucks, about 14,000 would be heavy trucks. A slightly lower number (60,000 to 65,000) is estimated for the segment of Loop 202 SMF where the alignment would leave the Pecos Road corridor and would be oriented in a southeast/northwest direction. The number of heavy trucks on this segment would also be about 14,000 per day. These numbers indicate that

Code	Issue	Response
95	**Traffic**	As stated on page 3-8 of the Final Environmental Impact Statement, the Eastern and Western Sections were developed to evaluate and compare action alternatives. The page further states that combining the Eastern and Western Sections is necessary to satisfy the project's purpose and need. The commenter's conclusions are correct. However, the comment is regarding a criterion presented by the Gila River Indian Community, not the project team. The criterion is not a differentiator among action alternatives but is a differentiator between the No-Action Alternative and any of the action alternatives, as noted in the comment.
96	**Traffic**	Comment noted.
97	**Traffic**	The Final Environmental Impact Statement notes that the Maricopa Association of Governments regional travel demand model projects that heavy truck traffic will represent approximately 10 percent of the total traffic on the freeway, similar to what is currently experienced on other regional freeways. It does not identify specifically what routes those heavy trucks are currently using. As the comment notes, the time savings for using the freeway will only occur when there is no traffic congestion in the Phoenix metropolitan area. As shown in Figures 1-9 and 1-10 in the Final Environmental Impact Statement, the duration of congested conditions is over 3 hours in the morning and evening.
98	**Trucks**	The 14,000 heavy vehicles per day on the freeway will represent approximately 10 percent of the total daily traffic on the freeway, which is estimated at between 117,000 and 190,000 vehicles per day (see page 3-63 of the Final Environmental Impact Statement). Ultimately, the commenter was provided the requested travel demand model output files and responses to specific questions from the Maricopa Association of Governments two weeks prior to the original end of Final Environmental Impact Statement review period. The review period was later extended for an additional 30 days.

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the assertion in the FEIS that trucks would constitute about 10% of the total traffic on the freeways in the Region is not correct. Furthermore, this information was not readily available and was not disclosed to the stakeholders and the public in the DEIS and FEIS, depriving them of the opportunity to make informed judgments.

99 Table 6-5 on Page 6-5 of The MAG publication "MAG External Truck Travel Model Development," dated May 2010 defines the light, medium, and heavy truck categories in terms of the FHWA Vehicle Classification chart. The "light truck" category is comprised of pickups and vans; the "Medium Truck" category includes buses and all single unit (no trailer) trucks. The "Heavy Truck" category includes all trucks with trailers.

100 **Comment 180**–Response is not satisfactory. If MAG has projections of the number of trucks for "through-transport of freight," these should be presented in the FEIS for key locations throughout the network. The use of a vague statement such as about 10% of the total traffic is misleading because the number of passenger vehicles varies from interchange to interchange along the length of a freeway, while trucks, especially heavy trucks, get on and off the freeway at few locations that serve freight-related land uses. Thus the percentage of trucks, especially heavy trucks, can vary even though the number of heavy trucks might remain constant. Please also see Comment 179.

101 Also, even though serving as a bypass route may not be included in the Purpose and Need, this would not keep truckers using the route as a bypass if it is in fact more attractive than the I-8/SR 85 option (see Comment 179).

102 **Comment 181**–In the sidebar on Page 3-64, quoted below, there is no statement to the effect that the MAG travel model forecast indicates that 10% of total traffic would consist of trucks. Rather, it is stated that 2007 ADOT vehicle classification counts indicate that 90% of the total traffic would consist of non-truck vehicles. The response to the comment is misleading.

> Commercial trucks would use the proposed action. As with all other freeways in the MAG region, trucks would use it for the through-transport of freight, for transport to and from distribution centers, and for transport to support local commerce. And as with travel on all other freeways in the MAG region, the primary users of the proposed action would be automobiles. Latest vehicle classification counts available from ADOT for 2007 show passenger vehicles and other nontruck vehicles make up over 90 percent of all traffic on the freeway system, and it is expected these percentages would not vary with the proposed action.

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Code	Issue	Response
99		Comment noted.
100	Trucks	The Maricopa Association of Governments regional travel demand model provides the number of trucks on each roadway link, but does not specifically identify the origin or destination of every vehicle on each roadway link. The select-link analysis presented in Figure 3-18, on page 3-36, notes that 9 percent of the total vehicles using the freeway would be pass-through, not stopping in the Maricopa Association of Governments' region. Of the pass-through vehicles, approximately 80 percent would be heavy trucks.
101	Trucks	Agree, as stated on page 3-64 of the Final Environmental Impact Statement, commercial trucks will use the freeway.
102	Trucks	The conclusionary statement in the noted text says that "it is expected that these percentages would not vary with the proposed action." "These percentages" refers to the 90 percent passenger car and nontruck vehicles and the remaining 10 percent as heavy trucks.

Code	Comment Document
103	**Comment 182-**The response is vague and evasive. **Comment 183-**Please see Comment 181.
104	**Comment 184-**The DEIS cites the source of the information as MAG Extrapolated data. But the nature of the extrapolation is not described. The source data (the starting point for extrapolation) is not readily available. The MAG model results were not publicly and readily available during the review period of the DEIS. They are still not available readily during the review period of the FEIS. Please see the discussion on Page 25 for documentation about the difficulty of obtaining the information from MAG.
105	**Comment 185-**The response is not adequate because the comment was that the data presented is not sufficient. It is acknowledged that some additional locations are included in the FEIS, but still insufficient to give the reader an understanding of the overall traffic volumes and the system-wide differences between the No Action and Proposed Action Alternatives.
106	**Comment 186, Comment 187, and Comment 188-** ADOT failed to provide adequate response. The responses offer no new information to add or clarify what was contained in the DEIS.
107	**Comment 189**- Of the two alternatives being compared, W59 is closer to the Central Phoenix area. The introduction of this criterion in the last stage of the evaluation has the appearance of a pre-disposition to select the W59 Alternative. If this consideration was addressed in earlier stages of the comparisons, this reader missed it.
103	**Comment 190**-ADOT failed to provide adequate response to the intent of the comment, that in the evaluation "pro" and "con" items should have been identified for each alternative to facilitate review of the DEIS and avoid confusion.
103	**Comment 191**-If the "pro" and "con" items had been identified for each alternative in the DEIS, **it** would have been easier and much less confusing for the stakeholders to agree with, or reject, the conclusion (s) of the Project Team. Also, please see Comment 190 above.
103	**Comment 192**-The additional information presented in the FEIS points to a pre-disposition to select the W59 Alternative. Also, please see Comment 189 above and the potential environmental justice issue discussed in Comment 194.

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Code	Issue	Response
103	**Traffic**	The proposed South Mountain Freeway would be a commuter corridor, helping to move local traffic. As with all other freeways in the region, trucks would use it for the through-transport of freight, for transport to and from distribution centers, and for transport to support local commerce. Nevertheless, the primary vehicles using the proposed freeway would be automobiles. Increasing the use of the State Route 202L (Santan Freeway) by all vehicles is an intended outcome for the region's freeway system.
104		Comment noted.
105	**Traffic**	The Final Environmental Impact Statement included updated traffic projections and added some locations beyond what was presented in the Draft Environmental Impact Statement. Additionally, the *Traffic Overview* report provided more details related to traffic data from the Maricopa Association of Governments' regional travel demand model. Finally, the raw model output was provided to the commenter by the Maricopa Association of Governments for review and use. The Arizona Department of Transportation and Federal Highway Administration believe the additional details provided in the *Traffic Overview* report and changes to the Final Environmental Impact Statement adequately address the comment.
106	**Alternatives**	A side-by-side evaluation of the traffic-related aspects of the No-Action Alternative and action alternative is presented beginning on page 3-27 of the Final Environmental Impact Statement.
107	**Alternatives**	The commenter misquotes the Final Environmental Impact Statement. The text actually says, "The W59 Alternative would provide more direct access to downtown Phoenix." The comparison is derived based not only on its location, but also considering its traffic operational benefits.

Code	Comment Document
108	**Comment 193**-This was not a comment but a reference to the heading in the DEIS and FEIS, to identify the source of the information in Comment 194. No response was needed and none was provided. Comment was noted.
109	**Comment 194**-Chapter 4 of the DEIS presents the mix of single family and multi-family units. The mix of residential properties was not addressed in Chapter 3 of the DEIS in the evaluation of alternatives. This matter has been clarified in the FEIS by the added information that two apartment complexes with a total of 680 units would be demolished. However, there may be an Environmental Justice issue because the multi-family units to be displaced are subsidized housing units. The displacement of the subsidized housing units should have been addressed in the evaluation of alternatives in Chapter 3. Also, the number of units has been revised in the FEIS, increasing the number of units for the W101 Alternative and decreasing the number for the W59 Alternative. The additional information presented in the FEIS points to a pre-disposition to select the W59 Alternative. Also, please see Comments 189 and 192 above.
110	**Comment 195**-Appropriate response is provided.
111	**Comment 196**- The response consists of a single word *"Agree"* but does not explain to what the respondent is agreeing. The comment noted that a relevant piece of information was not included in a bullet item in comparing alternatives. The DEIS and the FEIS have identical wording for the bullet item that was the subject of the comment. The comment was ignored despite the indication of agreement.
112	**Comment 197**-Comment was noted but no additional information was presented in the FEIS.
112	**Comment 198 and Comment 199**-No response is provided, except *"Comment noted."* These two comments are in reference to the differences between the alternatives. The response ignores the issues raised in the comment.
113	**Comment 200**-The key question is when SR-30 will be constructed and opened to traffic. The ADOT website makes no mention of SR 30 under the listing of current projects. The listing of projects indicates that a process is underway for Loop 303 between SR 30 and the Hassayampa Freeway. MAG lists SR 30 in its "Regional Freeway and Highway Program 2011 Update" and indicates that funding would be Post-2026 at a total Cost of over $1.5 billion. SR 30 remains in the 2035 horizon year of the Regional transportation Plan. While it may be true that, historically, facilities in the Regional Transportation Plan have been funded, the lack of significant activity on SR 30 makes it doubtful that funding will be available and if

Code	Issue	Response
108		Comment noted.
109	**Alternatives**	All of the environmental impacts presented in Chapter 4 were considered in the evaluation of alternatives presented in Chapter 3. Text on page 3-69 presents a summary of the comparative evaluation. The impact of residential relocations on environmental justice and Title VI populations is discussed in the *Environmental Justice and Title VI* section beginning on page 4-29 of the Final Environmental Impact Statement
110		Comment noted.
111	**Alternatives**	The agreement was with the first statement in the comment on the Draft Environmental Impact Statement. In response to the second part of the comment, the information presented in that section of Chapter 3 identifies contrasting characteristics of the W59 and W101 Alternatives, so in all cases items in which they are identical are omitted.
112	**Alternatives**	The observations presented in the comments on the Draft Environmental Impact Statement were noted, but no further changes were warranted.
113	**Alternatives**	The State Route 30 project is in the Maricopa Association of Governments *2035 Regional Transportation Plan*, updated in January 2014. It is identified in Group 3, with implementation planned between fiscal years 2027 and 2035. As noted in the text box on page 1-5, the *Regional Transportation Plan* includes only projects for which funding is available or is reasonably expected. Therefore, there is an intent and expectation that the State Route 30 project will be implemented by 2035.

Code	Comment Document

construction will be completed by 2035. It should be noted that SR 30 is not included in the freeway plan presented to the voters in 1985, but Loop 202 SMF was. The portion of SR 30 between Loop 303 (extended south from I-10 to SR 30) is included in the MAG Regional Transportation Plan Freeway Program.

114 **Comment 201-**Adequate response is provided, except that the amount of contingency (in terms of the percentage of estimated construction cost) is not specified.

115 **Comment 202-**This is summary comment and the response summarizes portions of previous responses.

116 **Comment 203-**The response repeats statements made in the DEIS and offers no new substantive information about the points raised in the comment.

Comment 204 and Comment 205-Response is inadequate because no evidence of cooperation with MAG and no evidence as to how or by whom observed conditions were translated into equivalent Levels of Service. The prevailing

117 average speed when LOS E occurs and when LOS F occurs should have been stated. The Traffic Overview Report uses 2030 as the per-lane capacity value for main-line freeway segments. According to the explanations and Table 10 in the Traffic Overview Report, congestion would prevail when the volume to capacity ratio (V/C ratio) reaches 85% of 2030 or a per-lane lane volume of 1,725 vehicles per lane per hour. According to the Highway Capacity Manual (a publication by the Transportation Research Board that is widely used by many jurisdictions for capacity calculations, including ADOT) freeway mainline operating speeds would be only slightly lower than free-flow speeds. If the prevailing speed is 65 miles per hour under light traffic conditions, the speed would drop to about 60 mph when the per-lane volume reaches 1,725. A prevailing speed of about 60 mph would be hard to characterize as congested. Without substantial additional information, stakeholders are being asked to take the statements at face value.

116 **Comment 206-**Inadequate response is provided because the Traffic Overview Report merely states the V/C ranges that result in certain durations of congestion. No explanation or relationship to observed conditions is provided in the FEIS or the Traffic Overview Report.

118 **Comment 207-**If, as stated, in the response, funding for the development of the arterial systems will come from impact fees, it would be reasonable to assume that the arterial network would be developed whether or not the Loop 202 SMF is built. A complete response to this comment should have stated if the identical arterial

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Code	Issue	Response
114		Comment noted.
115		Comment noted.
116	**Traffic**	The freeway is part of the *Regional Transportation Plan* for the Maricopa Association of Governments region. The *Regional Transportation Plan*, as described on pages 1-5 and 1-10 of the Final Environmental Impact Statement, addresses freeways, streets, transit, airports, bicycle and pedestrian facilities, freight, demand management, system management, and safety. The freeway is only one part of the overall multimodal transportation system planned to meet the travel demand needs of the Maricopa Association of Governments region. As noted on page 3-4 of the Final Environmental Impact Statement, however, even better-than-planned performance of transit and other modes would not adequately address the projected 2035 travel demand. The comparison of traffic operational characteristics between the action alternative and the No-Action Alternative is presented in the Final Environmental Impact Statement, beginning on page 3-27. The analysis shows that the action alternatives are responsive to the project's purpose and need and will: · reduce overall traffic on the arterial street system (see Figures 3-12 and 3-13) · optimize travel on the region's freeway system (see Figure 3-12) · reduce the capacity deficiency to levels better than experienced today (see Figures 1-12 and 3-14) · reduce the duration of level of service E or F conditions in key areas of the region's freeway system (see Figure 3-15) · improve travel times on trips within the Study Area and across the region (see Figure 3-17 and Table 3-8) · provide improved regional mobility for areas projected to experience growth in the next 25 years (see Figures 1-7 and 3-18) When all of this is considered in the realm of travel time savings for motorists in the region, the user benefits total approximately $200 million per year (see Table 4-27).
117	**Traffic**	The *Highway Capacity Manual* level of service thresholds for capacity and speed are based on a single peak hour. The analysis in the Final Environmental Impact Statement used a longer period (3 hours) because congested conditions in the Phoenix metropolitan area typically last longer than just 1 hour. Therefore, the capacity and speed thresholds were adjusted slightly from the prevailing thresholds presented in the *Highway Capacity Manual* for the peak hour. Thus the comparison made by the commenter (such as speeds dropping from 65 mph to 60 mph) is not a true apples-to-apples comparison.
118	**Traffic**	The identical arterial street network was used in the analysis of the No-Action Alternative and action alternative. The same planned land use and socioeconomic projections were used in the analysis of the No-Action Alternative and the action alternative. As noted in the Final Environmental Impact Statement *Secondary and Cumulative Impact* section on page 4-179, the area will develop in a similar way with or without the project.

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network was used in the traffic analysis for both the No Action and Proposed Action Alternatives, with the exception of appropriate changes necessary to accommodate the Proposed Action. A complete response to this comment should also have stated if identical socio-economic data were used for the MAG Transportation Model runs which were presented in the DEIS and if the Model was re-run for the 2035 No Action traffic volume forecasts presented in the FEIS.

(119) The second paragraph of the response, does not explain how the "unmet" demand is split between "unmet" demand on arterials, compared to "unmet" demand on the freeways, both under current conditions (Figure 1-12) and in 2035 (in Figure 3-14, not 3-24 as stated in the response). Also unexplained is the methodology used for computing these percentages; it is understood that unmet demand represents where traffic demand exceeds capacity. However, the DEIS (and the FEIS) does not explain: whether the "unmet" demand is computed facility by facility, or by cut-line, or by some other aggregation; whether it is for the morning peak period, or the afternoon peak period, or for a summation for both, or aggregated for the entire day, or in some other manner.

The third paragraph of the response obfuscates the matter, rather than clarify; and it is misleading. It is totally contrary to Footnote "b" in Figures 1-12 and 3-14 in the DEIS.

(120) **Comment 208**-The response implies that the peak hourly traffic volume was computed for each freeway segment for at least 3 hours during each peak period; otherwise it would not be possible to identify V/C ratios and LOS gradations by direction in 2010, 2035 with the No Action Alternative, and 2035 with the Proposed Action. This type of information should have been made available in the DEIS

(121) **Comment 209**-This is an introductory statement leading to Comment 210. No response is necessary and none was given.

(122) **Comment 210**-Explanation (not necessarily complete) is provided as to why truck restrictions cannot be placed on Loop 202 SMF. However, the timetable for upgrading SR 85 to full freeway standards is not presented. The DEIS has references to the fact that the Canamex corridor is designated as I-8/SR 85/I-10/a connection to US-60/US 93 Wickenburg Bypass/US 93 to points north of Wickenburg. Presently, no north-south direct connection exists between I-10 and Wickenburg west of Loop 303.

25

Code	Issue	Response
119	**Traffic**	In each figure, note "b" states that the analysis is based on the 41st Street cut line. The analysis is aggregated based on daily traffic volumes. The details of the analysis are presented in the *Traffic Overview* report.
120	**Traffic**	The volume-to-capacity thresholds for the duration of level of service E and F calculations were applied to the 3-hour peak period, not just the peak hour. Therefore, they were adjusted slightly from the prevailing thresholds presented in the *Highway Capacity Manual* for the peak hour.
121		Comment noted.
122	**Traffic**	Currently, no funding is programmed in the *Regional Transportation Plan* for corridor-wide improvements to State Route 85. The time line for these improvements is unknown. As described on page 3-64, the route between Interstate 10 and Wickenburg would generally follow Wickenburg Road and Vulture Mine Road.

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When construction is completed on Loop 202 SMF in 2020, the most direct route for Canamex trucks traveling between I-8 and Wickenburg would be I-10 Maricopa (between I-8 and Loop 202 SMF), Loop 202 SMF to I-10 Papago, I-10 Papago between Loop 202 SMF and Loop 303, US 60 between Loop 303 and Wickenburg). The DEIS presents no timetable for the completion of the necessary improvements along the Canamex route that might make the designated Canamex route preferable to the route via Loop 202 SMF.

In essence, the response does not dispute that through trucks, including Canamex trucks, will use Loop 202 SMF. The Canamex response is presented in the context of mitigation that should have been provided but was not. The Proposed Action should not rely on uncertain actions by others or other funding sources to develop the Canamex route to Wickenburg.

123 **Comment 211**-This is an introductory statement to subsequent comments. No response was necessary and none was given.

124 **Comment 212**-Response is unsatisfactory because the Purpose and Need identified an Unmet Demand on the transportation system as a whole, not specifically in the Southwest Area. The analysis in the Purpose and Need also showed that the current congestion problems are in the central area with virtually none in the Southwest area. The Purpose and Need identified a need based on growth in the Southwest Area but none of the evaluations were directed at the Southwest Area; rather all evaluations were based on Regional comparisons that were dominated by current and forecasted congestion in the Central Area. The benefits of the Proposed Action will be incidental to the Southwest Area, not to the central corridor area as claimed in the response.

125 **Comment 213**-Satisfactory response is not provided. Since the Regional Planning Agency (in this case MAG) is the conduit for Federal funds, consistency of the timing of construction expenditures with funding allocations is essential. While it may not be stated in the DEIS and FEIS that the Proposed Action must be in compliance with the Regional Transportation Plan, it is mentioned often that it is.

Comment 214- This is an introductory statement to subsequent comments. No response was necessary and none was given.

126 **Comment 215**-The responses to the first, second, fourth and fifth bullets in the comment repeat previous responses and do not add new information. The third bullet is an air quality issue. The response to the last bullet states that the study

Code	Issue	Response
123		Comment noted.
124	**Purpose and Need**	The comment infers the transportation problem is congestion in the central metropolitan area. As presented in Chapter 1 of the Draft and Final Environmental Impact Statements, the purpose and need analysis demonstrated a transportation problem associated with east-west regional mobility in the southwestern region of the Phoenix metropolitan area. The Arizona Department of Transportation, with concurrence from the Federal Highway Administration, has determined that the South Mountain Freeway (as made up by the W59 and E1 Alternatives) is the appropriate solution to the described transportation problem. A contribution of the Preferred Alternative to alleviate congestion in the central metropolitan area would be an incidental benefit of the project and would support a goal of better distribution of regional traffic across the network.
125	**Implementation**	Construction phasing of a project is not an indicator of "consistency." The location and facility type are indicators of consistency. Nowhere in the Draft Environmental Impact Statement is it referenced that the proposed action is needed to comply with the *Regional Transportation Plan*.
126	**Trucks**	The use of the word "generate" in the response was incorrect. The response should have stated that the study considered the amount of truck traffic that would use the proposed freeway if an action alternative were to become the Selected Alternative. As noted in the comment, the Draft and Final Environmental Impact Statements consistently describe the anticipated changes in the distribution of traffic with the freeway in operation. The basic premise of the response was that impacts associated with truck traffic were considered in the study and were disclosed in the Draft and Final Environmental Impact Statements. The response was not intended to introduce a new conclusion as inferred by the commenter.

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considered the amount of truck traffic an Action Alternative would 'generate'." The word "generate" is key because elsewhere in the DEIS and FEIS it is stated the Proposed Action would re-distribute traffic. The word "generate" implies new truck traffic in the corridor due to either new truck-related uses along the corridor or trucks re-routed from other corridors.

127 **Comment 216**-ADOT failed to provide adequate response to this comment because the response re-iterates previous responses and words that appear in the DEIS and FEIS.

127 **Comment 217**-The response is incomplete because no quantitative analysis is provided in the DEIS to support the impacts of the No Action Alternative. Also it fails to mention that the No Action Alternative would avoid any impacts on South Mountain.

127 **Comment 218**-Response acknowledges that the attachments were reviewed but does not say what was done as a result of the review. Therefore the response is not adequate.

128 **DIFFULTY OF OBTAINING MAG TRAVEL FORECASTING MODEL INFORMATION**

The FEIS was released for public review on September 24, 2014. After a review of the traffic-related portions of the FEIS and the ADOT responses to the DEIS Comments, it became apparent that obtaining output from the MAG Travel Forecasting Model and to get answers to some questions about the modeling process. Following is the timeline for the process of obtaining the desired information. In the timeline all dates refer to 2014.

Friday, October 24 -- Telephone call to MAG (Roger Roy) to request information. Mr. Roy advised that information should be directed, preferably via e-mail to Mr. Vladimir Livshits, head of the MAG transportation modeling group.

Monday, October 27 -- E-mail sent to Mr. Livshits listing questions and some travel model forecasting results. On the same date, e-mail response from Mr. Livshits requesting that I explain the reasons for the request for information and to identify on whose behalf I was requesting the MAG information.

October 28 -- The requested details e-mailed to Mr. Livshits.

Code	Issue	Response
127	**Traffic**	All analyses presented in the Final Environmental Impact Statement used state-of-the-practice, scientific community accepted methods, data and assumptions and were updated as appropriate as new data and/or regulatory requirements were disclosed. Updating analyses throughout an environmental impact statement process is common and expected. The Final Environmental Impact Statement reflects those updates. The impacts analysis is presented in Table S-3 beginning on page S-10 of the Final Environmental Impact Statement. In the Section 4(f) Resources portion of the table (see page S-17), it states that no use of Section 4(f) resources would occur for the No-Action Alternative. The exhibits were reviewed in the context of the corresponding comment and the information was considered in the development of the Final Environmental Impact Statement.
128		Ultimately, the commenter was provided the requested travel demand model output files and responses to specific questions from the Maricopa Association of Governments two weeks prior to the original end of Final Environmental Impact Statement review period. The review period was later extended for an additional 30 days.

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November 6 -- E-mail from Mr. Anderson (MAG Director of Transportation) advising that staff is working on preparing the requested information.

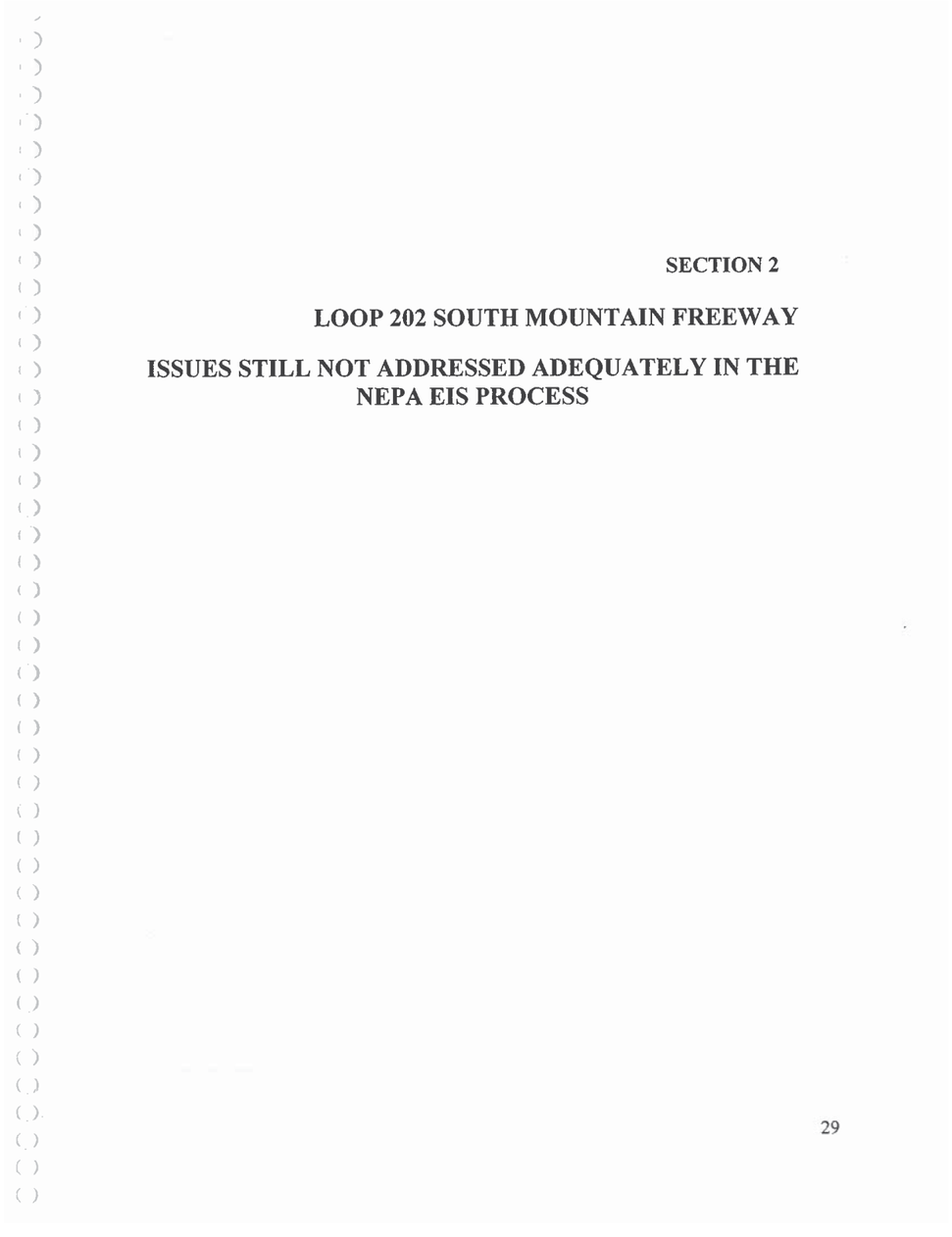
November 13 -- E-mail from Mr. Anderson answering some of the questions and advising that large files containing model output had been up-loaded to an FTP site for me to access.

November 13 to November 18 -- Exchange of e-mails (primarily with Mr. Livshits) to get the answers to questions not fully answered previously, or to complete the information requested in the e-mail sent to MAG on October 28. The help offered and the prompt responses by Mr. Livshits during this period are sincerely appreciated.

November 20 -- Advised by Mr. Anderson via e-mail that one of the output items requested is not available from MAG.

The entire process took about three weeks, indicating that the information was not readily available, even though it was referenced in the FEIS. The information still remains not readily available to the stakeholders and the general public.

Code	Issue	Response

Code	Comment Document
129	

SECTION 2

LOOP 202 SOUTH MOUNTAIN FREEWAY

ISSUES STILL NOT ADDRESSED ADEQUATELY IN THE NEPA EIS PROCESS

29

Code	Issue	Response
129		Section heading.

Code	Comment Document

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LOOP 202 SOUTH MOUNTAIN FREEWAY

ISSUES STILL NOT ADDRESSED ADEQUATELY IN THE NEPA EIS PROCESS

1. **ADOT has made an "a priori" decision that the SMF will be built as a freeway generally along the alignment and between the two termini shown in the Regional Transportation Plan.**

   Following are the reasons and supporting information for this assertion:

   a) A decision that transit was not an alternative was made prior to the submittal of Proposition 300 to the voters in 1985. Early in the decade of the 1980s, transit planning in the Phoenix Metropolitan area was in its infancy. Beyond the preparation of the Short Range Transit Plan, a requirement to obtain Federal funding assistance, very little attention was devoted to transit at the regional level.

   In the decade of the 1990s transit started having a more prominent role in the regional planning process. But, by then, the decision to build Loop 202 SMF as a freeway appears to have been made, as presented in subsequent paragraphs. So any subsequent discussion of transit in the Regional Planning process is irrelevant to Loop 202 SMF.

   The 2001 Update of the MAG Long Range Transportation Plan has a planning horizon year of 2021 and incorporates long range concepts for Light Rail Transit (LRT), including potential corridor extensions along I-10 (Papago), I-10 (Maricopa) and Central Avenue, southerly to Baseline Road. These corridor extensions would potentially serve portions of the Southwest Area. The 2001 LRTP also addresses plans for Local Bus, Express Bus, and Bus Rapid Transit services in the Southwest Area. The 2035 Regional Transportation Plan (published

Code	Issue	Response
130	**Alternatives**	The comment suggests the environmental impact statement process was biased by past planning efforts. Federal Highway Administration and Federal Transit Administration guidance issued in February 2005 (Linking the Transportation Planning and National Environmental Policy Act Process) notes that statewide and metropolitan transportation planning should be the foundation for highway and transit projects. The transportation planning process and the environmental analysis required during project development by the National Environmental Policy Act should work in tandem, with the results of the transportation planning processing informing the National Environmental Policy Act process. Therefore, the Federal Highway Administration was following a standard process of incorporating the metropolitan planning organization transportation plan into the National Environmental Policy Act. However, as required by the National Environmental Policy Act, the Federal Highway Administration evaluated a reasonable range of alternatives to those identified during the planning process, including transit, existing roads, and various alignments for the preferred alternative. Many of the alternatives were those brought forward by the public during the National Environmental Policy Act process. Because the Federal Highway Administration evaluated numerous alternatives to those identified by the local metropolitan planning organization, which is clearly described beginning on page 4 of the Record of Decision, it was not predecisional during the environmental impact statement process.

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in January 2014) includes only the potential corridor extension along I-10 (Papago), leaving the Southwest Corridor without any north-south LRT or other high-capacity transit routes.

131 b) ADOT has applied for Federal funds to build a "freeway." Please see below for quote from Summary Chapter of FEIS under Description of Proposed action, last paragraph.

"ADOT has opted to seek federal highway funds to assist in completing the proposed freeway. For this reason, FHWA is required to ensure that the proposed action complies with the provisions of NEPA and other federal environmental laws. Study of the proposed freeway in the FEIS is based on logical termini, sufficient length, independent utility; construction priorities associated with the Regional Freeway and Highway System, and projected traffic needs."

Also, in the 2001 Update of the MAG Long Range Regional Transportation Plan, Loop 202 SMF is depicted as a "Planned Parkway or Expressway," rather than a Freeway. The 2001 Update is the oldest version of the MAG Long Range Transportation Plan that is available on the MAG website. The actual wording of the ballot for Proposition 300, submitted to the voters in 1985, is not known. Therefore, it cannot be ascertained if at that time a freeway designation was attached to Loop 202 SMF or "Planned Parkway or Expressway." It also cannot be ascertained if a MAG Long Range Regional Transportation Plan existed in 1985. In Figure 1-2 of the FEIS, the general location of Loop 202 is presented, both as proposed and as sumitted to the voters; a footnote for Figure 1-2 emphasizes that the general location proposed is the same as the location submitted to the voters in 1985. However, the figure, text, and the footnotes do not make any mention of a difference in facility type designation ("Parkway or Expressway per the MAG Plan at the time, and "Freeway" as the Proposed Action).

As of the 2003 Update, MAG started using the term "Regional Transportation Plan" (instead of Long Range

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Code	Issue	Response
131	**Implementation**	The comment suggests the environmental impact statement process was biased by the fact that the Arizona Department of Transportation plans to use federal funds to construct the project. The National Environmental Policy Act does not allow this to be a factor in the decision regarding the selection of an alternative. Additionally, the National Environmental Policy Act process can't be started until an action is identified. One of the purposes of the National Environmental Policy Act is to evaluate alternatives to the action being brought forward by an agency.

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Regional Transportation Plan) and dropped the "Parkway or Expressway" category, instead using separate categories of "Freeway" and "Highway." Loop 202 SMF is designated as a 6-lane Freeway for its entire length. Accordingly, at some point between the 2001 and 2003 Updates, a decision was made to build Loop 202 SMF as a Freeway, rather than a Parkway or Expressway. In summary, despite the lengthy presentation of Historical Context in the FEIS, it cannot be ascertained what type of facility the voters believed would be built in the Loop 202 SMF corridor when they approved Proposition 300 in 1985.

132 c) ADOT has built the interchange at I-10 (Maricopa) and Loop 202 in such a configuration that it can be readily extended along Pecos Road. The last sentence in the following quote (Chapter 3, Page 3-48) supports this assertion.

"E1 Alternative (Preferred Alternative)

Horizontal Alignment: *At the point common among all action alternatives, the E1 Alternative would travel to the southeast parallel and adjacent to the Community boundary, crossing over Estella Drive, 51st Avenue, and Ivanhoe Street. In this direction, the action alternative would pass through three ridges of the South Mountains (two of which are in SMPP) before turning to the east. Traveling to the east, the E1 Alternative would follow and replace the Pecos Road alignment north of and adjacent to the Community boundary, and would cross over 17th Avenue, Desert Foothills Parkway, 24th Street, 32nd Street, and 40th Street. The E1 Alternative would then connect to the existing I-10 (Maricopa Freeway)/ SR 202L (Santan Freeway)/Pecos Road system traffic interchange. Table 3-11 presents additional data pertaining to the E1 Alternative."*

The following Responses to Comments (FEIS Volume III, Comments 162 and 175) are further support for this assertion.

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Code	Issue	Response
132	**Implementation**	The comment suggests the environmental impact statement process was biased by the fact that the Arizona Department of Transportation constructed the eastern terminus in such a way that it could be expanded for a potential freeway connection. The National Environmental Policy Act does not allow this to be a factor in the decision regarding the selection of an alternative. The process of developing and screening alternatives was disclosed, robust, comprehensive, objective, and consistent with the National Environmental Policy Act's intent to use a logical, sequential, interdisciplinary approach to establish a range of reasonable alternatives (as concluded in text beginning on page 3-26 of the Final Environmental Impact Statement). In the case of Eastern Section action alternative, the study did consider alternatives that would not connect to the existing interchange at Interstate 10 (Maricopa Freeway) and Pecos Road (see text beginning on page 3-9 and Figure 3-6 in the Final Environmental Impact Statement).

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"Comment 162- In addition to access from 40th Street, access to the park-and-ride lot would be provided off of the westbound on-ramp. This is similar to the park-and-ride operations at Happy Valley Road and Interstate 17. Bus operations and circulation would continue to operate as-is today. Traffic operational characteristics along 40th Street and at the Cottonwood Lane intersection would not be adversely affected by the freeway. The park-and-ride lot has been expanded to its ultimate configuration."

Comment 175-To mitigate this issue, the on-ramp from Interstate 10 would be extended beyond the 40th Street exit ramp to allow traffic to merge onto the State Route 202L main line."

Also, the following quote on the ADOT web site indicates that ADOT built the interchange at I-10 (Papago)/Loop 202 (Santan) with the intent of accommodating Loop 202 SMF.

"The E1 Alternative would connect to the existing I-10 (Maricopa Freeway)/Loop 202 (Santan Freeway)/Pecos Road system traffic interchange. The E1 Alternative would replace the Pecos Road connection. The system traffic interchange was constructed in 2000–2002 to accommodate the western leg of the Loop 202—the proposed freeway."

133 d) Per the following that appear on the ADOT web site, ADOT has acquired, and continues to acquire, right-of-way along Pecos Road.

"ADOT purchased some right-of-way in the corridor along Pecos Road when it was adopted as the alignment in 1988. Currently, ADOT is acquiring right-of-way to preserve the viability of the corridor and to minimize future relocation of homes and businesses as part of the agency's long-range planning efforts. Should another alternative be adopted as a result of this study, ADOT can dispose of the land that has been acquired but is no longer needed.

A Pecos Road alignment for a portion of the proposed South Mountain Freeway was identified in a State-level Environmental Assessment completed in 1988, and that alignment was adopted by the State Transportation Board.

The E1 Alternative, as known as the Pecos Road alignment, is the only action alternative developed for the Eastern Section. Therefore, ADOT,

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Code	Issue	Response
133	**Implementation**	The comment suggests the environmental impact statement process was biased by a history of property acquisitions within the Study Area. More specifically, properties falling within the limits of the Preferred Alternative, as identified in the Final Environmental Impact Statement, were targeted for acquisition. The National Environmental Policy Act does not allow the ownership of right-of-way to be a factor in the decision regarding the selection of an alternative. In this case, property acquisitions by the Arizona Department of Transportation for purposes of implementing the project are done at risk as communicated to the agency by the Federal Highway Administration. If another action alternative were to be ultimately selected, the agency would likely have to place the acquired properties on the market for sale and purchase. The Arizona Department of Transportation attempts to balance the risk against its mission of timely delivery of transportation infrastructure to the traveling public.

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with concurrence from FHWA, identified the E1 Alternative as its Preferred Alternative in the Eastern Section."

134 e) ADOT is advertising (see below) on its web site that consultant services for SMF will be sought in January 2015.

Pending Advertisements

Contract Number	*Contract Description*	*Project Manager/ADOT Group*	*ECS Specialist*	*DBE Goal*
2015-004	*SR202, South Mountain Freeway, General Engineering Consultant Services-The Anticipated Advertisement Date for this contract is late January, 2015*	*Carmelo Acevedo*	*Gregory Wristen*	*TB*

134 f) Per the following quote from the ADOT web site, ADOT has received an unsolicited proposal for a public/private partnership from a group of firms and is seriously considering this approach for the construction of Loop 202 SMF. In addition, ADOT introduced the concept of a design/build process in the FEIS.

"If approved, funding to begin construction of the South Mountain Freeway is available as soon as 2015, according to the state's Five-Year Transportation Facilities Construction Program. ADOT has determined that pursuant to the unsolicited proposal submitted to construct the freeway, construction will follow a public-private partnership helping to speed construction and reduce overall cost of the project. The freeway would not be tolled under any public-private partnership proposal, but would include a private group involved with design, construction and maintenance of the 22-mile-long freeway."

135 2. **As early as 2012, the preparers of the DEIS were, or should have been, aware that population and employment forecasts based on the 2010 U.S. Census were available and that these forecasts were much lower than the forecasts used for the DEIS. The issuance of the DEIS should**

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Code	Issue	Response
134	**Implementation**	The comment suggests the environmental impact statement process was biased by the Arizona Department of Transportation's recent activity related to the implementation of the Preferred Alternative. The National Environmental Policy Act does not allow the procurement of designers and constructors to be a factor in the decision regarding the selection of an alternative. In this case, procurement of designers and constructors by the Arizona Department of Transportation for purposes of implementing the project are done at risk as communicated to the agency by the Federal Highway Administration. The Arizona Department of Transportation attempts to balance the risk against its mission of timely delivery of transportation infrastructure to the traveling public.
135	**Socioeconomic Projections**	Socioeconomic projections are updated every 3 to 5 years by the Arizona State Demographer's Office. The projections by the Arizona State Demographer's Office are produced at the county level and were approved in December 2012. The Maricopa Association of Governments is tasked with producing the sub-county level projections, and those were approved in June 2013 after the Draft Environmental Impact Statement was published, but before the Final Environmental Impact Statement was issued. Under the National Environmental Policy Act, it is common for new data to avail itself and to, therefore, update the environmental impact statement as new data become available. It is not a requirement, however, to stop the environmental impact statement process in its entirety to wait for new information to become available. Completing an environmental impact statement under those terms would be quite difficult and, arguably, the public would not receive benefits associated with a proposed public infrastructure action. In this case, the project team experts were aware that socioeconomic projections were to be made available but it was likely (based on the Draft Environmental Impact Statement content and processes and a qualitative understanding of what the updated information would show and reveal) that conclusions affected by such data would not substantially change. The team undertook a quite acceptable, common, and understood practice of publishing the Draft Environmental Impact Statement while new data were developing and then present the new information in the Final Environmental Impact Statement. The new information would not automatically assume the need for a supplemental document.

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have been delayed until the implications of the revised socio-economic forecasts could have been determined and presented in the DEIS.

Countywide population and employment forecasts for 2020, 2030, and 2040 were available as early as May 2012 and were adopted by the MAG Regional Council in December 2012 (please see **Exhibit 3**, Page 3 in attached MAG document) .

The 2035 population projection in the DEIS exceeded the "new" 2040 projections (6,545,000 for 2035 in the DEIS, compared to 6,175,000 adopted for 2040). Likewise, in the DEIS the 2035 Countywide projection for employment was 3,600,000, compared to the approved 2040 employment projection of 3,096,600. Also, preliminary County- level 2035 population and employment projections were presented to the MAG Population Technical Advisory Committee (POPTAC) for approval in October 2012. These large differences in the population and employment projections that came to light well in advance of the release of the DEIS, were not disclosed in the DEIS. Therefore, stakeholders and public did not have ready access to this vital information during the DEIS review period and lacked adequate information to make informed decisions. Even now, TAZ level socio-economic data remains unavailable readily because it is not included in the FEIS, and the FEIS does not state how and from whom such data may be obtained, if needed, to make an informed judgment.

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The FEIS states in response to DEIS Comment Number 123 in Volume III of Responses to Comments that:

"The analyses in the Draft Environmental Impact Statement used socio-economic and traffic projections at the regional analysis zone and traffic analysis zone levels. At the time of publication of the Draft Environmental Impact Statement, Census 2010-based socioeconomic data at the regional analysis zone and traffic analysis zone levels had not been adopted by the Maricopa Association of Governments and were not available to the project team. Therefore, the data used in the Draft Environmental Impact Statement were the most appropriate information available."

This response fails to mention that sufficient information was available to the preparers of the DEIS as early as October 2012 when preliminary County-level 2035 population and employment forecasts were presented to the Population Technical Advisory Committee (POPTAC) for approval.

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Code	Issue	Response
136	**Socioeconomic Projections**	All socioeconomic and traffic projections used in the study were obtained from the Maricopa Association of Governments. The Maricopa Association of Governments 2013 socioeconomic projections and detailed documentation are available at <azmag.gov/Projects/Project.asp?CMSID=1132&MID=Information%20Services> and were posted on June 25, 2013. The projections can also be accessed in an online viewer on the Maricopa Association of Governments Web site at <geo.azmaq.gov/maps/projections2013/>.
137	**Socioeconomic Projections**	Socioeconomic projections are updated every 3 to 5 years by the Arizona State Demographer's Office. The projections by the Arizona State Demographer's Office are produced at the county level and were approved in December 2012. The Maricopa Association of Governments is tasked with producing the sub-county level projections, and those were approved in June 2013 after the Draft Environmental Impact Statement was published, but before the Final Environmental Impact Statement was issued. Use of the county-level projections without the more detailed regional analysis zone or traffic analysis zone information would have introduced inconsistencies in the Draft Environmental Impact Statement.

Code	Comment Document
138	These revised 2035 forecasts were substantially lower than the forecasts used for the DEIS. These large differences in the population and employment projections that came to light well in advance of the release of the DEIS, were not disclosed in the DEIS. Therefore, the stakeholders and public did not have ready access to this vital information during the DEIS review period and lacked adequate information to make informed judgments. Also in response to Comment 123, the FEIS states that: *"The Maricopa Association of Governments approved new population, employment, housing, and traffic projections in June 2013. The new data are presented in the Final Environmental Impact Statement beginning on page 1-11. ....."* This basis for this statement is not documented. In June 2013 the MAG Regional Council adopted population and employment projections by Municipal Planning Areas and by Regional Analysis Zones for 2040 (please see Exhibit 1, Page 2 of MAG Resolution). However, the resolution adopted by MAG in June 2013 addresses 2020, 2030, and 2040 projections and does not address 2035. The adoption does not even address traffic projections, only socio-economic projections. The FEIS does not state when and by whom 2035 population and employment forecasts at the level of Regional Analysis Zones (RAZ) and Traffic Analysis Zones (TAZ) were approved, and when traffic projections were prepared. As stated previously, preliminary County-level 2035 population and employment projections were presented to the Population Technical Advisory Committee (POPTAC) for approval in October 2012. The Meeting Agenda and the Minutes of POPTAC Meeting on Jan. 22, 2013 (Exhibit 4) indicate that: at that time, work on developing projections at the Municipality level was on-going; that projections through 2020 only were available; that projections through 2040 would be needed by May 2013, the month when the DEIS was released for public review. Thus, 2035 traffic projections could not have been approved in June 2013 because, 2035 TAZ-level socio-economic data was not available until the summer of 2013, per the explanation below provided by MAG by e-mail on November 13, 2014.
139	

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Code	Issue	Response
138	**Traffic**	Socioeconomic projections are updated every 3 to 5 years by the Arizona State Demographer's Office. The projections by the Arizona State Demographer's Office are produced at the county level and were approved in December 2012. The Maricopa Association of Governments is tasked with producing the sub-county level projections, and those were approved in June 2013 after the Draft Environmental Impact Statement was published, but before the Final Environmental Impact Statement was issued. As noted previously, the updated information was incorporated into the Final Environmental Impact Statement.
139	**Socioeconomic and Traffic Projections**	A data set for 2035 was provided by the Maricopa Association of Governments for use in the study. The traffic projections were provided after the adoption of the socioeconomic projections. The Maricopa Association of Governments socioeconomic projections are reviewed with the Maricopa Association of Governments Population Technical Advisory Committee by traffic analysis zone. While the dataset for 2035 from the 2013 Maricopa Association of Governments socioeconomic projections was not adopted, the dataset was produced using the AZ-SMART model, which operates on an annual basis, in line with the approved datasets for 2030 and 2040. The 2035 dataset conforms to the population control totals contained in the Arizona State Demographer's Office projections approved in December 2012. A detailed time line for the Maricopa Association of Governments 2013 socioeconomic projections can be found in the documentation available at <azmag.gov/Documents/IS_2013-06-25_MAG-Socioeconomic-Projections-Documentation-June-2013.pdf>.

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"On June 19, 2013, the MAG Regional Council, by consent, approved the MAG resident population, housing and employment by Municipal Planning Area (MPA) and Regional Analysis Zone (RAZ) for July 1, 2020, 2030 and 2040. Corresponding Traffic Analysis Zone (TAZ) level socioeconomic forecasts were then developed by MAG and provided for transportation modeling in the summer of 2013."

The FEIS also states in response to DEIS Comment Number 123 in Volume III of Responses to Comments that:

"Under the National Environmental Policy Act, it is common for new data to avail itself and to, therefore, update the environmental impact statement as new data become available. It is not a requirement, however, to stop the environmental impact statement process in its entirety to wait for new information to become available. Completing an environmental impact statement under those terms would be quite difficult and, arguably, the public would not receive benefits associated with a proposed public infrastructure action. In this case, the project team experts were aware that socioeconomic projections were to be made available but it was likely (based on the Draft Environmental Impact Statement content and processes and a qualitative understanding of what the updated information would show and reveal) that conclusions affected by such data would not substantially change. The team undertook a quite acceptable, common, and understood practice of publishing the Draft Environmental Impact Statement while new data was developing and then present the new information in the Final Environmental Impact Statement. The new information would not automatically assume the need for a supplemental document."

140 In this case, the data is not "new" but fundamental and vital to many aspects of the EIS for the Proposed Action. The "new" socio-economic forecasts affect many facets of the EIS analyses, including traffic projections, air quality, noise, land use, growth inducement, social conditions, economic implications, water resources, and possibly others. The preparers of the EIS did not reveal in the DEIS that, as stated in the Response to Comment 123, they had a "qualitative understanding" that the new information would not affect any conclusions, significantly. This lack of disclosure raises questions about the nature and scope of the analyses that led to the "qualitative understanding" prior to the release of the DEIS, since these are not disclosed in the FEIS either. The decision not to disclose significant

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Code	Issue	Response
140	**Socioeconomic and Traffic Projections**	At the time of publication of the Draft Environmental Impact Statement, Census 2010-based socioeconomic data at the regional analysis zone and traffic analysis zone levels had not been adopted by the Maricopa Association of Governments and were not available to the project team. Therefore, the data used in the Draft Environmental Impact Statement were the most appropriate information available. Socioeconomic projections are updated every 3 to 5 years by the Arizona State Demographer's Office. The projections by the Arizona State Demographer's Office are produced at the county level and were approved in December 2012. The Maricopa Association of Governments is tasked with producing the subcounty level projections, and those were approved in June 2013 after the Draft Environmental Impact Statement was published, but before the Final Environmental Impact Statement was issued. As noted previously, the updated information was incorporated into the Final Environmental Impact Statement. The Maricopa Association of Governments socioeconomic projections are reviewed with the Maricopa Association of Governments Population Technical Advisory Committee by traffic analysis zone. While the dataset for 2035 from the 2013 Maricopa Association of Governments socioeconomic projections was not adopted, the dataset was produced using the AZ-SMART model, which operates on an annual basis, in line with the approved datasets for 2030 and 2040. The 2035 dataset conforms to the population control totals contained in the Arizona State Demographer's Office projections approved in December 2012. A detailed time line for the Maricopa Association of Governments 2013 socioeconomic projections can be found in the documentation available at <azmag.gov/Documents/IS_2013-06-25_MAG-Socioeconomic-Projections-Documentation-June-2013.pdf>.

Code	Comment Document

information available to the preparers, but not readily available to the stakeholders at the time the DEIS was released, made it impossible for stakeholders to make informed judgments and offer comments based on the entirety of the information available to the preparers.

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3. **Some aspects of the 2035 socio-economic projections in the FEIS appear questionable.**

The socio-economic projections in the FEIS appear to overstate the amount of growth in the Southwest Area. Please see the tabulation and comparison of the DEIS and FEIS socio-economic projections **(Exhibit 1).** The FEIS does not contain or refer to this type of comparison, at all, nor is there any attempt to explain the reasons for the seemingly disproportionate changes between the DEIS and the FEIS projections.

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Code	Issue	Response
141	**Socioeconomic Projections**	Known development projects with varying degrees of investment and jurisdictional approval are input to AZ-SMART, the socioeconomic model used by the Maricopa Association of Governments to develop long-range projections. The datasets, methods, and assumptions used in the model are reviewed and approved by the Maricopa Association of Governments Population Technical Advisory Committee. Detailed documentation for the 2013 socioeconomic projections is available at <azmag.gov/Documents/IS_2013-06-25_MAG-Socioeconomic-Projections-Documentation-June-2013.pdf>. The observation reached by the commenter is correct. The reduction in total population is generally at the outer years of the horizon (2030 to 2035); most of the growth slated for the Study Area occurs in the earlier years of the horizon. Therefore, the Study Area experienced a lower percentage decrease in projected population in 2035 than the county as a whole. The values presented in the Final Environmental Impact Statement are accurate.

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The 2035 population projection in the FEIS is reduced by 154,000 in the Study Area, compared to the DEIS; the population in the rest of the County is reduced by 615,000. The 2035 employment in the Study Area is reduced by 169,000, compared to 539,000 in the rest of the County. The questions that arise are:

- Why were the DEIS projections so far off the mark for the rest of the County while the projections for the Study Area are reasonably close?
- Why did the MAG socio-economic forecasting tools produce such seemingly anomalous results? Is there a better explanation than "the Southwest Area is the fastest growing area in the County" that appears both in the DEIS and FEIS?
- Is the projected population growth of 918,000 in the Study Area between 2010 and 2035 reasonable in view of 1,034,000 projected for the rest of the County? (As a side note, the population of the City of Phoenix was approximately 1,000,000 in 1990. In 2010, the City's population was approximately 1.5 million.) Likewise is the employment growth of 558,000 in the Study Area reasonable compared to 627,000 in the rest of the County?

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4. **The FEIS is presented much like a DEIS and contains information that is significantly different than the DEIS.**

Because of the introduction of an entirely revised set of socio-economic projections, the FEIS contains much new data in addition to all the information that relies on the socio-economic projections. The description of the existing environment was changed also, where appropriate, such as the use of 2012 traffic counts in lieu of older counts. Because of such changes to the description of existing conditions, and the changes to the projections and analyses, the FEIS, in fact, represents a re-circulation of the DEIS, despite the change in name.

The FEIS has the appearance of a new, rather than revised, document because the changes are described only in the Prologue in general terms. On the other hand, the specific changes in text, tables, or figures are not identified. So the reader must refer to the DEIS to identify the revisions between the DEIS and the FEIS. This is a time-consuming process and makes it very difficult for the reader to determine the magnitude of the differences between the DEIS and the FEIS and to judge whether or not the

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Code	Issue	Response
142	**Socioeconomic Projections**	Known development projects with varying degrees of investment and jurisdictional approval are input to AZ-SMART, the socioeconomic model used by the Maricopa Association of Governments to develop long-range projections. The datasets, methods, and assumptions used in the model are reviewed and approved by the Maricopa Association of Governments Population Technical Advisory Committee. Detailed documentation for the 2013 socioeconomic projections is available at <azmag.gov/Documents/IS_2013-06-25_MAG-Socioeconomic-Projections-Documentation-June-2013.pdf>. The observation reached by the commenter is correct. The reduction in total population is generally at the outer years of the horizon (2030 to 2035); most of the growth slated for the Study Area occurs in the earlier years of the horizon. Therefore, the Study Area experienced a lower percentage decrease in projected population in 2035 than the county as a whole. The values presented in the Final Environmental Impact Statement are accurate.
143		The prologue to the Final Environmental Impact Statement provided details related to the changes between the Draft Environmental Impact Statement and the Final Environmental Impact Statement (see page xi in the Final Environmental Impact Statement). As noted on page xi of the Prologue to the Final Environmental Impact Statement, the purpose and need for the project was reevaluated using the new socioeconomic projections related to regional traffic, and the conclusions reached in the Draft Environmental Impact Statement were reconfirmed in the Final Environmental Impact Statement. Similarly, it is noted on page xi that the alternatives development and screening process was validated using the updated socioeconomic and traffic projections.

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results presented in the FEIS are commensurate with the changes in the inputs.

Many of the FEIS responses to comments ask the reader to take the statements at face value, such as "The 'Purpose and Need Statement' was confirmed," or "the selection of the range of alternatives was confirmed." In many cases, no real explanation is provided. Since some traffic projections in the FEIS do not make sense in view of the changes in the socio-economic data, the lack of additional explanation is not justifiable.

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5. **The planning horizon year is too short.**

The FEIS states that construction of the freeway will take about five to six years (please see Chapter 3, Alternatives, Page 3-60, first column). This would place opening of the entire freeway in or about the year 2020, with a planning horizon year of 2035, or 15 years after opening day. It is generally accepted practice to use a planning horizon year about 20 years beyond the opening date of the freeway.

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6. **Interim impacts with phased construction are not presented.**

Phased construction is mentioned in the FEIS, but no discussion of interim traffic impacts is presented. It is stated that construction would start at about the same time along Pecos Road and along the W59th Avenue alignment, but the middle section connecting the two initial segments would come later. The FEIS does not disclose whether the initial segment to be constructed along Pecos Road will have substantial, if any, benefits for the traveling public until such time as the middle section is constructed.

If during construction, cultural resources are encountered along the middle section, where this might be likelier than any other segment, any benefits of the freeway along Pecos Road would not be realized for a long time while impacts would be incurred, such as property takings, access route changes for residents, construction period impacts, and the possibility that westbound motorists on Loop 202 Santan and northbound I-10 (Maricopa) will use Pecos Road inadvertently and come to a stub end, with exits only into residential areas.

Code	Issue	Response
144	**Planning Horizon**	The Arizona Department of Transportation and Federal Highway Administration used a planning horizon of 2035 so that the study would be consistent with the planning horizon for the *Regional Transportation Plan* and regional air quality conformity analysis.
145	**Temporary Construction Impacts**	Potential temporary construction impacts are described beginning on page 4-173 of the Final Environmental Impact Statement.

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Also, the traffic forecasts indicate that the Pecos Road segment would have lower traffic volumes compared to the Western Section along the 59th Avenue alignment. It would be prudent not to start the construction of the Pecos Road segment until after it is ascertained that there would be no issues to delay the construction of the middle and 59th Avenue segments. Without the central portion, the portion of the route along 59th Avenue would have independent utility as an initial segment, whereas the Pecos Road segment would not.

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7. **The FEIS does not address truck traffic, adequately.**

The FEIS states that: *"The Maricopa Association of Governments regional travel demand model projects that truck traffic would represent approximately 10 percent of the total traffic on the proposed freeway, similar to what is currently experienced on other regional freeways such as Interstate 10, State Route 101L, and U.S. Route 60."* This general statement in the FEIS is the only indication of the number of trucks on Loop 202 SMF. On the other hand, ADOT truck traffic counts indicate that many segments along existing freeways in the region have substantially more than 10% truck traffic, while some others have less. Despite requesting additional truck traffic information in the DEIS comments, no additional information is presented in the FEIS.

If as stated in the FEIS, the MAG travel model forecasts truck traffic volumes, why not present the number of trucks for the freeways, including Loop 202 SMF? A mere mention of a percentage figure may lead to incorrect conclusions. As an example, with the information available in the FEIS, the total 2035 traffic on the SMF would be about 132,000 vehicles per day between 24th Street and 40th Street, whereas the traffic would be 120,000 vehicles per day between 40th Street and I-10 (Maricopa). If we were to apply the 10% truck traffic assumption, we would have about 13,200 trucks per day between 24th Street and 40th Street and about 12,000 trucks per day between 40th Street and I-10 (Maricopa). Thus, the FEIS suggests, and one would conclude that the residential area served by 40th Street interchange would result in a net increase in truck traffic of about 1,200 per day. (The term "net" is used because some trucks would get off and some trucks would get on the freeway at the interchange.) Does the MAG model indicate this level of truck activity at the 40th Street interchange? This level of activity at an interchange serving primarily a

Code	Issue	Response
146	**Trucks**	The total number of heavy trucks that will use the main line of the freeway will vary by location, but average out to approximately 10 percent. The percentage presented in the Final Environmental Impact Statement is an approximation that generally represents the entire corridor. Similarly, other regional freeways experience varying levels of heavy truck usage, but the 10 percent level is the average. It is not anticipated that a high number of heavy trucks will use the traffic interchanges serving primarily residential areas. Again, the percentage is approximate and varies and is presented for travel on the freeway main line. The quotes presented in the comment are correct in that trucks will use the freeway for varying purposes. A detailed discussion of trucking in the region is presented on page 3-64 of the Final Environmental Impact Statement.

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residential area is very unlikely, yet that would be the conclusion if the reader were to rely on the "percentage" calculation.

Following are a series of quotes from the ADOT web site:

"The primary purpose of the proposed freeway is not to create a "truck bypass" for downtown Phoenix. The proposed freeway is part of a transportation system developed to improve mobility in the region by increasing capacity and providing alternatives to allow traffic—including truck traffic—to bypass already congested routes. Like other "loop" freeways in the Phoenix metropolitan area, the proposed South Mountain Freeway would be a commuter corridor, helping to move local traffic between the eastern and western portions of Maricopa County."

This paragraph says, although not in so many words, that some trucks that now use congested routes will use Loop 202 SMF as a by-pass.

"Commercial trucks would use the proposed freeway. As with all other freeways in the MAG region, trucks would use it for the through-transport of freight, for transport to and from distribution centers, and for transport to support local commerce. And as with travel on all other freeways in the MAG region, the primary users of the proposed action would be automobiles."

This quote is stating, in essence, that trucks would in fact use Loop 202 SMF for through-transport, which is described in the following quote from the ADOT web site.

"Traffic that neither starts nor ends in the Valley is referred to as "pass-through." An example is I-10 traffic that originates in Los Angeles and passes through the Phoenix area, without stopping, on the way to El Paso."

These quotes support the contention in the DEIS comments that, intended or not, trucks will use Loop 202 as a by-pass for through or intra-regional trips.

The MAG Traffic Forecasting Model produces truck traffic forecasts for all freeways and arterials in the Region. An initial review indicates that there are large differences between the model results and the "approximately 10% trucks on the freeways" quoted in the FEIS. Because the MAG forecast information became available late in the FEIS review period, a detailed analysis of the truck traffic patterns, such as origin-destination pairs, could not be performed. The difference between actual model results and the 10% statement in the FEIS remains unexplained. Please refer to Section 1, Comment 179 for further details of the truck forecasts and to Section 1, Page 25 for the timetable for availability of the MAG model results.

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8. **The DEIS and the FEIS assume that SR-30 would be connected to the Proposed Action alignment in the Western Section even though funding for this route is not assured.**

The inclusion of SR 30 is not appropriate in the context of the analysis for the proposed action. In the event that construction of SR30 is delayed to a post-2035 period due to lack of funding or due to environmental constraints, the traffic projections for Loop 202 SMF would be substantially affected. The FEIS did not contain a sensitivity analysis to assess the implications of this eventuality. The No Action alternative also includes SR-30, albeit without a good definition of how it would connect with the arterial system and thence to I-10 (Papago). If SR 30 were to be included in the No Action alternative, a possible reasonable variation would have been the construction of the W59 portion of the Proposed Action between I-10 and SR 30 as part of an extension of SR 30.

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9. The DEIS and FEIS contain conclusions without presenting appropriate backup; also, some referenced information is not readily available.

The following is one of the Comments on the DEIS (Item 6.m in the Comments).

"Numerous tables and figures carry the notation "Source: MAG, Year, Extrapolated Analysis." The actual source of the data should have been provided and the data provided by MAG should have been included in the FEIS as an Appendix or should have been made readily available and accessible. The Traffic Overview Report, which is the basis of much of Chapter 3 (Alternatives) in the DEIS, does not offer anything further in this matter. Without more backup information, it is not possible to ascertain what constitutes "extrapolation," and whether the extrapolation reflects the full extent and significance of the information available. Difficulties were encountered in obtaining source information from MAG and are documented on Page 25 of Section 1 of this report. Identify specific

In Chapter 3 (Alternatives) of the FEIS, traffic volume, capacity, and other information is provided in spotty manner and does not offer the opportunity to ascertain if the information provided for selected locations is reasonable and if it fits in with the overall picture. For example, in Figure 3-38, daily traffic volumes are presented for the length of South Mountain Freeway

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147	**Implementation**	The State Route 30 project is in the Maricopa Association of Governments *2035 Regional Transportation Plan*, updated in January 2014. It is identified in Group 3, with implementation planned between fiscal years 2027 and 2035. As noted in the text box on page 1-5, the *Regional Transportation Plan* includes only projects for which funding is available or is reasonably expected. Therefore, there is an intent and expectation that the State Route 30 project will be implemented by 2035.
148	**Traffic**	The citation for most of the traffic-related figures and tables in the Final Environmental Impact Statement is to Maricopa Association of Governments 2013c, extrapolated analysis. In the references and bibliography that citation refers to the Regional Travel Demand Model Output (TransCAD). As noted on page 1-4 of the Final Environmental Impact Statement, the reference to "extrapolated analysis" means that the analysis was performed using Maricopa Association of Governments data as inputs. In most instances the data was extracted directly from the travel demand model output and presented in the figures and tables. Additional details are presented in the *Traffic Overview* report. Ultimately, the commenter was provided the requested travel demand model output files and responses to specific questions from the Maricopa Association of Governments two weeks prior to the original end of Final Environmental Impact Statement review period. The review period was later extended for an additional 30 days.

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between I-10 (Maricopa) and I-10 (Papago) and several other locations in the immediate vicinity of the Proposed Action. Traffic volume forecasts for other freeways are presented in spotty manner. Therefore routing changes attributable to the Proposed Action cannot be identified by stakeholders and the public on the basis of readily available information." The difficulties encountered in obtaining source information from MAG are documented on Page 25 of Section 1 of this report.

In the FEIS Response to Comments (Volume III, Page B467, Comments 184 and 185), the following two-part explanation is provided.

Comment 184-*"The sidebar, "How are MAG data used in the DEIS?" on page 1-4 of the Draft Environmental Impact Statement explains the citation notations. In general, the source of the traffic data is the Maricopa Association of Governments regional travel demand model, and analyses were performed using Maricopa Association of Governments data as inputs."*

Comment 185- *"The desired information is available in Figure 3-12, on page 3-29 of the Draft Environmental Impact Statement. This figure presents traffic volumes with and without the proposed freeway at locations similar to those noted in the comment."*

The response is not adequate because the nature and extent of the "extrapolation" is not explained. The difficulties encountered in obtaining source information from MAG are documented on Page 25 of Section 1 of this report.

The lack of some readily available information makes it impossible for stakeholders and the public to make informed judgments about points in favor and against the Proposed Action.

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10. **Some reasonable alternatives were not considered at all or dismissed without due consideration.**

The transit and arterial options were eliminated early in the NEPA process, in the modal screening stage, because they allegedly would not meet the Purpose and Need. This action precluded the formulation of possible alternatives for the Southwest Area to address specific needs with a multi-modal approach that would combine freeway, transit, and/or arterial

Code	Issue	Response
149	**Alternatives**	These alternatives and the combination of alternatives were evaluated in the Final Environmental Impact Statement. However, they did not satisfy the project purpose and need. A partial freeway from Interstate 10 (Papago Freeway) to Laveen Village is not reasonable because it would not meet the proposed freeway's identified purpose and need. Construction of Carver Road between 59th and 51st avenues is included in the City of Phoenix *General Plan* transportation element. Improving 51st Avenue between Carver and Pecos roads would require permission of the Gila River Indian Community. Any alternative on Gila River Indian Community land must consider tribal sovereignty. Tribal sovereignty is based in the inherent authority of Native American Tribes to govern themselves. While this notion of sovereignty is manifested in many areas, generally Native American land is held in trust by the United States. Native American communities have the authority to regulate land uses and activities on their land. States have very limited authority over activities within tribal land (see page 2-1 of the Final Environmental Impact Statement). From a practical standpoint, this means that the Arizona Department of Transportation and Federal Highway Administration do not have the authority to survey tribal land, make land use (including transportation) determinations directly affecting tribal land, or condemn tribal land for public benefit through an eminent domain process. Based on previous comments from the Gila River Indian Community related to pass-through traffic using 51st Avenue, the Gila River Indian Community would not support any activities that would increase unwanted traffic through its communities. Extending Pecos Road to 51st Avenue would not be feasible because a portion would be located on Gila River Indian Community land, and the Gila River Indian Community has not provided permission to construct a facility on its land. Based on previous comments from the Gila River Indian Community related to pass-through traffic using 51st Avenue, the Gila River Indian Community would not support any activities that would increase unwanted traffic through its communities. Improvements to the arterial street system in the southwestern area (Laveen and Estrella Villages) are planned in the City of Phoenix *General Plan*. For these reasons, alternatives similar to the hybrid alternative proposed in the comment were eliminated from detailed study.

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elements. One such alternative, "the hybrid" alternative, was suggested in the DEIS comments, but was dismissed without due consideration in the Responses to Comments in the FEIS. The primary reasons for rejection were that the hybrid alternative would not meet the Purpose and Need and that it would necessitate construction on land owned by the Community. Comment 135 in Section 1 of this report, describes the hybrid alternative and enumerates points in its favor.

Also Comment 136 in Section 1 explains why an alternative should not be dismissed without thorough analysis, solely because it traverses Community land. Several such alternatives, including the so-called Community Alternative as depicted in Figure 3-25 of the DEIS and FEIS, were also dismissed early in the NEPA process, primarily on the basis that they would traverse Community land.

The reasons for the dismissal of these and other alternatives are not presented with adequate supporting information to enable the stakeholders and the public to make informed judgments.

As distinct from the Community Alternative mentioned above, the Community submitted yet another alternative during the DEIS comment period. That alternative would lie generally along Baseline Road between 59th Avenue and I-10 and would connect to I-10, either as an extension of US 60 or at Baseline Road. As in the case of similar alternatives submitted early in the NEPA process, the Community's recent submittal appears to have been ignored in the FEIS.

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Code	Issue	Response
150	**Alternatives**	The alternative submitted by the Gila River Indian Community is included in the Final Environmental Impact Statement (see page 3-10 of the Final Environmental Impact Statement) and Record of Decision (see page 14).

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EXHIBIT 1

COMPARISON OF SOCIO-ECONOMIC FORECASTS IN DEIS AND FEIS

DEIS	2005 MAG Estimates	2010 Census	2035 MAG Forecasts in DEIS	Growth 2005 to 2010 Amount	%Growth	Average Annual % Growth	Growth 2010 to 2035 Growth Amount	%Growth	Average % Annual	Persons per job DEIS 2005	2010 Census	DEIS 2035
Population												
County	3,681,000	3,824,000	6,545,000	143,000	3.88%	0.78%	2,721,000	71.16%	2.85%	2.11	2.24	1.82
Study Area	1,308,000	1,506,000	2,578,000	198,000	15.14%	3.03%	1,072,000	197.09%	6.57%	2.93	2.96	2.09
County other than Study Area	2,373,000	2,318,000	3,967,000	-55,000	-2.32%	-0.46%	1,649,000	167.17%	5.57%	1.82	1.93	1.68
Employment												
County	1,748,000	1,707,000	3,600,000	-41,000	-2.35%	-0.47%	1,893,000	110.90%	4.44%			
Study Area	447,000	509,000	1,236,000	62,000	13.87%	2.77%	727,000	142.83%	5.71%			
County other than Study Area	1,301,000	1,198,000	2,364,000	-103,000	-7.92%	-1.58%	1,166,000	181.71%	6.06%			

FEIS	N/A	2010 Census	2035 MAG Forecasts in FEIS	N/A	N/A	N/A	Growth Amount	%Growth	Average % Annual	N/A	2010 Census	FEIS 2035
Population												
County		3,824,000	5,776,000				1,952,000	51.05%	2.04%		2.24	2.00
Study Area		1,506,000	2,424,000				918,000	60.96%	2.44%		2.96	2.27
County other than Study Area		2,318,000	3,352,000				1,034,000	44.61%	1.78%		1.93	1.84
Employment												
County		1,707,000	2,892,000				1,185,000	69.42%	2.78%			
Study Area		509,000	1,067,000				558,000	109.63%	4.39%			
County other than Study Area		1,198,000	1,825,000				627,000	52.34%	2.09%			

Comparison of MAG Population and Employment Forecasts for DEIS and FEIS

	DEIS	FEIS	Difference (FEIS-DEIS) Amount	Percent
Population				
County	6,545,000	5,776,000	-769,000	-11.75%
Study Area	2,578,000	2,424,000	-154,000	-5.97%
County other than Study Area	3,967,000	3,352,000	-615,000	-15.50%
Employment				
County	3,600,000	2,892,000	-708,000	-19.67%
Study Area	1,236,000	1,067,000	-169,000	-13.67%
County other than Study Area	2,364,000	1,825,000	-539,000	-22.80%

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Exhibit reviewed.

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COMMENT 2

SWCA Comments on ADOT South Mountain Freeway Final EIS (September 2014)

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152		Title page.

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ADEQUACY OF THE NEPA ANALYSIS					
Chapter	Section / Subsection	Page(s)	Resource Area	SWCA Comment on Draft EIS	ADOT Responses to Comments on Draft EIS
1	All	1-22	General NEPA – Purpose and Need	Chapter 1 of the DEIS, Purpose and Need, presents a lengthy and elaborate explanation of the need for the proposed freeway ("as recognized in over 25 years of transportation planning") based on Phoenix area growth rates from 1950 to the present day coupled with MAG growth projections to 2035. However, even if one accepts these future growth projections as reasonably accurate and that the "need" is real, there is nothing in the stated "purpose" to demonstrate why the proposed freeway remedy must be built within the selected Study Area and nowhere else. In short, other reasonable alternatives exist that could also fulfill the stated Purpose and Need, but these have been arbitrarily excluded from detailed analysis in violation of 40 CFR 1502.14. (Also see question/answer 2a of "Forty Most Asked Questions Concerning CEQ's NEPA Regulations": "In determining the scope of alternatives to be considered, the emphasis is on what is 'reasonable' rather than on whether the proponent or applicant likes or is itself capable of carrying out a particular alternative. Reasonable alternatives include those that are practical or feasible from the technical and economic standpoint and using common sense, rather than simply desirable from the standpoint of the applicant.")	219 As discussed beginning on page 1-11 of the Draft Environmental Impact Statement, the proposed action is needed to serve projected growth in population and accompanying transportation demand and to correct existing and projected transportation system deficiencies. The analyses in the Draft Environmental Impact Statement used socioeconomic and traffic projections at the regional analysis zone and traffic analysis zone levels. At the time of publication of the Draft Environmental Impact Statement, Census 2010-based socioeconomic data at the regional analysis zone and traffic analysis zone levels had not been adopted by the Maricopa Association of Governments and were not available to the project team. Therefore, the data used in the Draft Environmental Impact Statement were the most appropriate information available. As presented in text beginning on page 3-1 of the Draft Environmental Impact Statement, a comprehensive alternatives development and screening process was undertaken that represented an objective, defensible, and fully disclosed logical, sequential, step-by-step process using data and expertise from multiple disciplines applied to a comprehensive set of alternatives to establish the appropriate range of reasonable alternatives for detailed study in the Draft Environmental Impact Statement. The Maricopa Association of Governments approved new population, employment, housing, and traffic projections in June 2013. The new data are presented in the Final Environmental Impact Statement beginning on page 1-11. The purpose and need and analysis of alternatives were updated and reevaluated using these new socioeconomic projections and corresponding projections related to regional traffic. While new projections based on the 2010 Census showed a lower anticipated population and vehicle miles traveled in 2035 than the previous projections, the conclusions reached in the Draft Environmental Impact Statement were validated	SWCA Review of Final EIS In direct contravention of 40 CFR 1503.4, CEQ Regulations Implementing NEPA – Response to Comments, as well as FHWA's own NEPA guidance contained in Technical Advisory T 6640.8A, Section J(2), Comments and Coordination, ADOT's response to this comment on the DEIS completely evades the core point of the comment, which is that "there is nothing in the stated 'purpose' to demonstrate why the proposed freeway remedy must be built within the selected Study Area and nowhere else." The commenter readily conceded at the outset that despite a reliance on demonstrably outdated socioeconomic data, the need for the freeway may be justified ("even if one accepts these future growth projections as reasonably accurate and that the 'need' is real"). And yet the response from ADOT focuses only on the status of socioeconomic and traffic projection data and blatantly ignores the central issue raised by the commenter—that the arbitrary 'Study Area' into which it has been decided the South Mountain Freeway must fit is an artificial construct, and that the Purpose and Need for the project—in short, additional freeway capacity in the southwest Valley linking I-10 south of the metro Phoenix area (i.e., the Maricopa Freeway) to I-10 west of Phoenix (i.e. the Papago Freeway)—could also be fulfilled by routes outside the artificially limited boundaries of the ADOT 'Study Area.' ADOT's response to this comment on the DEIS should be considered invalid—it is non-responsive to the points raised.

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Code	Issue	Response
153	**Purpose and Need**	As presented in Chapter 1, *Purpose and Need*, the Study Area was based on where transportation modeling indicated the transportation problem would be diminished by an additional facility. Through transportation modeling, analysis of socioeconomic data, and coordination with stakeholder agencies, the Study Area for the project was strategically positioned where a gap exists in the regional transportation system's loop freeway network (see Chapter 3, page 3-3 of the Final Environmental Impact Statement). Even so, contrary to what the commenter states, alternatives outside the Study Area were rigorously and comprehensively evaluated during the alternatives development and screening process. Ultimately, none of the alternatives outside the Study Area could address the identified purpose and need (see text beginning on page 4 of the Record of Decision). Current transportation guidance (developed during the time frame of the South Mountain Freeway environmental impact statement) states that transportation objectives developed during the transportation planning process and identified in a statewide or metropolitan transportation plan can be the primary source of a project's purpose and need statement. The transportation planning process enables State and local governments and metropolitan planning organizations, with the involvement of stakeholders and the public, to establish a vision for a region's future transportation system, define a region's transportation goals and objectives for realizing that vision, decide which needs to address, and determine the time frame for addressing these needs. Out of the process emerge proposed projects intended to meet the needs and achieve the objectives of the plan.

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ADEQUACY OF THE NEPA ANALYSIS					
Chapter	Section / Subsection	Page(s)	Resource Area	SWCA Comment on Draft EIS	ADOT Responses to Comments on Draft EIS
					in the Final Environmental Impact Statement (see Chapter 3, *Alternatives*). The Federal Highway Administration and the U.S. Environmental Protection Agency approved the air quality conformity determination that includes the Maricopa Association of Governments regional travel demand model that produced the traffic projections used in the traffic analysis for the project (see Final Environmental Impact Statement page 3-27). The model projects demand for multiple modes of travel, including automobile, bus, and light rail. Driving patterns and alternative modes of transportation are among the key model inputs used to forecast travel demand in the Study Area.
1	All	1-22	General NEPA – Study Area	NEPA requires that the EIS "Rigorously explore and objectively evaluate all reasonable alternatives [emphasis added]," including those "not within the jurisdiction of the lead agency" (40 CFR 1502.14(e) and (c)). In reviewing the April 2013 South Mountain Freeway (Loop 202) Draft Environmental Impact Statement and Section 4(f) Evaluation, we find no technical or scientific rationale or justification presented as to why the project Study Area comprises the precise area it does. Why is it declared to fall along these particular boundaries and not others? The impression is that these boundaries were drawn for political and procedural reasons to comport with MAG's and ADOT's previous planning efforts, rather than to allow a comprehensive, objective NEPA assessment. Specifically, this Study Area appears configured so as to exclude freeway alternatives further south or west (including potential alternatives in Pinal or Pima Counties), thus deliberately avoiding evaluation of other "reasonable alternatives" to the Pecos Road alignment.	220 The parameters for delineation of the Study Area are described in Chapter 1, Purpose and Need, of the Draft and Final Environmental Impact Statements as the area defining the transportation problem. As presented in the chapter, transportation models were used to determine where the characteristics of the transportation problem would diminish, and, generally, it is at these locations where the definition of the Study Area took shape. This effort was coordinated with stakeholder agencies, including the U.S. Environmental Protection Agency. The statement that the project team excluded alternatives outside of the Study Area is not supported by the facts presented in the Draft Environmental Impact Statement. Alternatives considered in the Draft Environmental Impact Statement included many that were located outside of the Study Area. Examples include the Riggs Road Alternative (see page 3-9), the State Route 85/Interstate 8 Alternative (see page 3-9), the U.S. Route 60 Extension (see page 3-12), the Interstate 10 Spur (see page 3-12), and the Central Avenue Tunnel (see page 3-12).

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Code	Issue	Response
154	**Purpose and Need, Alternatives**	As presented in Chapter 1, *Purpose and Need*, the Study Area was based on where transportation modeling indicated the transportation problem would be diminished by a major transportation facility. Through transportation modeling, analysis of socioeconomic data, and coordination with stakeholder agencies and the public, the Study Area for the project was strategically positioned where a gap exists in the regional transportation system's loop freeway network (see Chapter 3, page 3-3 of the Final Environmental Impact Statement, and page 4 of the Record of Decision). Even so, alternatives outside the Study Area were rigorously and comprehensively evaluated during the alternatives development and screening process. The Riggs Road Alternative (Final Environmental Impact Statement page 3-9 and Record of Decision page 7), which the commenter mentions specifically, is primarily on Gila River Indian Community land, and the Gila River Indian Community has not allowed detailed study of an alternative using its land. Furthermore, the Riggs Road Alternative would not complete the loop system, thereby causing substantial out-of-direction travel for motorists. Ultimately, none of the alternatives outside of the Study Area, including the Riggs Road Alternative, could address the identified purpose and need with regard to regional travel demand and existing and projected transportation system capacity deficiencies. Similar discussions are provided in the Final Environmental Impact Statement for the other alternatives outside the Study Area. Current transportation guidance (developed during the time frame of the South Mountain Freeway environmental impact statement process) states that transportation objectives developed during the transportation planning process and identified in a statewide or metropolitan transportation plan can be the primary source of a project's purpose and need statement. The transportation planning process enables State and local governments and metropolitan planning organizations, with the involvement of stakeholders and the public, to establish a vision for a region's future transportation system, define a region's transportation goals and objectives for realizing that vision, decide which needs to address, and determine the time frame for addressing these needs. Out of the process emerge proposed projects intended to meet the needs and achieve the objectives of the plan.

ADEQUACY OF THE NEPA ANALYSIS

Chapter	Section / Subsection	Page(s)	Resource Area	SWCA Comment on Draft EIS	ADOT Responses to Comments on Draft EIS	SWCA Review of Final EIS
						preferred route identified in the 1985 MAG Regional Transportation Plan and, judging from this EIS, ADOT has never wavered in its determination to construct along this route. Granted, there are *variations* to the full course of the Pecos Road alignment, particularly at the proposed western sections of the South Mountain Freeway, but any true alternatives to the Pecos Road alignment are summarily dismissed at the outset. Thus, for ADOT's response to state that "Alternatives considered in the Draft Environmental Impact Statement included many that were located outside of the Study Area" is disingenuous at best. None of the alternatives listed in the response as examples was given more than a cursory glance before being immediately, and without adequate justification, eliminated from further consideration. In particular, we can find no reasonable justification for why the 'Riggs Road Alternative" (page 3-9 of the EIS) was not carried forward for detailed analysis. This alternative route would capably serve to complete the linkage between Interstate 10 south of Phoenix and I-10 west of Phoenix, thus allowing long-distance traffic from Tucson or other points south, or from greater Los Angeles and other points west, to bypass the congestion of downtown Phoenix. This functionality should be weighed against the numerous air quality, noise, visual, and other adverse effects of routing the proposed freeway along Pecos Road directly adjacent to a heaviliy developed residential area (Ahwatukee). To state that the alternative was eliminated from further study because it doesn't neatly complete a symmetrical loop around Phoenix by joining with the Santan Freeway at I-10,

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All	All	All	General NEPA – Omitted, Outdated, and Inaccurate Information Used as Basis for Impact Analysis and Public Comment	Standard practice in preparing NEPA documents, per CEQ regulations at 40 CFR 1502.24 ("Methodology and Scientific Accuracy"), is to use, and to present to the public, the "best available scientific and technical information. Moreover, in accordance with Section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001 (Public Law 106-554; H.R. 5658), the federal Office of Management and Budget (OMB) issued Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility, and Integrity of Information Disseminated by Federal Agencies, which state they are "designed to help agencies ensure and maximize the quality, utility, objectivity and integrity of the information that they disseminate (meaning to share with, or give access to, the public)" and, furthermore, that "It is crucial that information Federal agencies disseminate meets these guidelines." (OMB 2002) It is our assessment that ADOT has failed in the *South Mountain Freeway (Loop 202) Draft Environmental Impact Statement and Section 4(f) Evaluation* to present to the public the	221 Comment noted. Specific comments are addressed below. 222 Air Quality The data presented in Figure 4-18 of the Draft Environmental Impact Statement are included to demonstrate that emissions of criteria pollutants have decreased and continue to decrease. More recent data merely make a stronger case that these emissions have declined and do not change the conclusion. The monitoring data presented beginning on page 4-60 of the Draft Environmental Impact Statement demonstrate pollutant trends in the Study Area. More recent data merely make a stronger case that these emissions have declined and do not change the conclusion. Where information was deemed important to decision-making—for example, more recent trends in attainment status for various criteria pollutants—that information has been included. See for example the discussion on particulate matter that begins on page 4-61. Pinal County is not included in the Study Area and is, therefore, not discussed. All nonattainment areas presented in Figure 4-20 on page 4-61 of the Draft Environmental Impact	as envisioned by MAG RTP planners nearly 30 years ago, is not justification enough to dismiss it from detailed analysis (in fact, this is precisely the kind of arbitrary and capricious decision-making that the National Environmental Policy Act was designed to prevent). The statement that the Riggs Road alternative doesn't fulfill predetermined regional transportation planning goals is similarly insufficient—perhaps such restrictive goals should be reconsidered in light of the multiple adverse effects presented by the Pecos Road alignment and the significant residential and commercial development that has occurred on the adjacent lands since the 1985 RTP was put forth. Air Quality: • Contrary to ADOT's assertion, Figure 4-18 was not updated with more recent readily available information identified previously. • Ambient monitoring data remains unchanged from that of the DEIS. • It is unclear how the study area for the air quality resource was established and why a nonattainment area in such close proximity to the project was ignored (i.e., the Pinal County PM10 and PM2.5 nonattainment areas). The FEIS should provide a clear justification on how the study area was selected and should not disregard the fact that the Pinal County PM2.5/PM10 nonattainment areas are real and should be shown as such on Figure 4-20. In addition the figure still does not accurately present the current nonattainment boundaries in Maricopa County. • Figure 4-24 was not updated with more recent readily available information. A quantitative hotspots

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155	**Air Quality**	The purpose of Figure 4-18 is to demonstrate that emissions of criteria pollutants are decreasing and continue to do so. More recent data confirm and strengthen the trend, but do not change the conclusion. Therefore, updating the figure would be of no substantive benefit. There is no substantive benefit to updating ambient monitoring data for the same reasons as mentioned previously—newer data strengthen the conclusions in the Final Environmental Impact Statement, but do not change them. The core of the comment regarding the air quality study area seems to be the exclusion of nonattainment areas near the Study Area. The Pinal County particulate matter ($PM_{2.5}$ and PM_{10}) nonattainment areas were not included in the air quality study area because they are far enough from the project (15 miles) that the emissions from the project would not impact those areas. The receptor diagrams in the air quality technical report demonstrate that concentrations drop to zero or near zero within a few hundred meters of the project. The air quality study area was determined through interagency consultation and neither of the air quality agencies involved in the interagency consultation process (Arizona Department of Environmental Quality or the U.S. Environmental Protection Agency, Region 9) requested that these areas be included in the analysis. The current nonattainment and maintenance areas for particulate matter (PM_{10}), carbon monoxide, and ozone in Maricopa County are presented in the Record of Decision, Figure 23, on page 69. The main point of the remainder of the air quality comments is that they have not been incorporated in the Final Environmental Impact Statement. These points are discussed at an appropriate and standard level of detail in the air quality technical report and are incorporated into the Final Environmental Impact Statement by reference. The air quality technical report, along with other technical appendices have always been available to the public. It should be noted that the commenter states that vehicle miles traveled and vehicle mix are critical and should be discussed in the Final Environmental Impact Statement—again, this information is incorporated by reference and was requested by a commenter earlier in project development. The commenter incorrectly states that a hot-spot analysis was conducted for mobile source air toxics. A hot-spot analysis was only conducted for carbon monoxide and particulate matter (PM_{10}). The Draft Environmental Impact Statement analysis included a draft carbon monoxide dispersion modeling analysis and a qualitative particulate matter (PM_{10}) analysis. However, the Final Environmental Impact Statement analysis had to meet transportation conformity requirements; conformity requires that the year of peak emissions be modeled, which was determined to be 2035 for both pollutants. The quantitative particulate matter (PM_{10}) analysis only addressed 2035 because it was first completed for the Final Environmental Impact Statement and this is the only required year. Since the carbon monoxide analysis was an update of the Draft Environmental Impact Statement analysis, and since both years were modeled in the Draft Environmental Impact Statement, both were presented in the Final Environmental Impact Statement for continuity, even though only 2035 was technically required.

(Response 155 continues on next page)

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				"best available" scientific and technical information. This is particularly true of the following resources and associated impact analyses. Air Quality: • The data presented in Figure 4-18 *Comparison of National Economic and Demographic Growth Indicators and Air Emissions, 1970-2005*, is outdated. The U.S. EPA website http://www.epa.gov/airtrends/aqtrends.html#comparison provides data through 2011. • The subsection fails to include a discussion of more recent ambient monitoring data for calendar years 2011 and 2012. The MCAQD *2011 Air Monitoring Network Review* is readily available (http://www.maricopa.gov/aq/divisions/monitoring/docs/pdf/2011_Network_Assessment.pdf) and should have been employed in the analysis. Furthermore, the most recent available ambient monitoring data from 2012 should have been incorporated into the DEIS. These data are available at: http://www.epa.gov/airdata/ • Figure 4-20 *Nonattainment Areas for Particulate Matter, Carbon Monoxide, and Ozone, Maricopa County*, is not up-to-date. While footnote "b" attempts to address an expansion to the 8-hour ozone nonattainment area, it does not include the Pinal County PM2.5 nonattainment area approximately 15 miles to the south of the project. An interactive GIS map available on ADEQ's website identifies the current nonattainment boundaries in the vicinity of the project http://cisweb.azdeq.gov/arcgis/emaps/?topic=nonattain	Statement are current. As clarification, the title of Figure 4-20 was changed in the Final Environmental Impact Statement from "Nonattainment Areas for Particulate Matter, Carbon Monoxide, and Ozone, Maricopa County" to "Nonattainment and Maintenance Areas for Particulate Matter, Carbon Monoxide, and Ozone, Maricopa County." 40 Code of Federal Regulations § 93.111(c) was followed to conduct a qualitative analysis for particulate matter (PM10) for the proposed action. This analysis complied with National Environmental Policy Act requirements for the development of the Draft Environmental Impact Statement. In December 2010, the U.S. Environmental Protection Agency established transportation conformity guidance for performing quantitative particulate matter (PM2.5 and PM10) hot-spot analyses for transportation projects and established a 2-year grace period. U.S. Environmental Protection Agency conformity guidance continues to allow qualitative particulate matter (PM10) hot- spot conformity analyses for analyses that were started before or during the grace period and if the final environmental document for the project is issued no more than 3 years after issuance of the draft environmental document. A particulate matter (PM10) qualitative analysis was performed for this project because the initial air quality technical analysis repor for the proposed action was produced in October 2005. The Arizona Department of Transportation and Federal Highway Administration have updated the qualitative analysis to a quantitative analysis for the Final Environmental Impact Statement to ensure that a state-of-tne-art analysis is completed for the proposed project. The results of the analysis are summarized in the prologue to the Final Environmental Impact Statement (page xiii) and are more fully described beginning on page 4-68 of the Final Environmental Impact Statement. The carbon monoxide and particulate matter (PM10) analyses demonstrated that the proposed freeway would not contribute to any new localized violations, increase the frequency

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155 (cont.)		The Maricopa Association of Governments regional travel demand model projects that truck traffic will represent approximately 10 percent of the total traffic on the freeway, similar to what is currently experienced on other regional freeways such as Interstate 10, State Route 101L, and U.S. Route 60. As disclosed in the Final Environmental Impact Statement, it is expected that "true" through-truck traffic (not having to stop in the metropolitan area) will continue to use the faster, designated, and posted bypass system of Interstate 8 and State Route 85 (see page 3-64 of the Final Environmental Impact Statement).
156	**Vibration-related Impacts**	As stated in the response to comments on the Draft Environmental Impact Statement, no federal requirements are directed specifically to highway traffic-induced vibration. All studies completed by highway agencies to assess the impact of operational traffic-induced vibrations have shown that both measured and predicted vibration levels are less than any known criteria for structural damage to buildings. No mitigation is warranted.

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				• Figure 4-24 *Priority Mobile-Source Air Toxics Emissions, 1999, On-road Versus Other Sources*, presents outdated information. More recent data should have been obtained from: http://www.epa.gov/ttn/chief/eiinformation.html • While we agree the EPA transportation guidance provided on December 20, 2010, established modeling guidance for performing transportation conformity along with a 2-year grace period. However, based upon the FHWA's *Information: Interim Guidance Update on Mobile Source Air Toxic Analysis in NEPA* released on December 6, 2012, states "At the end of this grace period, i.e., beginning December 20, 2012, project sponsors should use MOVES to conduct emissions analysis for NEPA purposes." http://www.fhwa.dot.gov/environment/air_quality/air_toxics/policy_and_guidance/aqintguidmem.cfm Noise: • Vibration from blasting is qualitatively discussed in the Topography, Geology, and Soils section of the DEIS; however, vibration from non-blasting construction activities and from operational impacts is not discussed anywhere within the DEIS. Procedures for screening and analyzing for vibrational impacts from construction and highway operation are provided in the U.S. Department of Transportation Federal Transit Administration "Transit Noise and Vibration Impact Assessment" (2006): http://www.fta.dot.gov/documents/FTA_Noise_and_Vibration_Manual.pdf • The DEIS notes that "To further clarify the process of noise analysis and the evaluation of noise abatement, ADOT adopted a Noise Abatement Policy (NAP), last updated in 2007" (pg. 4-80). However, the most recently issued	or severity of any existing violation, or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones. The mobile source air toxics discussion was also updated to reflect the Federal Highway Administration's 2012 guidance. This discussion begins on page 4-77 of the Final Environmental Impact Statement. 223 – NOISE/TRAFFIC There are no federal requirements directed specifically to highway traffic induced vibration. All studies the highway agencies have done to assess the impact of operational traffic induced vibrations have shown that both measured and predicted vibration levels are less than any known criteria for structural damage to buildings. The noise analysis was updated for the Final Environmental Impact Statement using most recent Federal Highway Administration and Arizona Department of Transportation policy and traffic projections provided by the Maricopa Association of Governments in August 2013. This updated analysis begins on page 4-88 of the Final Environmental Impact Statement. No substantial differences between the analyses presented in the Draft and the Final Environmental Impact Statements resulted. As stated in the Council on Environmental Quality's Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act, environmental impact statements should be analytic rather than encyclopedic (40 Code of Federal Regulations Part 1502.2(a). Those noise regulations of direct consequence to the proposed action were discussed. 224 – WATER/GROUNDWATER As noted on page 4-97 of the Draft Environmental Impact Statement, although groundwater level data in Ahwatukee Foothills Village were shown from 1972 to 1992, this information was gathered from the U.S. Geological Survey in 2009. Groundwater data in other areas may indeed be more current. This	significantly impacted by construction related vibration impacts? What mitigation measures are proposed to ensure potential vibration impacts will remain less than significant? • The FEIS indicates the most recent ADOT guidance was used, but it is unclear if it was applied properly.. In our comments to the DEIS we specifically identified various laws that should have been addressed in ADOT's noise analysis. ADOT ignores the application of the laws and simply states that, "[T]hose noise regulations of direct consequence to the proposed action were discussed." • The EIS should clearly identify applicable laws and guidelines which are the basis for determining whether significant impacts may occur and to aid in the selection of mitigation measures. Water Resources: • The best source of information on water levels in wells in Arizona is the Arizona Department of Water Resources, either the well registry or the Groundwater Site Inventory databases. Despite being mentioned specifically in public comments, ADOT continued to rely on the USGS, which is not as comprehensive a data source with respect to groundwater levels. • Several responses were provided to comments regarding the analysis of the Foothills Community water supply. In response to the public comments, in the FEIS ADOT made minor text changes to remove mention of City of Phoenix effluent as an available water

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157	**Noise**	The noise analysis presented in the Final Environmental Impact Statement uses the most recent Arizona Department of Transportation Noise Abatement Policy (last updated in 2011), which was formally approved by the Federal Highway Administration, and traffic projections provided by the Maricopa Association of Governments in August 2013. Both the Noise Control Act of 1972 and the Quiet Communities Act of 1978 addressed emissions from transportation vehicles and equipment, machinery, appliances, aircraft, and other products in commerce. Based on this authority, the U.S. Environmental Protection Agency developed noise emission standards and controls for vehicles, which are enforced by the U.S. Department of Transportation. The noise emissions of motor vehicles are used in the Federal Highway Administration's noise prediction model (Traffic Noise Model), which was used on this project (see Final Environmental Impact Statement beginning on page 4-88). The noise regulations of other agencies have limited (U.S. Department of Housing and Urban Development and local noise ordinances) or no applicability (Federal Transit Administration—for federally funded transit projects) to the project. U.S. Department of Housing and Urban Development regulations consider noise in the acquisition of undeveloped land and noise exposure to existing developments. The Federal Highway Administration's Procedures for Abatement of Highway Traffic Noise and Construction Noise specifies abatement criteria for undeveloped land and existing housing. These criteria were used to determine mitigation for the project (see Final Environmental Impact Statement beginning on page 4-88). Local noise regulations are intended to address nuisance noise. They address emissions from modified motor vehicle exhausts, loud performances, and nighttime activities. Page 4-174 of the Final Environmental Impact Statement discusses the mitigation measures to be used to address the noise generated during construction, including nighttime construction. These commitments are confirmed in Table 3, beginning on page 38, of the Record of Decision. The Occupational Safety and Health Administration Occupational Noise Exposure, Hearing Conservation Amendment applies to on-the-job worker exposure to noise. These exposure limits will apply to highway construction workers in compliance with the Arizona Department of Transportation's safety policy.
158	**Water Resources**	Groundwater data in other areas may be more current; however, this additional level of detail would not assist the environmental impact statement decision-making process because groundwater levels are not a differentiating factor among action alternatives and because each action alternative is located in a similar area and follows a similar vertical profile.

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				ADOT Noise Abatement Policy is dated July 13, 2011; it superseded the 2007 version cited in the DEIS. It does not appear that the DEIS utilized the most recent ADOT Noise Abatement Policy in the noise analysis. The latest copy is available here: http://www.azdot.gov/highways/EPG/EPG_Common/Documents_Technical_Noise.asp • The DEIS includes an incomplete review of the regulations regarding noise. The only regulations analyzed in the DEIS for noise impacts in any detail are those dealing with the Federal Highway Administration Noise Abatement Criteria (found in 23 CFR 772), and the ADOT Noise Abatement Plan dated 2007 (which isn't even the most up-to-date version). The following additional laws and guidelines could also impact the project: ○ Noise Control Act of 1972, as amended (PL 92-574, 42 USC 4901 et seq.); ○ The Quiet Communities Act of 1978 (42 USC 4913) promoting the development of state and local noise control programs; ○ U.S. Department of Transportation Federal Transit Administration (FTA) guidelines that specifically addresses issues of community noise (FTA-VA-90-1003-06); ○ Occupational Safety and Health Administration (OSHA) Occupational Noise Exposure, Hearing Conservation Amendment (Federal Register 48[46]:9738-9785); ○ U.S. Department of Housing and Urban Development (24 CFR 51.101(a)(8)); and ○ County, city, or local noise ordinances applicable to the project.	information would not alter the conclusions of this section of the Draft Environmental Impact Statement. The comment is correct that wastewater effluent is not available as a replacement source and is not being used. The City of Phoenix did operate a wastewater reclamation facility in this area, but it was removed from service and demolished. The City of Phoenix still owns the property, but all facilities have been removed from the site. Thus, only two water sources are available for irrigation and lake supply for the Foothills Community Association: the well that would be acquired and potable water from the City of Phoenix. The discussion on page 4-100 of the Draft Environmental Impact Statement, "In the event that well replacement were to be impossible, Arizona Department of Transportation would still replace the water that would be lost through the acquisition." 225 – SocioEcon/Purpose & Need The analyses in the Draft Environmental Impact Statement used socioeconomic and traffic projections at the regional analysis zone and traffic analysis zone levels. At the time of publication of the Draft Environmental Impact Statement, Census 2010-based socioeconomic data at the regional analysis zone and traffic analysis zone levels had not been adopted by the Maricopa Association of Governments and were not available to the project team. Therefore, the data used in the Draft Environmental Impact Statement were the most appropriate information available. The Maricopa Association of Governments approved new population, employment, housing, and traffic projections in June 2013. The new data are presented in the Final Environmental Impact Statement beginning on page 1-11. The purpose and need and analysis of alternatives were updated and reevaluated using these new supply. These changes do not address the specific comment raised, particularly in #262. This comment was specifically about the indirect effects of losing that water supply and having it replaced with the only choice of replacement water left—City of Phoenix potable water. The FEIS does not analyze these indirect effects in any way; nor does the comment explain why it would be inappropriate to address these indirect effects. • Two very specific indirect effects were raised about impacts to the community and golf course. The response does not adequately address the issue or concern raised by the commenter nor does it provide sufficient information to support why these specific effects weren't addressed. • In effect, ADOT has fully agreed with the public comment that effluent is not a viable option, but then has failed to actually carry that information through any analysis of direct or indirect impacts.

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159	**Water Resources**	Impacts from well/water acquisition will be mitigated through well or water replacement; therefore, there will be minimal impact to the golf course and the Foothills Community Association. This is clearly stated in the Draft and Final Environmental Impact Statements. The discussion in the Final Environmental Impact Statement (see page 4-108) indicates that reclaimed wastewater would not be available; however, the conclusion is appropriate, "In the event that well replacement were to be impossible, [the Arizona Department of Transportation] would still replace the water that would be lost through the acquisition." Secondary and cumulative impacts related to groundwater are discussed beginning on page 4-179 of the Final Environmental Impact Statement. Specific analysis of the indirect impacts from the loss of water to the noted facilities was not included because, if affected, the water will be replaced by the Arizona Department of Transportation.

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				Water Resources: Analysis of water availability makes use of outdated and/or erroneous information, in two specific instances. • Water levels are referenced from 1992; more recent information is readily available from the Arizona Department of Water Resources (https://gisweb.azwater.gov/waterresourcedata/) • A feasibility study regarding water availability in the Ahwatukee Foothills area dated 1996 is relied upon to assess viable sources of replacement water for lost groundwater wells. Reliability on this report has resulted in erroneous information, as it indicates that effluent is available as a source of water. The referenced effluent plant was removed in the late 1990s and is no longer a viable source of replacement water. Socioeconomics: • Growth projections should have cited 2012 Arizona Department of Administration (ADOA) estimates, rather than 2009 Maricopa Association of Governments (MAG) projections—the MAG data significantly overstates future growth compared to current ADOA projections. • DEIS assessments of real estate and homes values are based on 2006 data—i.e., data from before the recent recession and housing market downturn began. This is misleading. More current datasets are available and should have been presented and used for impact analysis in the DEIS. • Though ADOA projections and other recent data sources are preferable, at the very least ADOT could have consistently utilized readily available	socioeconomic projections and corresponding projections related to regional traffic. While new projections based on the 2010 Census showed a lower anticipated population and vehicle miles traveled in 2035 than the previous projections, the conclusions reached in the Draft Environmental Impact Statement were validated in the Final Environmental Impact Statement (see Chapter 3, Alternatives). The traffic analysis demonstrated that the proposed project is needed today and will continue to be needed into the future. The new projections were also used to update the air and noise analyses for the Final Environmental Impact Statement (see sections beginning on pages 4-68 and 4-88, respectively).	

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				2010 Census data rather than 2000 Census data (no explanation is given as to why this was not done). It is a great disservice to the general public and stakeholder groups for ADOT to present outdated and inaccurate data in the DEIS in its representation of environmental and social conditions around the proposed Loop 202 South Mountain Freeway. For most members of the public, the opportunity to comment on the Draft EIS is the only real chance they will have to voice their opinions and concerns. The impact analyses contained in the April 2013 DEIS are, in many cases, based on documents and data which are known to be inaccurate. If the inputs are flawed, the conclusions in the DEIS are likewise flawed. Thus, ADOT is presenting an EIS analysis that is not accurate, yet will likely be the only version of the document that the overwhelming majority of the public will ever have the opportunity—or ability—to comment on.	
AIR QUALITY					
Ch. 4	General Comment	-	Air Quality	The DEIS discussion is incomplete or lacking in the following areas: • There is no discussion with regard to federally listed Class I areas. The Clean Air Act and its supporting regulations are intended to protect human health, our natural and man-made environments, and to preserve visibility of scenic vistas by preventing the degradation of air quality; • Provides no quantitative or qualitative discussion on air quality impact difference between the alternatives during construction (e.g., fugitive dust emissions during construction, emissions due to concrete batch or hot-mix asphalt plants, construction workforce and non-road equipment tailpipe emissions; • Provides no discussion with regard to	226 – AIR Quality Mobile sources are not regulated for impacts on visibility in Class 1 areas (40 Code of Federal Regulations § 51.307). Quantification of short-term impacts associated with construction or maintenance activities is not required; qualitative discussion may be found under Mitigation on page 4-85 of the Final Environmental Impact Statement. The proposed high-occupancy vehicle lane is discussed on page 3-19 of the Draft Environmental Impact Statement. Cumulative impacts are discussed on page 4-167 of the Draft Environmental Impact Statement. Vehicle traffic mix projections were provided by Maricopa Association of Governments and are consistent with the regional conformity analyses; they are discussed in greater detail in the air quality technical report prepared for the project. The results of the analyses are summarized in

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160	**Air Quality**	Mobile sources are not regulated for impacts on visibility in Class I areas (40 Code of Federal Regulations Section 51.307) and neither of the air quality agencies involved in the interagency consultation process (Arizona Department of Environmental Quality or the U.S. Environmental Protection Agency, Region 9) requested that Class I areas be included in the analysis. Qualitative discussions regarding construction activities are found under *Mitigation* on page 4-85 of the Final Environmental Impact Statement. Maintenance activities mentioned by the commenter (i.e., repaving, re-striping, landscaping maintenance) will be construction-like activities, although at a smaller scale, and will have similar, but more often less impact than construction activities.

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Ch. 4	Figure 4-18	4-58	Air Quality	The data presented in Figure 4-18 *Comparison of National Economic and Demographic Growth Indicators and Air Emissions, 1970-2005*, is outdated. The U.S. EPA website http://www.epa.gov/airtrends/aqtrends.html#comparison provides data through 2011.	See comment 225 above.	This comment was not addressed in Comment 225 and the FEIS was not updated with the latest readily available data. For the purposes of NEPA and public disclosure the analysis should be based on the latest readily available data.
Ch. 4	Subsection - Criteria Pollutants	4-58 thru 4-59	Air Quality	While this section describes attainment and nonattainment areas it is completely silent on maintenance areas. This is important as the Study Area is located in a currently designated CO Maintenance Area.	227 – Air Quality The maintenance area is discussed in the subsection, Carbon Monoxide, on page 4-59 Draft Environmental Impact Statement. As clarification, the title of Figure 4-20 was changed in the Final Environmental Impact Statement from "Nonattainment Areas for Particulate Matter, Carbon Monoxide, and Ozone, Maricopa County" to "Nonattainment and Maintenance Areas for Particulate Matter, Carbon Monoxide, and	Change was made.

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161	**Air Quality**	Socioeconomic projections are updated every 3 to 5 years by the Arizona State Demographer's Office. The projections by the Arizona State Demographer's Office are produced at the county level and were approved in December 2012. The Maricopa Association of Governments is tasked with producing the sub-county level projections, and those were approved in June 2013 after the Draft Environmental Impact Statement was published, but before the Final Environmental Impact Statement was issued. The new data are presented in the Final Environmental Impact Statement beginning on page 1-11. These new projections were used to update other sections, including *Air Quality* (beginning on page 4-68). Figure 4-18 was not updated because the comparison of national economic and demographic growth indicators and air emissions show the same trend of increasing vehicle miles traveled and decreasing emissions of principal air pollutants. Updating the figure would neither change the conclusions of the environmental document or aid in decision-making.
162		Comment noted.

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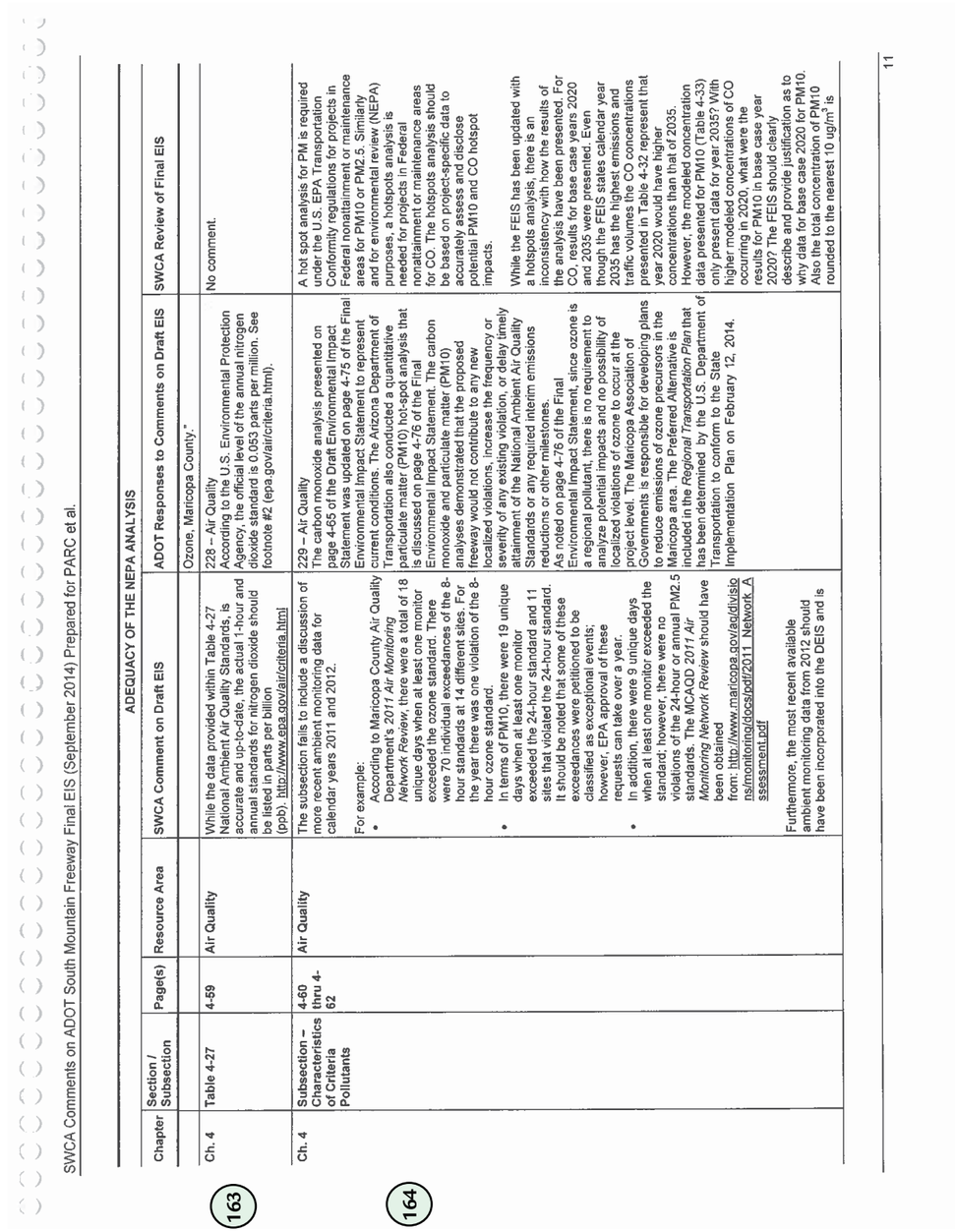

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				Ozone, Maricopa County.*		
Ch. 4	Table 4-27	4-59	Air Quality	While the data provided within Table 4-27 National Ambient Air Quality Standards, is accurate and up-to-date, the actual 1-hour and annual standards for nitrogen dioxide should be listed in parts per billion (ppb). http://www.epa.gov/air/criteria.html	228 – Air Quality According to the U.S. Environmental Protection Agency, the official level of the annual nitrogen dioxide standard is 0.053 parts per million. See footnote #2 (epa.gov/air/criteria.html).	No comment.
Ch. 4	Subsection – Characteristics of Criteria Pollutants	4-60 thru 4-62	Air Quality	The subsection fails to include a discussion of more recent ambient monitoring data for calendar years 2011 and 2012. For example: • According to Maricopa County Air Quality Department's *2011 Air Monitoring Network Review*, there were a total of 18 unique days when at least one monitor exceeded the ozone standard. There were 70 individual exceedances of the 8-hour standards at 14 different sites. For the year there was one violation of the 8-hour ozone standard. • In terms of PM10, there were 19 unique days when at least one monitor exceeded the 24-hour standard and 11 sites that violated the 24-hour standard. It should be noted that some of these exceedances were petitioned to be classified as exceptional events; however, EPA approval of these requests can take over a year. • In addition, there were 9 unique days when at least one monitor exceeded the standard; however, there were no violations of the 24-hour or annual PM2.5 standards. The MCAQD *2011 Air Monitoring Network Review* should have been obtained from: http://www.maricopa.gov/aq/divisions/monitoring/docs/pdf/2011_Network_Assessment.pdf Furthermore, the most recent available ambient monitoring data from 2012 should have been incorporated into the DEIS and is	229 – Air Quality The carbon monoxide analysis presented on page 4-65 of the Draft Environmental Impact Statement was updated on page 4-75 of the Final Environmental Impact Statement to represent current conditions. The Arizona Department of Transportation also conducted a quantitative particulate matter (PM10) hot-spot analysis that is discussed on page 4-76 of the Final Environmental Impact Statement. The carbon monoxide and particulate matter (PM10) analyses demonstrated that the proposed freeway would not contribute to any new localized violations, increase the frequency or severity of any existing violation, or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones. As noted on page 4-76 of the Final Environmental Impact Statement, since ozone is a regional pollutant, there is no requirement to analyze potential impacts and no possibility of localized violations of ozone to occur at the project level. The Maricopa Association of Governments is responsible for developing plans to reduce emissions of ozone precursors in the Maricopa area. The Preferred Alternative is included in the *Regional Transportation Plan* that has been determined by the U.S. Department of Transportation to conform to the State Implementation Plan on February 12, 2014.	A hot spot analysis for PM is required under the U.S. EPA Transportation Conformity regulations for projects in Federal nonattainment or maintenance areas for PM10 or PM2.5. Similarly and for environmental review (NEPA) purposes, a hotspots analysis is needed for projects in Federal nonattainment or maintenance areas for CO. The hotspots analysis should be based on project-specific data to accurately assess and disclose potential PM10 and CO hotspot impacts. While the FEIS has been updated with a hotspots analysis, there is an inconsistency with how the results of the analysis have been presented. For CO, results for base case years 2020 and 2035 were presented. Even though the FEIS states calendar year 2035 has the highest emissions and traffic volumes the CO concentrations presented in Table 4-32 represent that year 2020 would have higher concentrations than that of 2035. However, the modeled concentration data presented for PM10 (Table 4-33) only present data for year 2035? With higher modeled concentrations of CO occurring in 2020, what were the results for PM10 in base case year 2020? The FEIS should clearly describe and provide justification as to why data for base case 2020 for PM10. Also the total concentration of PM10 rounded to the nearest 10 ug/m³ is

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163		Comment noted.
164	**Air Quality**	Particulate matter (PM_{10}) emission rates (from vehicles and re-entrained road dust) were used in the CAL3QHCR dispersion model to generate particulate matter (PM_{10}) concentrations at specific receptor locations at each of the three analysis locations. The particulate matter (PM_{10}) concentrations (including a background concentration) were used to determine whether the vehicle emissions resulting from the project would cause the applicable National Ambient Air Quality Standards for particulate matter (PM_{10}) to be exceeded. For each analysis location, particulate matter (PM_{10}) emission rates for running exhaust, crankcase running exhaust, brake wear, and tire wear were developed using MOVES2010b. The conformity regulations require hot-spot analyses to address the year or years of peak emissions. Through the interagency consultation process, 2035 was selected as the analysis year when traffic volumes and vehicle miles traveled would be the greatest. The U.S. Environmental Protection Agency was consulted on the conformity methodology presented in the Final Environmental Impact Statement. The carbon monoxide analysis was updated for the Final Environmental Impact Statement similar to the particulate matter (PM_{10}) analysis, using link-specific data and model inputs consistent with the inputs the Maricopa Association of Governments uses for regional carbon monoxide emissions analyses. The Draft Environmental Impact Statement analysis included a draft carbon monoxide dispersion modeling analysis and a qualitative particulate matter (PM_{10}) analysis. However, the Final Environmental Impact Statement analysis had to meet transportation conformity requirements; conformity requires that the year of peak emissions be modeled, which was determined to be 2035 for both pollutants. The quantitative particulate matter (PM_{10}) analysis only addressed 2035 because it was first completed for the Final Environmental Impact Statement and this is the only required year. Since the carbon monoxide analysis was an update of the Draft Environmental Impact Statement analysis, and since both years were modeled in the Draft Environmental Impact Statement, both were presented in the Final Environmental Impact Statement for continuity, even though only 2035 was technically required. While carbon monoxide consists only of exhaust emissions, particulate matter (PM_{10}) consists of exhaust, brake wear, tire wear, and road dust. The trend in exhaust emissions is downward, due to the ongoing phase-in of U.S. Environmental Protection Agency tailpipe emissions standards, but brake wear, tire wear, and road dust increase in direct proportion to vehicle miles traveled (there are no U.S. Environmental Protection Agency standards that reduce these sources of emissions). The Final Environmental Impact Statement (page 4-75) states that the Maricopa Association of Governments most recent conformity analysis for its regional transportation plan shows regional emissions of carbon monoxide will be highest in 2035. This is from the regional model, whereas Table 4-32 in the Final Environmental Impact Statement shows site-specific modeled results, hence the difference. Regardless, the conclusion remains the same that the project complies with the transportation conformity regulations at 40 Code of Federal Regulation, Part 93 and with conformity provisions of Section 176(c) of the Clean Air Act.

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				available at: http://www.epa.gov/airdata/		right at the 24-hour PM10 NAAQS! How is the public ensured based on the results of the refined modeled impacts that the project will not contribute to any new localized violations, increase the frequency or severity of any existing violation, or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones? This should be clearly discussed within the FEIS.
Ch. 4	Figure 4-20	4-61	Air Quality	Figure 4-20 *Nonattainment Areas for Particulate Matter, Carbon Monoxide, and Ozone, Maricopa County*, is not up-to-date. While footnote "b" attempts to address an expansion to the 8-hour ozone nonattainment area further to the south, Figure 4-20 does not include the Pinal County PM2.5 nonattainment area approximately 15 miles to the south of the project. An interactive GIS map is available on ADEQ's website identifies the current nonattainment boundaries in the vicinity of the project http://gisweb.azdeq.gov/arcgis/emaps/?topic=nonattain	230 – Air Quality Pinal County is not included in the Study Area and is, therefore, not discussed. All nonattainment areas presented in Figure 4-20 on page 4-61 of the Draft Environmental Impact Statement are current. As clarification, the title of Figure 4-20 was changed in the Final Environmental Impact Statement from "Nonattainment Areas for Particulate Matter, Carbon Monoxide, and Ozone, Maricopa County" to "Nonattainment and Maintenance Areas for Particulate Matter, Carbon Monoxide, and Ozone, Maricopa County."	It is unclear how the study area for the air quality resource was established and why a nonattainment area in such close proximity to the project was ignored (i.e., the Pinal County PM10 and PM2.5 nonattainment areas are approximately 15 miles to the south of the project). The FEIS should provide a clear justification on how the study area was selected and should not disregard the fact that the Pinal County PM2.5/PM10 nonattainment areas are real and should be shown as such on Figure 4-20. In addition the figure still does not accurately present the current nonattainment boundaries in Maricopa County. In addition, under standard modeling procedures the study area is based on a radius from the project boundaries rather than an arbitrary boundary. For example, ADEQ modeling guidance recommends a receptor grid to extend out to 50 km (31 miles) even if the maximum impact is anticipated to be close to the project site.
Ch. 4	Figure 4-23	4-62	Air Quality	It is unclear what time period (i.e., year) is being presented in Figure 4-23 *Sources of the 188 Hazardous Air Pollutants Regulated by the Environmental Protection Agency*. Data from 2008 should have been obtained from: http://www.epa.gov/ttn/chief/eiinformation.html	231 – Air Quality As noted in the footnote reference to Figure 4-23, the information was based on the Federal Highway Administration publication, Transportation Air Quality Facts and Figures, January 2006. The data referenced were from 1999. This figure was removed from the Final	The data was not updated as requested and simply deleted without providing any explanation.

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Code	Issue	Response
165	**Air Quality**	As indicated in the Final Environmental Impact Statement, the project complies with the transportation conformity regulations at 40 Code of Federal Regulations Part 93 and with the conformity provisions of Section 176(c) of the Clean Air Act. The U.S. Environmental Protection Agency was consulted on the conformity methodology presented in the Final Environmental Impact Statement. The Pinal County particulate matter ($PM_{2.5}$ and PM_{10}) nonattainment areas were not included in the air quality study area because they are far enough from the project (15 miles) that the emissions from the project would not impact those areas. The air quality study area was determined through interagency consultation and neither of the air quality agencies involved in the interagency consultation process (Arizona Department of Environmental Quality or the U.S. Environmental Protection Agency, Region 9) requested that these areas be included in the analysis. The U.S. Environmental Protection Agency's guidance for hot-spot modeling for highway projects does not require such an extensive receptor grid. The geographic extent of the hot-spot modeling was agreed to through interagency consultation with the Arizona Department of Environmental Quality and the U.S. Environmental Protection Agency. Concentrations comply with the National Ambient Air Quality Standards at the roadside and decrease with distance away from the roadway. Extending the receptor network would simply produce additional model results that are even farther below the National Ambient Air Quality Standards.
166	**Air Quality**	The figure in question was based on emissions information that was out of date. In addition, it presented information on source contributions for all 188 air pollutants that are regulated by the U.S. Environmental Protection Agency as air toxics, even though most of these pollutants are not mobile source air toxics. Pages 4-74 and 4-75 of the Final Environmental Impact Statement include three tables and one figure with local Maricopa County information about the sources of mobile source air toxic pollutants, which is more relevant to the Study Area.

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						Environmental Impact Statement.	
167	Ch. 4	Figure 4-24	4-62	Air Quality	Figure 4-24 *Priority Mobile Source Air Toxics Emissions, 1999, On-road Versus Other Sources*, presents outdated information. More recent data from 2008 should have been obtained from: http://www.epa.gov/ttn/chief/eiinformation.html	232 – Air Quality As noted in the footnote reference to Figure 4-23, the information was based on the Federal Highway Administration publication, Transportation Air Quality Facts and Figures, January 2006. This figure was removed from the Final Environmental Impact Statement.	The data was not updated as requested and simply deleted without providing any explanation.
168	Ch. 4	Local Emissions of Priority MSATs	4-64	Air Quality	The DEIS fails to discuss the findings of Joint Air Toxics Assessment Project (JATAP) which occurred within the DEIS Air Quality Study Area. According to data collected during the Pilot Study (March 2003 – March 2004), annual average concentrations of formaldehyde, acetaldehyde, benzene and 1,3 butadiene were on the high end of the range when compared to EPA funded assessment of other U.S. cities.	233 – Air Quality Summary information about the findings of the Joint Air Toxics Assessment Project study is provided as background information in the Draft and Final Environmental Impact Statements, but the study itself is not relevant to the type of analysis done pursuant to the Federal Highway Administration's mobile source air toxics guidance, which is an emissions analysis. Monitored ambient concentrations of mobile source air toxics (the focus of the Joint Air Toxics Assessment Project) do not inform this type of analysis. While monitoring data can be useful for defining current conditions in the affected environment (to the extent that the monitoring data are current), they don't tell us anything about future conditions, or the impacts of the project itself, which is why an emissions analysis was performed. The mobile source air toxic analysis presented beginning on page 4-77 of the Final Environmental Impact Statement is an estimated inventory of mobile source air toxic emissions for the entire Study Area for 2025 and 2035. This approach was used because the inventory estimate accounts for changes in traffic and emissions on all roadways affected by a proposed project, and would, therefore, be a more reliable predictor of changes in exposure to mobile source air toxics.	While the JATAP study may have been referenced, the DEIS fails to discuss the findings of the study, which are important in terms of describing the affected environment of the project.
169	Ch. 4	Table 4-30	4-65	Air Quality	It is unclear as what year is being represented in Table 4-30, *Priority Mobile Source Air Toxic Emissions, South Phoenix*. Data from 2006 should have been obtained from: http://www.epa.gov/ttn/chief/eiinformation.html	234 – Air Quality The footnote to Figure 4-30 on page 4-65 of the Draft Environmental Impact Statement references data from the 2004 Joint Air Toxics Assessment Project. These data are from 2003–2004.	This comment was not addressed in Comment 225 and the FEIS was not updated with the latest readily available data. For the purposes of NEPA and public disclosure, the analysis should be based on the latest readily available data

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Code	Issue	Response
167	**Air Quality**	The figure in question was based on emissions information that was out of date. In addition, it presented information on source contributions for all 188 air pollutants that are regulated by the U.S. Environmental Protection Agency as air toxics, even though most of these pollutants are not mobile source air toxics. Pages 4-74 and 4-75 of the Final Environmental Impact Statement include three tables and one figure with local Maricopa County information about the sources of mobile source air toxic pollutants, which is more relevant to the Study Area.
168	**Air Quality**	The Joint Air Toxics Assessment Project study is provided as background information in the Draft and Final Environmental Impact Statements, but the study itself is not relevant to the type of analysis done pursuant to the Federal Highway Administration's interim mobile source air toxics guidance, which is an emissions analysis. Monitored ambient concentrations of mobile source air toxics, the focus of the Joint Air Toxics Assessment Project, do not inform this type of analysis. The discussions in the *Air Quality* section of the Final Environmental Impact Statement are of sufficient detail to understand existing conditions without having to use the particular study the commenter mentions. It should be noted, however, that Tables 4-30 and 4-31 in the section, *Air Quality*, use this study to show existing conditions regarding mobile source air toxics. Also, the mobile source air toxics analysis showed that emissions will decline, and that reductions on the order of 57 to 92 percent will occur irrespective of whether the project is constructed.
169	**Air Quality**	The table presents the findings of the Joint Air Toxics Assessment Project, which was completed in 2004. Updating these background data would not change the conclusions of the project-specific analysis.

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Ch. 4	Environmental Consequences – CO	4-65	Air Quality	The EPA transportation guidance provided on December 20, 2010, established modeling guidance for performing transportation conformity and under certain circumstances allows for a 2-year grace period. However, based upon the FHWA's *Information: Interim Guidance Update on Mobile Source Air Toxic Analysis in NEPA* released on December 6, 2012, states "At the end of this grace period, i.e., beginning December 20, 2012, project sponsors should use MOVES to conduct emissions analysis for NEPA purposes." Therefore, in accordance with FWHA guidance the CO analysis presented in the DEIS should have been updated using MOVES2010, which is the current EPA/FHWA approved model.	235 – Air Quality 40 Code of Federal Regulations § 93.111(c) was followed to conduct a qualitative analysis for particulate matter (PM10) for the proposed action. This analysis complied with National Environmental Policy Act requirements for the development of the Draft Environmental Impact Statement. In December 2010, the U.S. Environmental Protection Agency established transportation conformity guidance for performing quantitative particulate matter (PM2.5 and PM10) hot- spot analyses for transportation projects and established a 2-year grace period. U.S. Environmental Protection Agency conformity guidance continues to allow qualitative particulate matter (PM10) hot-spot conformity analyses for analyses that were started before or during the grace period and if the final environmental document for the project is issued no more than 3 years after issuance of the draft environmental document. A particulate matter (PM10) qualitative analysis was performed for this project because the initial air quality technical analysis report for the proposed action was produced in October 2005. The Arizona Department of Transportation and Federal Highway Administration have updated the qualitative analysis to a quantitative analysis for the Final Environmental Impact Statement to ensure that a state-of-the-art analysis is completed for the proposed project. The results of the analysis are summarized in the prologue to the Final Environmental Impact Statement (page xiii) and are more fully described beginning on page 4-68 of the Final Environmental Impact Statement. The carbon monoxide and particulate matter (PM10) analyses demonstrated that the proposed freeway would not contribute to any new localized violations, increase the frequency or severity of any existing violation, or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones.	The FEIS now includes a quantitative hotspots analysis. However, as discussed in Comment 229, there is an inconsistency in how the CO and PM10 modeled results have been presented in the FEIS. With higher modeled concentrations of CO occurring in 2020, what were the results for PM10 in base case year 2020? The FEIS should clearly describe and provide justification as to why data for base case 2020 was not presented for PM10.
Ch. 4	Environmental Consequences	4-65	Air Quality	It is unclear whether the maximum projected 1-hour and 8-hour CO concentrations at	236 – Air Quality The modeling protocols area is discussed in	Comment - It appears the background concentrations of CO included use of 4.8.

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Code	Issue	Response
170	**Air Quality**	The conformity regulations require hot-spot analyses to address the year or years of peak emissions. Through the interagency consultation process, 2035 was selected as the analysis year when traffic volumes and vehicle miles traveled would be the greatest. The Draft Environmental Impact Statement analysis included a draft carbon monoxide dispersion modeling analysis and a qualitative particulate matter (PM_{10}) analysis. However, the Final Environmental Impact Statement analysis had to meet transportation conformity requirements; conformity requires that the year of peak emissions be modeled, which was determined to be 2035 for both pollutants. The quantitative particulate matter (PM_{10}) analysis only addressed 2035 because it was first completed for the Final Environmental Impact Statement and this is the only required year. Since the carbon monoxide analysis was an update of the Draft Environmental Impact Statement analysis, and since both years were modeled in the Draft Environmental Impact Statement, both were presented in the Final Environmental Impact Statement for continuity, even though only 2035 was technically required. While carbon monoxide consists only of exhaust emissions, particulate matter (PM_{10}) consists of exhaust, brake wear, tire wear, and road dust. The trend in exhaust emissions is downward, due to the ongoing phase-in of U.S. Environmental Protection Agency tailpipe emissions standards, but brake wear, tire wear, and road dust increase in direct proportion to vehicle miles traveled (there are no U.S. Environmental Protection Agency standards that reduce these sources of emissions). The Final Environmental Impact Statement (page 4-75) states that the Maricopa Association of Governments most recent conformity analysis for its regional transportation plan shows regional emissions of carbon monoxide will be highest in 2035. This is from the regional model, whereas Table 4-32 in the Final Environmental Impact Statement shows site-specific modeled results, hence the difference. Regardless, the conclusion remains the same that the project complies with the transportation conformity regulations at 40 Code of Federal Regulation, Part 93 and with conformity provisions of Section 176(c) of the Clean Air Act.
171	**Air Quality**	The background values used in the Final Environmental Impact Statement were updated from what was used in the Draft Environmental Impact Statement (see Table 4-32 on page 4-76 of the Final Environmental Impact Statement) and were agreed to through interagency consultation with the Arizona Department of Environmental Quality and U.S. Environmental Protection Agency.

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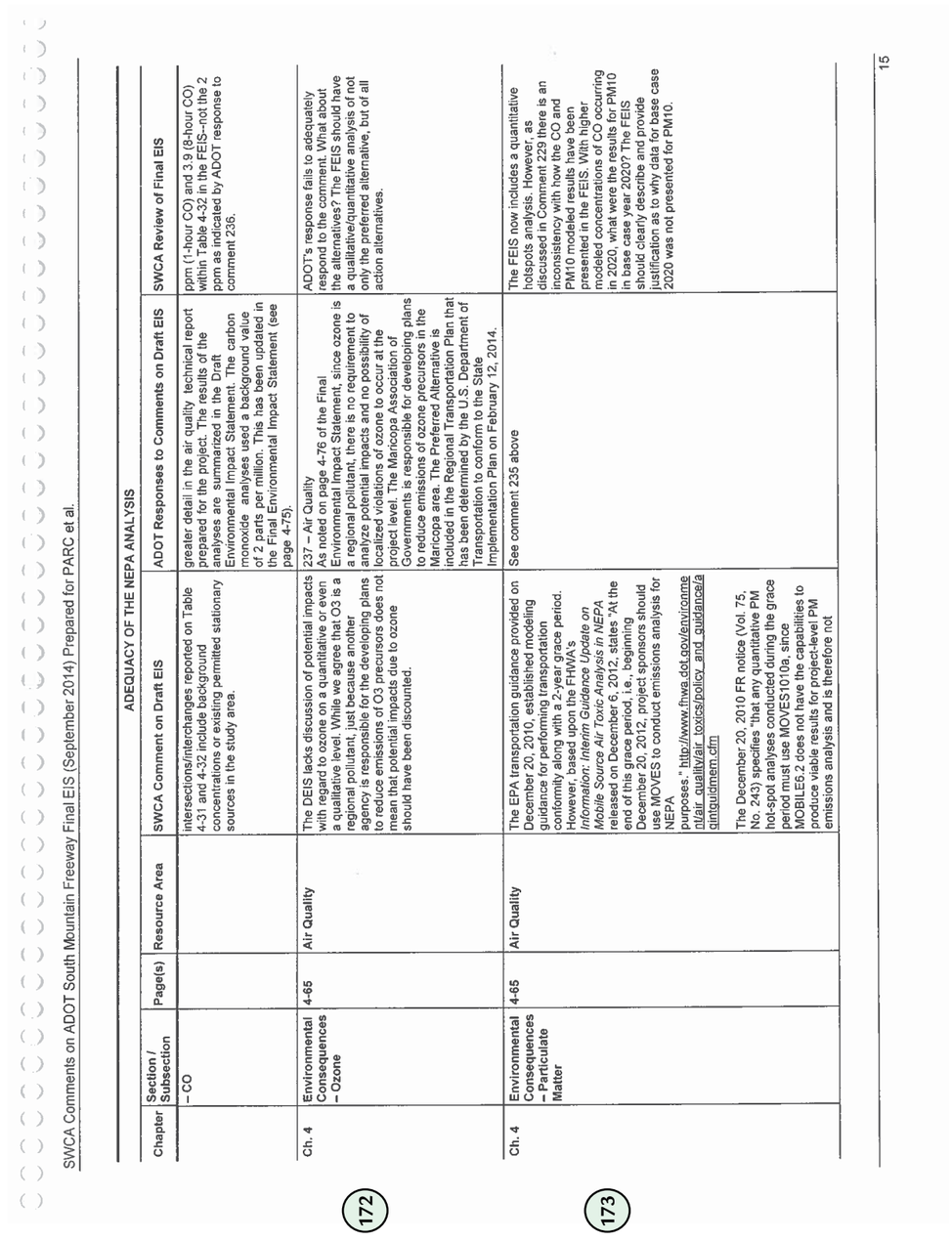

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	– CO			intersections/interchanges reported on Table 4-31 and 4-32 include background concentrations or existing permitted stationary sources in the study area.	greater detail in the air quality technical report prepared for the project. The results of the analyses are summarized in the Draft Environmental Impact Statement. The carbon monoxide analyses used a background value of 2 parts per million. This has been updated in the Final Environmental Impact Statement (see page 4-75).	ppm (1-hour CO) and 3.9 (8-hour CO) within Table 4-32 in the FEIS—not the 2 ppm as indicated by ADOT response to comment 236.
Ch. 4	Environmental Consequences – Ozone	4-65	Air Quality	The DEIS lacks discussion of potential impacts with regard to ozone on a quantitative or even a qualitative level. While we agree that O3 is a regional pollutant, just because another agency is responsible for the developing plans to reduce emissions of O3 precursors does not mean that potential impacts due to ozone should have been discounted.	237 – Air Quality As noted on page 4-76 of the Final Environmental Impact Statement, since ozone is a regional pollutant, there is no requirement to analyze potential impacts and no possibility of localized violations of ozone to occur at the project level. The Maricopa Association of Governments is responsible for developing plans to reduce emissions of ozone precursors in the Maricopa area. The Preferred Alternative is included in the Regional Transportation Plan that has been determined by the U.S. Department of Transportation to conform to the State Implementation Plan on February 12, 2014.	ADOT's response fails to adequately respond to the comment. What about the alternatives? The FEIS should have a qualitative/quantitative analysis of not only the preferred alternative, but of all action alternatives.
Ch. 4	Environmental Consequences – Particulate Matter	4-65	Air Quality	The EPA transportation guidance provided on December 20, 2010, established modeling guidance for performing transportation conformity along with a 2-year grace period. However, based upon the FHWA's *Information: Interim Guidance Update on Mobile Source Air Toxic Analysis in NEPA* released on December 6, 2012, states "At the end of this grace period, i.e., beginning December 20, 2012, project sponsors should use MOVES to conduct emissions analysis for NEPA purposes." http://www.fhwa.dot.gov/environment/air_quality/air_toxics/policy_and_guidance/aqintguidmem.cfm The December 20, 2010 FR notice (Vol. 75, No. 243) specifies "that any quantitative PM hot-spot analyses conducted during the grace period must use MOVES1010a, since MOBILE6.2 does not have the capabilities to produce viable results for project-level PM emissions analysis and is therefore not	See comment 235 above	The FEIS now includes a quantitative hotspots analysis. However, as discussed in Comment 229 there is an inconsistency with how the CO and PM10 modeled results have been presented in the FEIS. With higher modeled concentrations of CO occurring in 2020, what were the results for PM10 in base case year 2020? The FEIS should clearly describe and provide justification as to why data for base case 2020 was not presented for PM10.

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Code	Issue	Response
172	**Air Quality**	Ozone is a regional pollutant, and under the Clean Air Act conformity requirements, ozone precursor emissions are addressed at the regional level through emissions analysis of the Maricopa Association of Government's long range transportation plan. As long as projects are included in a conforming plan, as is the case for the South Mountain Freeway, then they are considered to have complied with the Clean Air Act requirements applicable to ozone. Analysis of the alternatives for National Environmental Policy Act purposes is not necessary, because any alternative would have to meet this same conformity test in order to proceed (the Arizona Department of Transportation and Federal Highway Administration could not approve any alternative that did not meet regional conformity requirements for demonstrating compliance with the ozone National Ambient Air Quality Standards). The question of whether one alternative is "better" than another from an ozone standpoint is moot, because all alternatives are required to be consistent with attainment of the ozone standard.
173	**Air Quality**	The conformity regulations require hot-spot analyses to address the year or years of peak emissions. Through the interagency consultation process, 2035 was selected as the analysis year when traffic volumes and vehicle miles traveled would be the greatest. The Draft Environmental Impact Statement analysis included a draft carbon monoxide dispersion modeling analysis and a qualitative particulate matter (PM_{10}) analysis. However, the Final Environmental Impact Statement analysis had to meet transportation conformity requirements; conformity requires that the year of peak emissions be modeled, which was determined to be 2035 for both pollutants. The quantitative particulate matter (PM_{10}) analysis only addressed 2035 because it was first completed for the Final Environmental Impact Statement and this is the only required year. Since the carbon monoxide analysis was an update of the Draft Environmental Impact Statement analysis, and since both years were modeled in the Draft Environmental Impact Statement, both were presented in the Final Environmental Impact Statement for continuity, even though only 2035 was technically required. While carbon monoxide consists only of exhaust emissions, particulate matter (PM_{10}) consists of exhaust, brake wear, tire wear, and road dust. The trend in exhaust emissions is downward, due to the ongoing phase-in of U.S. Environmental Protection Agency tailpipe emissions standards, but brake wear, tire wear, and road dust increase in direct proportion to vehicle miles traveled (there are no U.S. Environmental Protection Agency standards that reduce these sources of emissions). The Final Environmental Impact Statement (page 4-75) states that the Maricopa Association of Governments most recent conformity analysis for its regional transportation plan shows regional emissions of carbon monoxide will be highest in 2035. This is from the regional model, whereas Table 4-32 in the Final Environmental Impact Statement shows site-specific modeled results, hence the difference. Regardless, the conclusion remains the same that the project complies with the transportation conformity regulations at 40 Code of Federal Regulation, Part 93 and with conformity provisions of Section 176(c) of the Clean Air Act.

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				appropriate for this purpose." Therefore, in accordance with FWHA guidance the PM analysis presented in the DEIS should have used MOVES2010, which is the current EPA/FHWA approved model.		
Ch. 4	Environmental Consequences – Particulate Matter	4-65	Air Quality	The FHWA guidance specifies "the implications of MOVES on MSAT emissions estimates compared to MOBILE are" lower estimates of total MSAT emissions; significantly lower benzene emissions; significantly higher diesel PM emissions, especially for lower speeds. Consequently, diesel PM is projected to be the dominate component of the emissions totals." Therefore, in accordance with FWHA guidance the MSAT analysis presented in the DEIS should have used MOVES2010, which is the current EPA/FHWA approved model.	238 – Air Quality As noted on page 4-70 of the Draft Environmental Impact Statement, MOBILE6.2 was used to project emissions at a regional level consistent with 40 Code of Federal Regulations Part 93.111(c), since the mobile source air toxics analysis for the proposed action started before or during the grace period for using the MOVES2010 emissions model. However, the mobile source air toxics analysis presented on page 4-70 of the Draft Environmental Impact Statement was updated on page 4-77 of the Final Environmental Impact Statement using the MOVES2010 model.	The FEIS presents MSAT analysis data based upon the current MOVES2010 model. However, the vehicle mix breakdown and VMT should be specifically described and summarized in the FEIS. This is a critical data input within the project description and for the purposes of the hotspots modeling analysis. Burying this data in the technical report does not fully disclose the project for review by the general public.
Ch. 4	Environmental Consequences – Particulate Matter	4-65	Air Quality	Was a formal interagency consultation process conducted to determine whether the current qualitative analysis is adequate for the purpose of full disclosure of potential PM10 and PM2.5 impacts associated with the action alternatives?	239 The air quality analysis parameters were determined through the process established by the Arizona Department of Transportation interagency consultation procedures [40 Code of Federal Regulations § 93.105(c)(1) (i)].	The FEIS now includes a quantitative hotspots analysis using MOVES 2010. However, as discussed in Comment 229, there is an inconsistency with how the CO and PM10 modeled results have been presented in the FEIS.
Ch. 4	Environmental Consequences – Particulate Matter	4-65	Air Quality	The analysis fails to address impacts of PM2.5. This is a significant flaw as the project is within approximately 15 miles of the Pinal County PM2.5 nonattainment area.	240 Maricopa County is in attainment for the particulate matter ($PM_{2.5}$) National Ambient Air Quality Standard; the Pinal County particulate matter ($PM_{2.5}$) nonattainment area is not included in the Study Area.	It is unclear how the study area for the air quality resource was established and why a nonattainment area in such close proximity to the project was ignored (i.e., the Pinal County PM10 and PM2.5 nonattainment areas located approximately 15 miles south of the project). The FEIS should provide a clear justification on how the study area was selected and should not disregard the fact that the Pinal County PM2.5/PM10 nonattainment areas are real.
Ch. 4	Mobile Source Air Toxics – Emissions Model	4-70	Air Quality	The DEIS states "The implications of MOVES related to MSAT emissions estimates compared with MOBILE as used in this analysis are lower estimated of total MSAT emissions; and significantly lower benzene emissions; significantly higher DPM emissions.	See comment 238 above	The FEIS presents MSAT analysis data based upon the current MOVES2010 model.

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Code	Issue	Response
174	**Air Quality**	MOVES2010b is the mobile-source emission factor model used in this analysis. The main point of the comment appears to be that these critical data have not been incorporated into the Final Environmental Impact Statement. These data were incorporated into the air quality technical report, which is available to the public. These data were incorporated into the Final Environmental Impact Statement by reference (see page 4-78).
175	**Air Quality**	The conformity regulations require hot-spot analyses to address the year or years of peak emissions. Through the interagency consultation process, 2035 was selected as the analysis year when traffic volumes and vehicle miles traveled would be the greatest. The Draft Environmental Impact Statement analysis included a draft carbon monoxide dispersion modeling analysis and a qualitative particulate matter (PM_{10}) analysis. However, the Final Environmental Impact Statement analysis had to meet transportation conformity requirements; conformity requires that the year of peak emissions be modeled, which was determined to be 2035 for both pollutants. The quantitative particulate matter (PM_{10}) analysis only addressed 2035 because it was first completed for the Final Environmental Impact Statement and this is the only required year. Since the carbon monoxide analysis was an update of the Draft Environmental Impact Statement analysis, and since both years were modeled in the Draft Environmental Impact Statement, both were presented in the Final Environmental Impact Statement for continuity, even though only 2035 was technically required. While carbon monoxide consists only of exhaust emissions, particulate matter (PM_{10}) consists of exhaust, brake wear, tire wear, and road dust. The trend in exhaust emissions is downward, due to the ongoing phase-in of U.S. Environmental Protection Agency tailpipe emissions standards, but brake wear, tire wear, and road dust increase in direct proportion to vehicle miles traveled (there are no U.S. Environmental Protection Agency standards that reduce these sources of emissions).
176	**Air Quality**	Conformity applies to the nonattainment or maintenance area(s) where the proposed project is located; therefore, modeling a nonattainment area 15 miles away from the project is neither necessary nor required.
177	**Air Quality**	MOVES2010b is the mobile-source emission factor model used in this analysis.

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				especially for lower speeds." Therefore, in accordance with FWHA guidance the MSAT analysis presented in the DEIS should have used MOVES2010, which is the current EPA/FHWA approved model.		
Ch. 4	Mobile Source Air Toxics – Emissions Model	4-70	Air Quality	MSAT emissions and impacts during construction of proposed action and the alternatives are lacking. Furthermore, it is unclear whether morning and afternoon rush hour short-term emissions were included in the modeling?	241 The Arizona Department of Transportation is evaluating construction delivery methods for the proposed freeway. One concept is to deliver it as a single design- build project. This method would accelerate the construction duration for the entire project to around 3 to 3.5 years. Another concept would be to deliver the project in a more traditional method, breaking the 22-mile corridor into nine segments (each 1 to 3 miles long) and constructing them in phases. Each segment would be under construction for 1 to 3 years, and the total construction duration for the entire corridor would be 5 to 6 years. A discussion of construction implementation is provided beginning on page 3-59 of the Final Environmental Impact Statement. Any particular area of the Preferred Alternative would not be expected to see construction activities beyond an approximate 2-year period. The mobile source air toxics analyses as presented in the Draft Environmental Impact Statement were based on average daily traffic volumes over a 1-year period. However, a quantitative project-level particulate matter (PM10) hot-spot analysis has been prepared for the proposed project. The results of the analysis are summarized in the prologue to the Final Environmental Impact Statement (page xiii) and are more fully described beginning on page 4-68 of the Final Environmental Impact Statement. For this analysis, emission factors were generated for the morning peak, midday hours, afternoon peak, and overnight. Particulate matter (PM_{10}) emissions were modeled incorporating operating conditions included in the U.S. Environmental Protection Agency's *Transportation Conformity Guidance for Quantitative Hot-spot Analyses in $PM_{2.5}$ and PM_{10}*	The FEIS presents MSAT analysis data based upon the current MOVES2010 model. However, the vehicle mix breakdown and VMT should be specifically described and summarized in the FEIS. This is a critical data input within the project description and for the purposes of the hotspots modeling analysis. Burying this data in the technical report does not fully disclose the project for review by the general public.

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Code	Issue	Response
178	**Air Quality**	The mobile source air toxics analyses as presented in the Final Environmental Impact Statement were based on average daily traffic volumes over a 1-year period. Vehicle miles traveled are presented in the mobile source air toxics tables starting on page 4-80 of the Final Environmental Impact Statement. The Final Environmental Impact Statement indicates that local vehicle mix was a model input (page 4-79). Details on vehicle mix (heavy trucks versus all vehicles) are located in the appendix of the air quality technical report (page A-3), which is available to the public. Technical reports are designed to support the environmental impact statement, not to be reproduced in the environmental impact statement.

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					Nonattainment and Maintenance Areas, publication number EPA-420-B-13-053, dated November 2013. The development of the particulate matter (PM_{10}) hot-spot modeling protocol for this analysis used a formal interagency consultation process.
Ch. 4	Figure 4-28	4-71	Air Quality	It is unclear what type of vehicle is being represented by this graph (i.e. gasoline passenger vehicle, diesel passenger vehicle, heavy-duty diesel truck, etc.). The DEIS should be updated to clarify what type vehicle this represents and provide a comparison to the other vehicle classes.	242 MOBILE6.2 national defaults, including the national default vehicle fleet mix. ADOT simply ignores this comment as Figure 4-28 of the DEIS was simply removed from the FEIS without explanation.
Ch. 4	Table 4-34	4-72	Air Quality	It is unclear in both ADOT's *Environmental Planning Group Draft Report Air Quality Assessment South Mountain Freeway, SR 202L* dated March 1, 2013 and the DEIS what is the breakdown of VMT for light duty/ heavy duty gasoline and diesel vehicles under the various alternatives? The assessment and DEIS should have clearly specified the vehicle mix. As stated in the DIES "The implications of MOVES related to MSAT emissions estimates compared with MOBILE as used in this analysis are lower estimated of total MSAT emissions; and significantly lower benzene emissions; significantly higher DPM emissions, especially for lower speeds." Therefore, in accordance with FWHA guidance the MSAT analysis presented in the DEIS should have used MOVES2010, which is the current EPA/FHWA approved model.	243 Vehicle traffic mix projections were provided by the Maricopa Association of Governments. ALSO see comment 238 above. Like 242 above, ADOT simply ignores this comment. The vehicle mix breakdown should be specifically described and summarized in the FEIS. This is a critical data input within the project description and for the purposes of the hotspots analysis. Burying this data in the technical report does not fully disclose the project for review by the general public. In addition, it is still unclear if the hotspots analysis evaluated the potential increases in heavy duty diesel vehicles from the CANAMEX project. Potential increases to heavy-truck traffic could result in significant increases to criteria pollutant and MSAT emissions. These potential impacts must be clearly discussed and disclosed in the direct and cumulative impacts sections of the FEIS.
Ch. 4	Table 4-34	4-72	Air Quality	ADOT's Environmental Planning Group Draft Report Air Quality Assessment South Mountain Freeway SR 202L dated March 1, 2013, which is the basis for the modeled impact results presented in the DEIS, does not account for increases in heavy duty diesel vehicles from the CANAMEX project and/or Phoenix-area origination and destination traffic, as "Average daily traffic volumes are	244 The Mexico to Canada route (commonly referred to as the CANAMEX route) is described in detail on page 3-64 of the Draft Environmental Impact Statement. The locally preferred route includes Interstate 8 and State Route 85 to bypass the Phoenix metropolitan area. State Route 85 is currently being reconstructed It is still unclear if the hotspots analysis evaluated the potential increases in heavy duty diesel vehicles from the CANAMEX project. Potential increases to heavy-truck traffic could result in significant increases to criteria pollutant and MSAT emissions. These potential impacts must be clearly discussed and disclosed in the direct

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Code	Issue	Response
179	**Air Quality**	Figure 4-28 in the Draft Environmental Impact Statement was based on MOBILE6.2 national defaults, including the national default vehicle fleet mix. Because MOBILE6.2 has been replaced by MOVES, the graphic was no longer relevant and was deleted.
180	**Air Quality, Trucks**	The Final Environmental Impact Statement indicates that local vehicle mix was a model input (page 4-79). Details on vehicle mix (heavy trucks versus all vehicles) are located in the appendix of the air quality technical report (page A-3), which is available to the public. Technical reports are designed to support the environmental impact statement, not to be reproduced in the environmental impact statement. As with all other freeways in the region, trucks will use the project for the through-transport of freight, for transport to and from distribution centers, and for transport to support local commerce. Nevertheless, the primary vehicles using the freeway will be automobiles. The Maricopa Association of Governments regional travel demand model projects that truck traffic will represent approximately 10 percent of the total traffic on the freeway, similar to what is currently experienced on other regional freeways such as Interstate 10, State Route 101L, and U.S. Route 60. As disclosed in the Final Environmental Impact Statement, it is expected that "true" through-truck traffic (not having to stop in the metropolitan area) will continue to use the faster, designated, and posted bypass system of Interstate 8 and State Route 85 (see page 3-64 of the Final Environmental Impact Statement). The vehicle mix and specifically the percentages of trucks using the facility is similar in vehicle mix ratios found throughout the region's existing freeway system.

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				projected to range from approximately 60,000 to over 200,000; heavy-truck traffic is expected to account for approximately 5-7% of the volume (MAG, 2010b)." The potential increases to heavy-truck traffic could result in significant increases to criteria pollutant and MSAT emissions, and vehicles originating from outside of the United States may not have the same level of emission controls or diesel fuel standards. In addition, it is unclear whether the potential increases to heavy-truck traffic were considered based on the natural bypass potential of the project. The DEIS should have accounted for all increases in heavy-duty diesel vehicle traffic from the CANAMEX project, Phoenix-area origination and destination traffic, as well as considered additional increases due to the natural bypass potential of the project.	as a four-lane, divided highway with limited-access control, and Interstate 8 is a four-lane, divided Interstate freeway with full access control. Existing signs at each terminus designate the route as a truck bypass of metropolitan Phoenix. This route would continue to be available for Interstate and interregional travel. Trucks crossing from Mexico to Arizona are restricted to the commercial zones within 25 miles of the border. The Federal Motor Carrier Safety Administration is administering a United States-Mexico cross-border, long-haul trucking pilot program. The program tests and demonstrates the ability of Mexico-based motor carriers to operate safely in the United States beyond the municipalities and commercial zones along the United States-Mexico border (see <fmcsa.dot.gov/intl-programs/trucking/trucking-program.aspx>). Petróleos Mexicanos (better known as Pemex), the Mexican state owned petroleum company, has guaranteed 15 parts per million in its sulfur diesel fuel in the border region (see <http://transportpolicy.net/index.php?title=Mexico:_Fuels:_Diesel_and_Gasoline>). All air quality analyses included projected truck traffic Provided by the Maricopa Association of Governments.	and cumulative impacts sections of the FEIS.
Ch. 4	MSAT Information Status	4-74	Air Quality	The DEIS fails to discuss studies conducted in support of Joint Air Toxics Assessment Project (JATAP), which included air toxic measurements, numerical modeling, exposure modeling and risk assessment for the metropolitan Phoenix area. The DEIS should have included a discussion on these studies and should have be obtained from the *Phoenix, Arizona Air Toxics Assessment – Final Comprehensive Report* dated September 2011 and available at:	245 Summary information about the findings of the Joint Air Toxics Assessment Project study is provided as background information in the Draft and Final Environmental Impact Statements, but the study itself is not relevant to the type of analysis done pursuant to the Federal Highway Administration's mobile source air toxics guidance, which is an emissions analysis. Monitored ambient concentrations of mobile source air toxics (the focus of the Joint Air Toxics Assessment	The FEIS does not include a discussion of the *Phoenix, Arizona Air Toxics Assessment – Final Comprehensive Report* dated September 2011. While the JATAP study may have been referenced, the DEIS fails to discuss the findings of the study, which are important in terms of describing the affected environment of the project.

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Code	Issue	Response
181	**Air Quality**	Similar to the Joint Air Toxics Assessment Project, the Phoenix, Arizona Air Toxics Assessment – Final Comprehensive Report is not relevant to the type of analysis done pursuant to the Federal Highway Administration's interim mobile source air toxics guidance, which is an emissions analysis. The mobile source air toxics analysis presented beginning on page 4-78 of the Final Environmental Impact Statement is an estimated inventory of mobile source air toxics emissions for the entire Study Area for 2025 and 2035. This approach was used because the inventory estimate accounts for changes in traffic and emissions on all roadways affected by a proposed project and would, therefore, be a more reliable predictor of changes in exposure to mobile source air toxics.

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Ch. 4	MSAT Information Status	4-74	Air Quality	The DEIS fails to discuss the "Mobile Source Air Toxics (MSATs) at Three Schools Next to US 95 in Las Vegas, Nevada" (May 2010). This report was prepared for the Nevada Department of Transportation and provides a discussion on the: 1) indoor and outdoor concentrations of MSATs to which students are exposed at the three schools near US 95; 2) the influence of US 95 vehicle traffic on MSAT concentrations at the three schools, both before and after the November 2007 freeway expansion; and 3) the effectiveness and MSAT removal efficiencies of HVAC/filtration systems before and after modified air filtration systems were installed at each school. The DEIS should have included a discussion of this study as it provides a potential mitigation strategy for reducing MSAT exposure at schools.	246 The National Near Roadway Mobile Source Air Toxic Study is discussed on page 4-74 of the Draft Environmental Impact Statement, but not in great detail. As stated in the Council on Environmental Quality's Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act, environmental impact statements should be analytic rather than encyclopedic [40 Code of Federal Regulations Part 1502.2(a)]. The mobile source air toxics emissions information presented in the Draft and Final Environmental Impact Statements demonstrates mobile source air toxics emissions at the study area level would be much lower in the future. The U.S. Environmental Protection Agency's MOVES model also predicts lower mobile source air toxics emissions in the future. Therefore, there is no basis for the assumption that mitigation would be needed.	The FEIS does not include a discussion of the *Mobile Source Air Toxics (MSATs) at Three Schools Next to US 95 in Las Vegas, Nevada* dated May 2010. The EIS should have provided an analytical discussion of this study given the importance of the impact on children.
Ch. 4	No-Action Alternative	4-76	Air Quality	The DEIS states "MSATs emissions for the entire regional Study Area would decline regardless of whether the proposed action	247 Vehicle traffic mix projections were provided by the Maricopa Association of		The FEIS presents MSAT analysis data based upon the current MOVES2010 model. However, the vehicle mix

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Code	Issue	Response
182	**Air Quality**	The National Near Roadway Mobile Source Air Toxic Study is discussed on page 4-81 of the Final Environmental Impact Statement, although not in detail. The National Near Roadway Mobile Source Air Toxic Study is provided as background information in the Draft and Final Environmental Impact Statements, but the study itself is not relevant to the type of analysis done pursuant to the Federal Highway Administration's interim mobile source air toxics guidance, which is an emissions analysis. Monitored ambient concentrations of mobile source air toxics, the focus of the National Near Roadway Mobile Source Air Toxic Study, do not inform this type of analysis. The discussions in the *Air Quality* section of the Final Environmental Impact Statement are of sufficient detail to understand existing conditions without having to use the particular study the commenter mentions. The Council on Environmental Quality's Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act state that environmental impact statements should be analytic rather than encyclopedic [40 Code of Federal Regulations Part 1502.2(a)]. The information presented in both the Draft and Final Environmental Impact Statements demonstrated mobile source air toxics emissions at the Study Area level will be much lower in the future. The U.S. Environmental Protection Agency's MOVES model also predicts lower mobile source air toxics in the future; therefore, it can be logically assumed that these emissions will be lower at the schools as well.
183	**Air Quality**	The mobile source air toxics analyses presented in the Final Environmental Impact Statement were based on average daily traffic volumes over a 1-year period. Vehicle miles traveled are presented in the mobile source air toxics tables starting on page 4-80 of the Final Environmental Impact Statement. The Final Environmental Impact Statement indicates that local vehicle mix was a model input (page 4-79). Details on vehicle mix (heavy trucks versus all vehicles) are located in the appendix of the air quality technical report (page A-3), which is available to the public. Technical reports are designed to support the environmental impact statement, not to be reproduced in the environmental impact statement.

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				were constructed.* Does this statement consider increases to heavy-truck traffic associated with trucks bypassing the Phoenix downtown area as well as those from the CANAMEX project, and from Phoenix-area origination and destination traffic? Therefore, in accordance with FWHA guidance the MSAT analysis presented in the DEIS should have used MOVES2010, which is the current EPA/FHWA approved model, and should have included the projected increases in heavy truck traffic.	Governments and are consistent with the regional conformity analyses; they are discussed in greater detail in the air quality technical report prepared for the project. As noted on page 4-70 of the Draft Environmental Impact Statement, MOBILE6.2 was used to project emissions at a regional level consistent with 40 Code of Federal Regulations Part 93.111(c), since the mobile source air toxics analysis for the proposed action started before or during the grace period for using the MOVES2010 emissions model. However, the mobile source air toxics analysis presented on page 4-70 of the Draft Environmental Impact Statement was updated on page 4-77 of the Final Environmental Impact Statement using the MOVES2010 model.
Ch. 4	No-Action Alternative	4-76	Conformity	Neither the DEIS or the supporting technical report provides the conformity determination (i.e., the conformity analysis demonstrating the project conforms).	248 As stated on page 4-76 of the Draft Environmental Impact Statement, the proposed action is contained within the currently approved *Regional Transportation Plan* and the Maricopa Association of Government's Fiscal Year 2011–2015 TIP contains several references to the South Mountain Freeway project. Therefore, the proposed action would conform to the approved transportation plan and transportation improvement program. The carbon monoxide and particulate analyses demonstrated that the proposed freeway would not contribute to any new localized violations, increase the frequency or severity of any existing violation or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones.
NOISE					
Ch. 4	General Comment	-	Noise	The DEIS discussion is incomplete or lacking in the following areas: • Provides no discussion with regard to potential noise impacts due to ongoing maintenance activities (i.e., re-striping, re-surfacing, landscaping maintenance, etc.);	249 Analysis of noise impacts associated with maintenance activities are not required by Arizona Department of Transportation and Federal Highway Administration policy. Cumulative noise impacts are addressed on page 4-176 of the Draft Environmental Impact

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Code	Issue	Response
184		Comment noted.
185	Noise	Analysis of noise-related impacts from maintenance activities is not required under Arizona Department of Transportation and Federal Highway Administration noise policies. Noise generated by maintenance activities would be temporary in nature and would be similar to that generated during construction of the freeway (see page 4-173 of the Final Environmental Impact Statement). A discussion of induced growth can be found beginning on page 4-182 of the Final Environmental Impact Statement. Cumulative impacts from noise are discussed on page 4-188 of the Final Environmental Impact Statement. Vehicle traffic mix projections were provided by the Maricopa Association of Governments and are consistent with the regional conformity analyses; they are discussed in greater detail in the noise technical report prepared for the project. The technical report is designed to support the environmental impact statement and is available to the public.

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				• Provides no clear discussion of cumulative impacts including reasonably foreseeable development; and • It is unclear what vehicle traffic mix was used for the noise modeling	Statement. Vehicle traffic mix projections were provided by the Maricopa Association of Governments and are consistent with the regional conformity analyses; they are discussed in greater detail in the noise technical report prepared for the project.	• discussion of the cumulative impacts with regard to noise, including reasonable foreseeable development (i.e., induced growth associated with the freeway); • The vehicle mix breakdown and VMT should be specifically described and summarized in the FEIS. This is a critical data input within the project description and for the purposes of the hotspots modeling analysis. Burying this data in the technical report does not fully disclose the project for review by the general public.
Ch. 4	Noise Criteria	4-80	Noise	The DEIS notes that "To further clarify the process of noise analysis and the evaluation of noise abatement, ADOT adopted a Noise Abatement Policy (NAP), last updated in 2007 (4-80). However, the most recently issued ADOT Noise Abatement Policy is dated July 13, 2011, which superseded the 2007 version cited in the DEIS. It does not appear that the DEIS utilized the most recent ADOT Noise Abatement Policy in the noise analysis.	250 The noise analysis has been updated for the Final Environmental Impact Statement using most recent Federal Highway Administration and Arizona Department of Transportation policy and traffic projections provided by the Maricopa Association of Governments in August 2013. This updated analysis begins on page 4-88 of the Final Environmental Impact Statement. No substantial differences between the analyses presented in the Draft and the Final Environmental Impact Statements resulted.	The most recent ADOT guidance was referenced in the FEIS.
Ch. 4	Noise Criteria	4-80	Noise	The DEIS includes an incomplete review of the regulations regarding noise. The only regulations analyzed in the DEIS for noise impacts in any detail are those dealing with the Federal Highway Administration Noise Abatement Criteria (found in 23 CFR 772), and the ADOT Noise Abatement Plan dated 2007 (which isn't even the most up-to-date version). The following additional laws and guidelines could impact the project: • Noise Control Act of 1972, as amended (PL 92-574, 42 USC 4901 et seq.); • The Quiet Communities Act of 1978 (42 USC 4913) promoting the development of state and local noise control programs; • U.S. Department of Transportation Federal Transit Administration (FTA) has	251 As stated in the Council on Environmental Quality's Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act, environmental impact statements should be analytic rather than encyclopedic (40 Code of Federal Regulations Part 1502.2[a]). Those noise regulations of direct consequence to the proposed action were discussed.	The EIS should clearly identify applicable laws and guidelines which are the basis for determining whether significant impacts may occur and to aid in the selection of mitigation measures.

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Code	Issue	Response
186		Comment noted.
187	**Noise**	The noise analysis presented in the Final Environmental Impact Statement uses the most recent Arizona Department of Transportation Noise Abatement Policy (last updated in 2011), which was formally approved by the Federal Highway Administration, and traffic projections provided by the Maricopa Association of Governments in August 2013. Both the Noise Control Act of 1972 and the Quiet Communities Act of 1978 addressed emissions from transportation vehicles and equipment, machinery, appliances, aircraft, and other products in commerce. Based on this authority, the U.S. Environmental Protection Agency developed noise emission standards and controls for vehicles, which are enforced by the U.S. Department of Transportation. The noise emissions of motor vehicles are used in the Federal Highway Administration's noise prediction model (Traffic Noise Model), which was used on this project (see Final Environmental Impact Statement beginning on page 4-88). The noise regulations of other agencies have limited (U.S. Department of Housing and Urban Development and local noise ordinances) or no applicability (Federal Transit Administration—for federally funded transit projects) to the project. U.S. Department of Housing and Urban Development regulations consider noise in the acquisition of undeveloped land and noise exposure to existing developments. The Federal Highway Administration's Procedures for Abatement of Highway Traffic Noise and Construction Noise specifies abatement criteria for undeveloped land and existing housing. These criteria were used to determine mitigation for the project (see Final Environmental Impact Statement beginning on page 4-88). Local noise regulations are intended to address nuisance noise. They address emissions from modified motor vehicle exhausts, loud performances, and nighttime activities. Page 4-174 of the Final Environmental Impact Statement discusses the mitigation measures to be used to address the noise generated during construction, including nighttime construction. These commitments are confirmed in Table 3, beginning on page 38, of the Record of Decision. The Occupational Safety and Health Administration Occupational Noise Exposure, Hearing Conservation Amendment applies to on-the-job worker exposure to noise. These exposure limits will apply to highway construction workers in compliance with the Arizona Department of Transportation's safety policy.

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				published a guideline that specifically addresses issues of community noise (FTA-VA-90-1003-06); • Occupational Safety and Health Administration (OSHA) Occupational Noise Exposure, Hearing Conservation Amendment (Federal Register 48[46]:9738-9785); • U.S. Department of Housing and Urban Development (24 CFR 51.101(a)(8)); and • County, city, or local noise ordinances applicable to the project.		
Ch. 4	Table 4-40 – Noise Analysis Results, Western and Eastern Sections	4-84	Noise	It appears that not all sensitive receptors that could be impacted by noise from the project were identified and impacts predicted for, only the ones closest to the project were analyzed. For example, multiple schools located within approximately 0.5 mi of the project or alternatives that could be impacted were not evaluated, such as the following: • Kyrene de la Estrella; • Kyrene del Milenio; • Kyrene de la Sierra; • Desert Vista High School; • Keystone Montessori; • Horizon Community Learning Center; • St. John Bosco Interparish Catholic School; • Betty Fairfax High School; • Cheatham Elementary School; • Country Gardens Charter School; • Summit School of Ahwatukee, and • Sunridge Elementary School.	252 As stated on page 4-82 of the Draft Environmental Impact Statement, over 220 sensitive receivers were evaluated from a traffic noise perspective. All of the receivers represent noise sensitive land uses in proximity to the proposed project. These receivers were closer to the proposed action than the schools listed; therefore, these receivers would have higher noise levels than the schools more distant from the proposed action. Analysis of noise impacts is conducted in accordance with Arizona Department of Transportation and Federal Highway Administration policy.	No comment.
Ch. 4	Construction Noise Inset	4-89	Noise	Both the DEIS and the accompanying Noise Report use as a proxy for noise-related construction impacts from the project "measurements" from "a freeway construction project in Arizona that assessed the collective impact of construction noise" (p. 4-89 in the DEIS and p. 3-17 of the Noise Report) However, the specific freeway construction project was not mentioned; therefore, the comparability of these measurements to the proposed project is questionable and cannot	253 The measurements were collected during the construction of State Route 202L (Red Mountain Freeway) near Mesa Drive. This information has been added to the text box on page 4-98 of the Final Environmental Impact Statement.	No comment.

Code	Issue	Response
188		Comment noted.
189		Comment noted.

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					be ascertained from the data provided.			
190	Ch. 4	Mitigation for Vibration-related Impacts Inset	4-115	Topography, Geology, and Soils	Vibration from blasting is qualitatively discussed in the Topography, Geology, and Soils section of the DEIS; however, vibration from non-blasting construction activities and from operational impacts is not discussed anywhere within the DEIS. Procedures for screening and analyzing for vibrational impacts from construction and highway operation are provided in the U.S. Department of Transportation Federal Transit Administration "Transit Noise and Vibration Impact Assessment" (2006).	254 There are no federal requirements directed specifically to highway traffic induced vibration. All studies the highway agencies have done to assess the impact of operational traffic induced vibrations have shown that both measured and predicted vibration levels are less than any known criteria for structural damage to buildings.	No comment.	
	WATER RESOURCES							
191	4	Water Resources	4-93	Surface Water	The DEIS correctly identifies that there are impaired waters within the project area (page 4-93). However, the importance of this designation is not fully carried through the analysis. ADOT's Statewide Stormwater Permit (Permit No. AZS000016-2008) has specific monitoring criteria associated with impaired waters and specific mitigation criteria that shall be implemented for impaired waters. These specific criteria are not discussed. The specific water quality constituents are not identified that cause the impairment of these waters. This lack of disclosure prevents full analysis of the expected impact to these impaired waters due to both construction and operation of the proposed freeway. The analysis concludes that "Implementation of BMPs associated with any of the action alternatives would reduce water quality impacts on the receiving waters of the Salt and Gila rivers. Both construction and operational impacts may be mitigated through the use of BMPs." (page 4-101) This conclusion is not supported by the existing disclosure. Without disclosure of 1) the types of impairment on the Salt and Gila Rivers, 2) the specific monitoring/mitigation required under the ADOT Statewide permit, and 3) analysis of the types	255 The specific water quality constituents that cause the impairment change from year to year as the Arizona Department of Environmental Quality and U.S. Environmental Protection Agency assess and evaluate the water quality standards; therefore, the specific contaminants from the Section 303(d) list are not noted in the Draft Environmental Impact Statement. The primary constituent that causes impairment (total dissolved solids) is discussed on page 4-93 of the Draft Environmental Impact Statement. Specific best management practices would not be known until final design when the stormwater pollution prevention plan would be developed. The Flood Control District of Maricopa County has shared drainage systems with the municipalities and stormwater discharges that have the potential to reach the Salt and Gila rivers; therefore, the Flood Control District of Maricopa County has established and implemented monitoring requirements to comply with Arizona Pollutant Discharge Elimination System regulations, as discussed beginning on page 4-93 of the Draft Environmental Impact Statement. Discussion of Arizona Pollutant Discharge Elimination System requirements and the Arizona Department of Transportation's permit requirements through individual permits begins	The public comment made three specific, reasonable suggestions for this analysis: "It would be reasonable to extend the analysis to disclose a) what measures might be needed, and b) whether those measures would be effective. Without disclosure of 1) the type of impairment, 2) the types of contaminants, and 3) the prescribed mitigation measures and their effectiveness, disclosure of impacts to the impaired waters is partial and limited." The ADOT response provides a response to the first question—the type of impairment. However, the likely types of contaminants and the prescribed mitigation measures and effectiveness remains absent from the analysis. The commenter is referred to page 4-93 of the DEIS. This page contains a detailed description of the AZPDES permitting process. It does not contain a disclosure of the types of contaminants likely to be experienced in the impaired waters due to this project, or the typical mitigation measures that would be applied to a project of this sort and their effectiveness at reducing impacts to the impaired waters. A reasonable	

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Code	Issue	Response
190		Comment noted.
191	**Water Resources**	The impacts to surface waters as a result of the project are discussed beginning on page 4-105 of the Final Environmental Impact Statement and include increased runoff, which can increase pollutant transport, attributable to the introduction of an impermeable surface (i.e., a freeway). As discussed on page 4-101 of the Final Environmental Impact Statement, total dissolved solids are a major constituent associated with degraded water quality. Other constituents that cause impairment vary from year to year, therefore, are not noted in the Final Environmental Impact Statement. In Arizona the accepted mitigation associated with reducing impacts to surface waters (or impaired waters) is implementation of a stormwater pollution prevention plan (and best management practices) and the Arizona Pollutant Discharge Elimination System (see page 4-102). The Arizona Pollutant Discharge Elimination System meets the requirements of Section 402 of the Clean Water Act.

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				of contaminants to be discharged from the project, the conclusion as stated is arbitrary and unsupported. Specific to the impaired waters, the analysis also concludes that "increased pollutant loading from freeway operation might further impair listed reaches of the Salt River and might need measures in addition to existing permit controls to achieve or maintain water quality standards in accordance with CWA Section 303(d)." (page 4-97) This analysis is incomplete. It would be reasonable to extend the analysis to disclose a) what measures might be needed, and b) whether those measures would be effective. Without disclosure of 1) the type of impairment, 2) the types of contaminants, and 3) the prescribed mitigation measures and their effectiveness, disclosure of impacts to the impaired waters is partial and limited.	on page 4-94 of the Draft Environmental Impact Statement.	disclosure of impacts for a specific project cannot rest solely on the description of a future permitting process.
4	Water Resources	4-93	Surface Water	The impaired waters should be identified on at least one of the maps included in the Water Resources section. Instead they appear in the Waters of the U.S. section later in the DEIS.	256 A reference to the figure on which the impaired waters are shown has been added to the discussion on page 4-101 of the Final Environmental Impact Statement. The sentence, "Several reaches of the Salt and Gila rivers are on the Section 303(d) list, including that portion of the Salt River in the Study Area" has been modified to read: "Several reaches of the Salt and Gila rivers are on the Section 303(d) list, including that portion of the Salt River in the Study Area (see Figure 4-36 on page 4-116)."	The change appears to have been made as indicated.
4	Secondary and Cumulative Impacts	4-173	Surface Water	The analysis indicates in several places that along the Eastern route, surface water discharge would be routed onto lands owned by the Gila River Community, and that this currently occurs. "The drainage design features of the E1 Alternative would be such that drainage patterns from the South Mountains toward the Gila River would not be altered. Currently, drainage flows generally from the north to the south, passing under Pecos Road through a series of culverts	257 As noted on page 4-171 of the Draft Environmental Impact Statement, the type of activities that could contribute to cumulative impacts included general development patterns. Development on the Gila River Indian Community is a tribal function and requires no approval from other jurisdictions or notice to other jurisdictions regarding pending development. As a result, development along the Gila River Indian	The ADOT response is responsive to only part of the public comment. While the response provides an after-the-fact justification for not including any specific development projects south of the proposed freeway as Reasonably Foreseeable Actions, it does not address the underlying concern about the Cumulative Impacts section of the EIS.

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Code	Issue	Response
192		Comment noted.
193	**Water Resources, Secondary and Cumulative Impacts**	The Gila River Indian Community has not provided notice to the Arizona Department of Transportation regarding reasonably foreseeable development. As a result, development along the Gila River Indian Community boundary is speculative. The Final Environmental Impact Statement's *Secondary and Cumulative Impacts* section includes a discussion of water resources and the continued conversion of undisturbed land to human-based development. All reasonably foreseeable development plans are included as "human-based" development. The specifics the commenter requests can be found in "*Development Plans*" on page 4-7 of the Final Environmental Impact Statement and in Figures 4-4 and 4-5 on pages 4-8 and 4-10, respectively. In an effort to avoid being encyclopedic, the specific information is not repeated.

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				following natural drainages/ washes. The E1 Alternative would include small drainage basins and channels on the northern side of the freeway to treat the water quality and meter and direct drainage flows under the freeway and onto Community land in the same manner as they are currently." (4-98) This passage highlights a general lack in the Cumulative Impacts section of the EIS. The fundamental first step in assessing cumulative impacts is to define what other Reasonably Foreseeable Actions overlap the project in both time and space. No list of Reasonably Foreseeable Actions is provided in the DEIS. Lacking this fundamental background information results in an inadequate framework for assessing cumulative impacts. From the analysis of cumulative impacts of water resources, the reasonably foreseeable actions considered appear to be fairly generic. Specifically, the potential for development along the south side of the Eastern alignment, on the Gila River Indian Community, ought to have been explicitly assessed for its likelihood of occurring. Potential development in this area has a high likelihood of changing the location of stormwater discharges and the impact of those stormwater discharges. The future discharge of stormwater is stated as being identical to that occurring at present. This is a valid method of identifying any direct impacts from the project. It is not, however, a valid method of identifying any cumulative impacts from the project, as there may be reasonably foreseeable development south of Pecos Road that would alter conditions from the current situation.	Community boundary is speculative. It is, however, difficult to conceive of a development project on the Gila River Indian Community that would cause upstream impacts to the level described in the comment. As noted in the comment, according to 46 Federal Register 18026 (March 23, 1981), an environmental impact statement must discuss reasonably foreseeable actions. These are actions that are likely to occur or probable, rather than those that are merely possible. The Federal Highway Administration and Arizona Department of Transportation have committed to continue coordination with the Arizona Game and Fish Department, Gila River Indian Community Department of Environmental Quality, and U.S. Fish and Wildlife Service regarding wildlife concerns as a result of the freeway (see *Mitigation*, beginning on page 4-126 of the Draft Environmental Impact Statement and on page 4-138 of the Final Environmental Impact Statement).	Specifically, there is no list of Reasonably Foreseeable Actions in the EIS that can be reviewed by the public for completeness, there is no discussion of how each Reasonably Foreseeable Action overlaps with proposed project impacts in time and space, and there is no discussion of the actual impacts that would result from those Reasonably Foreseeable Actions. Even if we were to assume, for the sake of argument, that there are no future activities along the Gila River Indian Community that should be considered, or that the activities that would occur there would not be pertinent to stormwater, the EIS fails to demonstrate this in a reasonable manner. The information is not made available for the public and presumably not for a decision-maker either. Further, it is not reasonable to disregard potential future development activities on the Gila River Indian Community, solely because those activities are on the Gila River Indian Community. Every jurisdiction—city, county, state, and tribe—has regulatory or decision processes that must be passed for new development. That the Gila River Indian Community has a regulatory process in which ADOT has no role is not a reason for excluding future activities on the Community. NEPA regulations quite clearly contemplate analysis of actions beyond immediate agency control (40 CFR 1502.14(c)). ADOT's dismissal of any analysis of future development on Gila River lands is an inadequate position with respect NEPA regulation and guidance.
194 4	Water Resources	4-100	Ground-water	Analysis of impacts as required under NEPA and other laws has several fundamental	258 Specific comments are addressed below.	See specific comment responses below.

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				components: 1) The "best available scientific and technical information" shall be used (CEQ) 2) The analysis is not a bitrary (Administrative Procedures Act) 3) Resources are interrelated and the direct impacts on one resource may engender indirect impacts on other resources; these indirect impacts must be assessed (CEQ) The disclosure of impacts on water availability is insufficient with respect to these three fundamental requirements 1) the analysis does not make use of the best available information, 2) application of the analysis is applied in an arbitrary manner, and 3) interrelated indirect impacts are insufficiently analyzed. Each of these three components is addressed individually below.		
4	Water Resources	4-100	Ground-water	<u>The analysis of water availability does not use the "best available scientific and technical information."</u> Concerns were raised to ADOT through the scoping process about the destruction of supply wells located along the Eastern alternative (Pecos Road). ADOT appears to be aware of these concerns, as an attempt is made to directly address them on page 4-100 of the DEIS. This page specifically analyzes wells used for water supply for the Foothills golf courses. The analysis included on page 4-100 makes use of information that is both outdated and erroneous. This leads to an insufficient analysis that does not make use of the "best available scientific and technical information". There are three major concerns: 1. The sole information utilized (a report from 1996) is seriously out-of-date. A 17-year period in a rapidly growing community like the Ahwatukee Foothills Village has resulted in the use of a report	259 Page 4-100 of the Draft Environmental Impact Statement states that finding a suitable location for a new well in this area may be difficult. Productivity of the well in bedrock formations is primarily based on intercepting fractures, and that can be very difficult to do. The Arizona Department of Transportation is aware of the difficult conditions that exist in replacing wells in this area. The Arizona Department of Transportation is also aware of the productivity of the well in question. The comment is correct that wastewater effluent is not available as a replacement source and is not being used. The City of Phoenix did operate a wastewater reclamation facility in this area, but it was removed from service and demolished. The City of Phoenix still owns the property, but all facilities have been removed from the site. Thus, only two water sources are available for irrigation and lake supply for the Foothills Community Association: the well that would be acquired and potable water from the	This public comment was about the use of outdated information. Three specific issues were raised: 1) the use of outdated reports and identification of other data sources that could be referenced, 2) the fact that effluent is not available for use, and 3) the clear difficulty in replacing water supplies when all the available information is properly reviewed. The ADOT response only responds to the second issue, regarding effluent. ADOT does not appear to have made use of any additional data sources, nor has ADOT included additional analysis of the difficulty of replacing groundwater sources. ADOT states that "In the event that well replacement were to be impossible, the Arizona Department of Transportation would still replace the water that would

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195	**Water Resources, Secondary and Cumulative Impacts**	The City of Phoenix regularly evaluates a wide array of factors that will influence long-term (50 years) water availability and water demand. These assessments are documented in the city's *Water Resources Plan*. The most recent document was published in 2011 (see <phoenix.gov/waterservicessite/Documents/wsd2011wrp.pdf>). The study states, "Today, the City maintains a well diversified water supply portfolio which is sufficient to meet the needs of this growing community for decades to come." Additionally, the City of Phoenix Water Services Department states in its *Water Supplies* frequently asked questions document (updated July 25, 2014) that "Phoenix water supplies are in good condition." Based on information received from the City of Phoenix Water Services Department, the current breakdown of water sources is 41 percent from the Central Arizona Project (Colorado River) and 49 percent from the Salt River Project (Verde River and Salt River). The remaining water comes from groundwater and reclaimed water. Combining all water sources, the City of Phoenix's current total capacity is approximately 555 million gallons per day. During the peak summer months, the total demand is approximately 380 million gallons per day. The Foothills Community Association well produces approximately 700 gallons per minute, which equals approximately 1 million gallons per day. In comparison to the current peak demand and the total capacity, the well represents 0.26 percent and 0.19 percent, respectively. The City of Phoenix provides water for several golf courses and has indicated that there is sufficient capacity to serve the Foothills golf course were that the only option left. The procedure identified on page 4-108 of the Final Environmental Impact Statement defines the procedure that the Arizona Department of Transportation will use to replace adversely affected wells, and also identifies the general costs the Arizona Department of Transportation will incur to replace the lost water sources. As noted in this discussion, if it were necessary to provide replacement water instead of a new well, the Arizona Department of Transportation would, in negotiations with the well owner, include the difference between the costs of pumping the well and the costs of the new replacement water source.

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				that is no longer either reliable or appropriate to use. 2. Based on information in the 1996 report, ADOT identifies that the Foothills Community Association has multiple sources of water available other than the supply wells to be lost: effluent, well water, and municipal water supplied by the City of Phoenix. Because ADOT used outdated information, the analysis does not disclose to the reader that effluent is entirely unavailable within the area. The wastewater treatment plant referenced in the DEIS was removed by the City of Phoenix in the late 1990s. This key information that--effluent is completely unavailable--was reportedly made available to ADOT. It was not, however, used in the analysis of water supply availability. Using outdated information has led to the use of an erroneous assumption—that effluent is available for use. This disclosure does not reflect the "best available scientific and technical information." 3. The analysis of water replacement on page 4-100 is flawed in another way. The analysis states: "According to comments received, several wells have been drilled in the area and have either produced small amounts of water or no water." The difficulty this presents is summarized as such: "It is understood that finding a suitable location for a new well in this area may be difficult." Most of the analysis is dedicated to the process that would be undertaken to drill a new well, despite the difficulty that would be encountered in doing so. This difficulty is dismissed by indicating there are at least two other sources of water: effluent and municipal water. As indicated above, effluent is not a viable water source.	City of Phoenix. In this Final Environmental Impact Statement, the discussion on page 4-100 of the Draft Environmental Impact Statement has been modified in the Final Environmental Impact Statement to reflect that reclaimed wastewater would not be available; however, the conclusion on page 4-100 is still appropriate. As stated on pages 4-100 of the Draft Environmental Impact Statement, "In the event that well replacement were to be impossible, the Arizona Department of Transportation would still replace the water that would be lost through the acquisition." Depending on whether an action alternative were to become the Selected Alternative, it may be possible to keep certain wells in their current location, but move the well controls and associated piping to outside of the right-of-way. Such an analysis would be performed later in the design process. If a well were adversely affected by construction activities, the well might need to be abandoned or the well owner would be compensated by drilling a new well according to State regulations/standards (see text box on page 4-100 of the Draft Environmental Impact Statement). The number of wells potentially affected would be consistent with that of a project the magnitude of the proposed action, and the well replacement program as outlined by State law has been regularly implemented by the Arizona Department of Transportation to effectively mitigate well impacts associated with its projects throughout the region. Comment 260 - comment noted.	be lost through the acquisition." The point of these comments is not that ADOT wouldn't attempt to replace the water source—it is understood that there is a legal obligation to do so. The point is that in the event that ADOT can't easily do this by drilling a new well nearby, there may be significant indirect effects from the necessary use of potable water from the City of Phoenix system. These could include socioeconomic effects due the expense of using potable water, or possible impacts to the City of Phoenix system itself. That the future availability of potable water to these communities would not warrant any analysis in the EIS flies in the face of common sense. The City of Phoenix water supply relies roughly 95 percent on surface water, of which roughly two thirds is from the Colorado River via the Central Arizona Project. Even a superficial reading of available literature shows that there will eventually be a shortcoming between water supply and water demand (see the Bureau of Reclamation's Colorado River Basin Water Supply and Demand Study, December 2012 http://www.usbr.gov/lc/region/programs/crbstudy/finalreport/studyrpt.html; or see the Morrison Institute's Watering the Sun Corridor, August 2011 http://morrisoninstitute.asu.edu/products/watering-sun-corridor-managing-arizonas-megapolitan-area). Will City of Phoenix taps run dry? The same reports indicate that this is extremely unlikely. But that is not the point that was made by the public comment. What is a reasonable expectation is that the water supply will be available, but that the cost of that

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				The statement that drilling a new well "…may be difficult" seriously downplays the importance of the wells that will be lost, the unique hydrogeology of this area, and the rarity of how productive these particular wells are. The relative difficulty in finding water north from Pecos Road is illustrated in Figure 1 below, which illustrates data from 27 wells between roughly 40th Street and Desert Foothills Parkway (Source: ADWR Well Registry, https://gisweb.azwater.gov/waterresourcedata/WellRegistry.aspx, accessed 6/22/13). The wells to be lost are the most productive in the community. Farther north from Pecos Road most wells appear to be completed in bedrock rather than alluvium, as reflected by the much lower (or non-existent) pumping rates. This well information is readily available, and in fact was used by ADOT (page 4-96) solely for illustrative purposes. It was not, however, used in order to prepare a full disclosure of the impacts when these unique supply wells along Pecos Road are lost. Again, the analysis does not use the "best available scientific and technical information." It should be noted that other independent studies regarding the difficulty of siting new wells in the area were also made available to ADOT (i.e., Brown and Caldwell, 1995), but do not appear to have been used.		water supply may increase substantially. This was the point of the public comment—that there could be significant indirect effects of swapping out one water supply for another. Nobody expects a NEPA document to perfectly predict the future; but ADOT ignored any analysis of these indirect effects, even on a very basic level. We simply don't know what the impact of swapping out this water supply might be, because the EIS does not disclose this analysis. Despite public comments specifically requesting such an analysis, it was not done, nor was an adequate explanation given for why it should not or could not be done.

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				Figure 1. Groundwater Availability within Ahwatukee Foothills		
4	Water Resources	4-100	Ground-water	The analysis of water availability is applied in an arbitrary manner, and is not complete. In addition to being technically flawed by the use of outdated information and by not fully assessing available information, the analysis presented by ADOT has been applied in an arbitrary manner. The detailed analysis regarding water availability (page 4-100) focused solely on the Foothills Community Association and the potential loss of their wells. The DEIS does not analyze nearby entities that would experience the same	261 Because of the public concern expressed during the environmental impact statement process, page 4-100 of the Draft Environmental Impact Statement focuses on the Foothills Community Association to provide more details on the well acquisition, condition assessment, and replacement process used by the Arizona Department of Transportation. The Arizona Department of Transportation understands, and states on page 4-100 of the Draft Environmental Impact Statement, that finding a suitable location for a new well in this area may be difficult.	The public comment brought up a very specific concern that the analysis of impacts to water supplies was being applied arbitrarily. Specifically, that the water replacement issues associated with the Foothills Community Association and not on other impacted water supplies that could be equally problematic. The public comment identified a specific water supply—that associated with the Lakewood community—as being equally difficult to replace.

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196	**Water Resources**	The response was explaining that all wells and well owners will be treated the same and that the Arizona Department of Transportation understands that relocation of any well is a difficult activity. However, the Arizona Department of Transportation has effectively mitigated well impacts associated with its projects throughout the region and state. In the specific case of the Lakewood wells, it is anticipated that because the wells are located south of Pecos Road, they may not be directly affected by the freeway and could remain in place. The pipes associated with the water delivery system would need to be protected as they pass under the freeway, but production would not be affected.

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				impacts, or entities anywhere else along the potential freeway route. One specific example is the Lakewood Community Association. As shown in Figure 1, the supply wells currently used by the Lakewood community would be even more difficult to replace given their large pumping capacity. The DEIS arbitrarily discloses impacts to one entity (Foothills Community Association) and not the other (Lakewood Community Association), no more than a few miles away. Further, no other impacts to domestic wells or supply wells are disclosed anywhere along any of the alternative routes, despite the potential for significant impacts to be present as demonstrated by the Foothills Community Association wells. With respect to the total number of wells to be impacted (Table 4-41), this type of tabulation is not a useful or sufficient analysis. A thorough analysis would, at the least, identify the number of domestic or exempt wells, the number of supply or non-exempt wells, the presence of monitoring wells, and the ownership of major supply wells.	Depending on whether an action alternative were to become the Selected Alternative, it may be possible to keep certain wells in their current location, but move the well controls and associated piping to outside of the right-of-way. Such an analysis would be performed later in the design process. Table 4-41, on page 4-98 of the Draft Environmental Impact Statement, discloses the number of wells that may be acquired by each action alternative and, as noted on page 4-98 of the Draft Environmental Impact Statement, some of these wells are abandoned wells. This information was updated in the Final Environmental Impact Statement on page 4-106. The comment suggests that the wells that would be adversely affected should be further classified as domestic, supply, or monitoring, and well ownership should be noted. This additional level of detail would not assist the environmental impact statement decision-making process.	The ADOT response does not address the specific concern raised at all. In fact, the response is even more arbitrary than before. The justification for not providing an analysis of a very specific issue raised by the public (the Lakewood Community water supply) is that "This additional level of detail would not assist the EIS decision-making process. That statement reflects less on the importance of the issue—which is assuredly important to the Lakewood community—and more on the shortcomings of the ADOT decision process. FHWA Technical Advisory T 6640.8A states that the response should adequately address the issue or concern raised by the commenter or, where substantive comments do not warrant further response, explain why they do not, and provide sufficient information to support that position." Sufficient information was not provided in the comment to support the position that analysis of the Lakewood Community water supply would not impact the decision.
4	Water Resources	4-100	Ground-water	The analysis of water availability fails to take into account significant indirect effects. Analysis of impacts under NEPA does not require that speculative impacts be assessed, but it does require that reasonably foreseeable impacts be addressed, and in particular indirect impacts that may affect another resource. The DEIS fails to disclose significant adverse indirect impacts resulting from the loss of these supply wells. ADOT states that there are three sources of water: effluent, groundwater, and municipal water. The best available scientific and technical information indicates that two of these sources—effluent and groundwater—are	262 The comment is correct that wastewater effluent is not available as a replacement source and is not being used. The City of Phoenix did operate a wastewater reclamation facility in this area, but it was removed from service and demolished. The City of Phoenix still owns the property, but all facilities have been removed from the site. Thus, only two water sources are available for irrigation and lake supply for the Foothills Community Association: the well that would be acquired and potable water from the City of Phoenix. In the Final Environmental Impact Statement, the discussion on page 4-100 of the Draft Environmental Impact Statement has been modified to reflect that reclaimed wastewater would not be available (see page 4-108 of the	Several responses were provided to comments regarding the analysis of the Foothills Community and Lakewood water supply. In response to the public comments, in the FEIS ADOT made minor text changes to remove mention of City of Phoenix effluent as an available water supply. These changes do not address the specific comment raised, particularly in #262. This comment was specifically about the indirect effects of losing that water supply and having it replaced with the only choice of replacement water left—City of Phoenix potable water. The FEIS does not analyze these indirect effects in any way, nor does the

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197	**Water Resources, Secondary and Cumulative Impacts**	The City of Phoenix regularly evaluates a wide array of factors that will influence long-term (50 years) water availability and water demand. These assessments are documented in the city's *Water Resources Plan*. The most recent document was published in 2011 (see <phoenix.gov/waterservicessite/Documents/wsd2011wrp.pdf>). The study states, "Today, the City maintains a well diversified water supply portfolio which is sufficient to meet the needs of this growing community for decades to come." Additionally, the City of Phoenix Water Services Department states in its *Water Supplies* frequently asked questions document (updated July 25, 2014) that "Phoenix water supplies are in good condition." Based on information received from the City of Phoenix Water Services Department, the current breakdown of water sources is 41 percent from the Central Arizona Project (Colorado River) and 49 percent from the Salt River Project (Verde River and Salt River). The remaining water comes from groundwater and reclaimed water. Combining all water sources, the City of Phoenix's current total capacity is approximately 555 million gallons per day. During the peak summer months, the total demand is approximately 380 million gallons per day. The *Water Resources Plan* notes that from the peak demand year of 2002, total demand has actually declined by more than 16 percent, while the service population increased by nearly 8 percent. The Foothills Community Association well produces approximately 700 gallons per minute, which equals approximately 1 million gallons per day. In comparison to the current peak demand and the total capacity, the well represents 0.26 percent and 0.19 percent, respectively. The City of Phoenix provides water for several golf courses and has indicated that there is sufficient capacity to serve the long-term needs of the Foothills golf course were that the only option left. The procedure identified on page 4-108 of the Final Environmental Impact Statement defines the procedure that the Arizona Department of Transportation will use to replace adversely affected wells, and also identifies the general costs the Arizona Department of Transportation will incur to replace the lost water sources. As noted in this discussion, if it were necessary to provide replacement water instead of a new well, the Arizona Department of Transportation would, in negotiations with the well owner, include the difference between the costs of pumping the well and the costs of the new replacement water source.

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				either completely unavailable or their availability is going to be challenging. That leaves only one source of water: municipal water from the City of Phoenix. The DEIS correctly states that City of Phoenix water is significantly more expensive than groundwater. It does not, however, fully investigate the impact of this cost. There are two reasonably foreseeable outcomes if only City of Phoenix water is available: The golf courses within the Foothills community become economically infeasible. There are several analogs that suggest this is a reasonable effect. One course in the Ahwatukee area has recently closed because of financial difficulties. One other course already has seasonal shutdowns due to water expenses. State law restricts increases of association fees, making associations relatively unresponsive to large increases in costs. That increased costs of water would have a negative effect is not speculative. The economic fallout from the loss of a golf course—not only to the course owner and operator but to the many homeowners with home values that would be impacted—is reasonably foreseeable and should have been disclosed as an indirect environmental impact of losing supply wells. The lakes within the Lakewood community would likely also become economically infeasible, for the same reasons. These are large lakes that require significant amounts of water. The costs of supplying municipal water to these lakes would be prohibitive, and the association would not be able to raise fees to respond (in Arizona HOA fee increases are statutorily capped at a maximum of 5% per annum). These lakes are the centerpiece of the Lakewood community. The loss of these lakes would have a significant negative impact on homeowners in the area, including to neighborhood property values, recreational opportunities, and aesthetic values. The loss of	Final Environmental Impact Statement); however, the conclusion on page 4-100 is still appropriate. As stated on page 4-100 of the Draft Environmental Impact Statement, "In the event that well replacement were to be impossible, Arizona Department of Transportation would still replace the water that would be lost through the acquisition." Page 4-100 of the Draft Environmental Impact Statement states that finding a suitable location for a new well in this area may be difficult. Productivity of the well in bedrock formations is primarily based on intercepting fractures, and that can be very difficult to do. The Arizona Department of Transportation is aware of the difficult conditions that exist in replacing wells in this area. The procedure identified on page 4-100 of the Draft Environmental Impact Statement defines the procedure that the Arizona Department of Transportation would use to replace adversely affected wells, and also identifies the general costs the Arizona Department of Transportation would incur to replace the lost water sources. As noted in this discussion, if it were necessary to provide replacement water instead of a new well, the Arizona Department of Transportation would, in negotiations with the well owner, include the difference between the costs of pumping the well and the costs of the new replacement water source. Depending on whether an action alternative were the Selected Alternative, it may be possible to keep certain wells in their current location, but move the well controls and associated piping to outside of the right-of-way. Such an analysis would be performed later in the design process.	comment explain why it would be inappropriate to address these indirect effects. Two very specific indirect effects were raised about impacts to the community and golf course. The response does not adequately address the issue or concern raised by the commenter nor does it provide sufficient information to support why these specific effects weren't addressed. In effect, ADOT has fully agreed with the public comment that effluent is not a viable option, but then has failed to actually carry that information through any analysis of direct or indirect impacts.

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					these lakes is reasonably foreseeable and should have been disclosed as an indirect environmental impact of losing supply wells.		
198	4	Secondary and Cumulative Impacts	4-173	Water Availability	Based on the above concerns, the assessment of cumulative impacts of water availability is lacking. The DEIS states: "Ongoing planned and permitted residential, commercial, and industrial development in the region would likely continue to place a demand on water availability. The proposed action would have little cumulative effect on water availability." (emphasis added) Given the outcomes of attempting to replace water lost to both Foothills Community Association and Lakewood Community Association, there would be stresses placed on other aspects of the water delivery system within the City of Phoenix. This has not been analyzed properly as either a direct, indirect, or cumulative impact.	262 See comment # 262 above	Similar to that described above, this comment pointed out another indirect effect that was specifically called out by the public. An analysis was not included in the FEIS, and the reasons for not including such an analysis in the FEIS were not provided.
199	4	Water Resources	4-97	Ground-water	A comment typical throughout the document, but specific to groundwater resources is the use of outdated information. Specifically, groundwater levels are shown from 1992, almost 20 years in the past. If new information is not available, it is the responsibility of the agency to either obtain that information, or state clearly why that cannot be done. (CEQ Regs 1502.22) Curiously, elsewhere in the document "Topography, Geology, and Soils" more up-to-date groundwater levels are presented.	263 As noted on page 4-97 of the Draft Environmental Impact Statement, although groundwater level data in Ahwatukee Foothills Village were shown from 1972 to 1992, this information was gathered from the U.S. Geological Survey in 2009. Groundwater data in other areas may indeed be more current; however, this additional level of detail would not assist the environmental impact statement decision-making process.	This highlights another deficiency in the ADOT response to comments. The best source of information on water levels in wells in Arizona is the Arizona Department of Water Resources, either the well registry or the Groundwater Site Inventory databases. These sources were specifically used and mentioned in public comments. The USGS is not as comprehensive a data source with respect to groundwater levels. Use of this data source and no other does not reflect the best available information and science. Several wells have been attempted in the Foothills area in the last few years, with negative results. An appropriate search of ADWR files possibly could have identified additional information pertinent to available water supply. As noted in the response to #261, ADOT states that "This additional level of detail

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198	**Water Resources, Secondary and Cumulative Impacts**	The City of Phoenix regularly evaluates a wide array of factors that will influence long-term (50 years) water availability and water demand. These assessments are documented in the city's *Water Resources Plan*. The most recent document was published in 2011 (see <phoenix.gov/waterservicessite/Documents/wsd2011wrp.pdf>). The study states, "Today, the City maintains a well diversified water supply portfolio which is sufficient to meet the needs of this growing community for decades to come." Additionally, the City of Phoenix Water Services Department states in its *Water Supplies* frequently asked questions document (updated July 25, 2014) that "Phoenix water supplies are in good condition." Based on information received from the City of Phoenix Water Services Department, the current breakdown of water sources is 41 percent from the Central Arizona Project (Colorado River) and 49 percent from the Salt River Project (Verde River and Salt River). The remaining water comes from groundwater and reclaimed water. Combining all water sources, the City of Phoenix's current total capacity is approximately 555 million gallons per day. During the peak summer months, the total demand is approximately 380 million gallons per day. The Foothills Community Association well produces approximately 700 gallons per minute, which equals approximately 1 million gallons per day. In comparison to the current peak demand and the total capacity, the well represents 0.26 percent and 0.19 percent, respectively. The City of Phoenix provides water for several golf courses and has indicated that there is sufficient capacity to serve the Foothills golf course were that the only option left. The procedure identified on page 4-108 of the Final Environmental Impact Statement defines the procedure that the Arizona Department of Transportation will use to replace adversely affected wells, and also identifies the general costs the Arizona Department of Transportation will incur to replace the lost water sources. As noted in this discussion, if it were necessary to provide replacement water instead of a new well, the Arizona Department of Transportation would, in negotiations with the well owner, include the difference between the costs of pumping the well and the costs of the new replacement water source.
199	**Water Resources**	Groundwater data in other areas may be more current; however, this additional level of detail would not assist the environmental impact statement decision-making process because groundwater levels are not a differentiating factor among action alternatives and because each action alternative is located in a similar area and follows a similar vertical profile.

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4	Water Resources	4-97	Ground-water	The analysis of water quality is insufficient. While existing background water quality (page 4-97) is of interest, the more important concern is the potential for the proposed freeway route to impact known areas of contamination. This is not disclosed in the assessment of water resources. There are several basic and readily available data sources that should have been consulted for this analysis. At a minimum: 1) known Leaking Underground Storage Tank (LUST) sites, 2) known State (WQARF) or Federal (CERCLA) superfund sites, and 3) known or suspected landfills, either historic or active (the location along the Salt River makes this a particularly important item to assess in the DEIS).	264 Both the Van Buren Tank Farm and the West Van Buren Water Quality Assurance Revolving Fund site were identified and considered during development of the Draft Environmental Impact Statement (see pages 4-97 and 4-153 of the Draft Environmental Impact Statement and the Draft Initial Site Assessment prepared for the proposed project). These sites are primarily groundwater-impact sites, and groundwater is found at a depth of over 60 feet below the footprint of the Preferred Alternative. Given the separation distance between the adversely affected medium (groundwater) and the construction zone (near-surface in these locations), the project team determined that these sites would not pose a risk to construction or to the general public once the facility were completed. This assessment has been clarified in the Final Environmental Impact Statement on page 4-165.
4	Waters of the U.S.	4-112	Waters of the U.S.	The DEIS states: "The general and special conditions of the Section 404 Individual Permit would minimize impacts on jurisdictional waters to the extent practicable. ADEQ would issue Section 401 Individual certification for compliance with water quality prior to Section	265 According to 33 Code of Federal Regulations 323.3, a permit is required for discharges of dredged or fill material into waters of the United States. As noted on page 4-110 of the Draft Environmental Impact Statement, as design

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200		Comment noted.
201	**Waters of the United States**	As described on page 4-118 of the Final Environmental Impact Statement, it is anticipated that the W59 (Preferred) Alternative will qualify for Section 404 of the Clean Water Act Nationwide Permit #14, Linear Transportation Projects, because of the limited amount of fill that would be placed into jurisdictional waters. Generally, nationwide permits on non-tribal lands in Arizona have water quality certification conditions, which, when implemented, provide conditional water quality certification for the permit; however, if the activity affects an impaired water, an individual water quality certification is required. If an individual Section 404 permit is required, a permit application will be submitted to the U.S. Army Corps of Engineers describing the proposed activity. Once the application is complete, the U.S. Army Corps of Engineers issues a public notice containing the information needed to evaluate the likely impacts of the activity. A notice is sent to all interested parties including adjacent property owners, government agencies, and others who have requested a notice. During the public notice period of the individual permit, the Arizona Department of Environmental Quality conducts its Clean Water Act Section 401 certification review. As part of the application review, the Arizona Department of Environmental Quality may issue a public notice that provides an opportunity for the public to comment on the Arizona Department of Environmental Quality certification decision prior to providing a water quality certification. Controlling and treating runoff is a normal function of Arizona Department of Transportation projects. The U.S. Army Corps of Engineers, as a cooperating agency, has participated and contributed in each step of the environmental process. The agency has found the logical sequence of decision making to be sound and in line with National Environmental Policy Act requirements. The Arizona Department of Environmental Quality has also contributed to the process. Both agencies have oversight roles in project permitting as established in the Clean Water Act (Sections 401, 402, and 404). Extensive mitigation in accordance with the permitting requirements can be found in the *Water Resources* and *Waters of the United States* sections of Chapter 4 of the Final Environmental Impact Statement. These commitments are confirmed in Table 3, beginning on page 38, of the Record of Decision. The Arizona Department of Transportation will comply with the conditions required in the Section 404 permit and Section 401 water quality certification.

ADEQUACY OF THE NEPA ANALYSIS

Chapter	Section / Subsection	Page(s)	Resource Area	SWCA Comment on Draft EIS	ADOT Responses to Comments on Draft EIS	SWCA Review of Final EIS
				404 permit issuance." The issuance of the Section 401 individual certification in light of the impaired nature of the Salt and Gila River should have been discussed.	proceeds, the Arizona Department of Transportation would prepare and submit an application to the U.S. Army Corps of Engineers for a permit under Section 404 of the Clean Water Act. Steps are outlined beginning on page 4-110 of the Draft Environmental Impact Statement. Minimization of impacts would be achieved and unavoidable impacts would be mitigated to the extent reasonable and practicable. These steps are outlined beginning on page 4-110 of the Draft Environmental Impact Statement.	given the presence of impaired waters in the area. The ADOT response makes reference only to the 404 permit. This response does not adequately address the issue or comment raised by the commenter, or indicate why it was not addressed. It should be noted that EPA raised questions regarding the 404 permitting in their review of the DEIS; these questions do not appear to have been addressed in any more detail in the FEIS than they were in the DEIS.

Code	Comment Document

202

COMMENT 3

Comment from Chris Garret, B.S., P. HGW, at SWCA regarding South Mountain Freeway (Loop 202) EIS Depressed Freeway Alternative

Code	Issue	Response
202		Title page.

Code	Comment Document

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ENVIRONMENTAL CONSULTANTS
Sound Science. Creative Solutions.

Phoenix Office
3033 North Central Avenue, Suite 145
Phoenix, AZ 85012
Tel 602.274.3831 Fax 602.274.3958
www.swca.com

November 5, 2014

Patricia Lawlis
Protecting Arizona's Resources and Children, Inc.
PO Box 50455
Phoenix, AZ 85076

Re: South Mountain Freeway (Loop 202) EIS Depressed Freeway Alternative

Dear Ms. Lawlis:

203

The purpose of this letter is to provide you with some thoughts specific to the dismissal of the depressed freeway alternative in the ADOT Loop 202 EIS. As a hydrologist, it is difficult to actually assess from a technical viewpoint whether a depressed freeway alternative is reasonable or not, for the very simple reason that ADOT has not provided any analysis to review or consider, even at a generic level. For that reason, most of the following thoughts are related to the NEPA process, and not the actual hydrology.

I note that both the Draft EIS and Final EIS state the following (page 3-18): "For these reasons, the depressed freeway options were not carried forward for further study. Instead, the rolling profile was carried forward. Maintaining the existing flows onto Community land with a rolling profile would require extension of the existing drainage structures and the construction of small drainage basins at regular intervals." This statement is preceded in the EIS by a discussion of the design components that would be required to consider a depressed freeway option. From this it would appear that ADOT considered and analyzed the depressed freeway option internally. Even if we assume that such an internal analysis was conducted, it remains unclear as to why this alternative was dismissed as an alternative[1].

That an alternative is different is not a reason to dismiss it. That an alternative could take more land, have a bigger footprint, cost more, or require special engineering are all components to be analyzed and compared against other alternatives, not reasons to dismiss an alternative from consideration. Generally speaking, the only valid reasons to dismiss an alternative are that it does not meet the Purpose and Need, is illegal, or that design constraints make it an impossibility to accomplish (i.e., it is not practical or feasible).

A review of the Purpose and Need is enlightening on this point. It does not mention cost or funding as any part of the purpose and need for this project. It appears to me that the depressed freeway alternative meets the stated purpose and need for the project just as well as any other alternative. The depressed freeway alternative clearly should not have been dismissed for not meeting the Purpose and Need.

[1] The National Environmental Policy Act is a disclosure exercise, designed to ensure that a decision maker, as well as the public, adequately understands the environmental impacts (both positive and negative) of various alternatives that meet the Purpose and Need. Failure to discuss the basis for dismissal of an alternative, either in the EIS or in publicly-available decision documents, is contrary to the spirit of the law as well as to available NEPA guidance.

Code	Issue	Response
203	**Alternatives**	Depressing the freeway is considered a design option of the associated alternative. Numerous design options were evaluated and documented during the alternatives development and screening process. It is not required within the National Environmental Policy Act process that every potential similar variation be carried forward and studied in detail. As noted beginning on page 3-15 of the Final Environmental Impact Statement, depressing the Pecos Road sections would entail installation of pump stations to drain the main line freeway. A depressed freeway would also need a drainage channel to capture the off-site flows to prevent their entering the freeway. Pump stations were not used because of the high cost of construction and maintenance needed for their operation. The recommended freeway configuration has the E1 Alternative aboveground and the existing culverts extending to pass the drainage under the freeway. Pecos Road currently has numerous existing culvert crossings. Depressing the freeway in this area would eliminate the existing culvert crossings and potentially have adverse flooding impacts on adjacent properties. Extending the existing culverts or upsizing the culverts would maintain or improve drainage flows. This would ensure that there would be no adverse flooding impacts on adjacent properties. To reduce impacts by depressing the freeway in the Eastern Section, the Arizona Department of Transportation would: · need to spend an additional $400 million for right-of-way acquisition and construction · displace an additional 300 residences · maintain additional pump stations and detention basins for the life of the freeway · would still have noise-related impacts requiring mitigation (i.e., noise barriers and their associated costs and visual impacts) Because the below-ground option would result in substantially greater costs and residential displacements, this option was eliminated from further study. The individual alternatives screening documents were referenced throughout Chapter 3 of the Draft Environmental Impact Statement, including the *E1 Alternative - Profile Variations along Pecos Road* memorandum mentioned on page 3-18. This document and others were included as part of the *Validation of the Alternatives Screening Process at the FEIS Stage* (2014) document, which presented a reassessment and validation of the alternatives screening process for the Final Environmental Impact Statement, including the revised traffic projections. This document was available for public review on the project Web site at <azdot.gov/southmountainfreeway>.

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Which then begs the next question, are the design constraints impossible to overcome to build a depressed freeway? By ADOT's own analysis, they are not impossible to overcome. ADOT states the various manners in which drainage issues could be overcome. ADOT also correctly points out that overcoming these drainage design concerns will have other environmental impacts.

Of course they'll have environmental impacts--that's to be expected from any alternative. Examining the trade-off of those benefits versus environmental impacts is exactly the point of including the alternative in an EIS. That there are different or greater impacts is simply not a valid reason to dismiss an alternative. ADOT also hints (but does not fully analyze) that there are environmental benefits to the alternative with respect to noise and air quality, but dismisses these benefits as negligible. In total, this amounts to an arbitrary dismissal of impacts (both positive and negative) that ought to have been provided to the decision-maker and public in order to allow an informed decision to be made.

In other words, it's perfectly acceptable if ADOT were to weigh the costs and benefits of a depressed freeway, and then in the end make an informed choice to not build a depressed freeway alternative. But it is contrary to NEPA guidance and practice to dismiss an alternative, without analysis or comparison, that can be physically built, isn't illegal, and meets the stated Purpose and Need.

When evaluating these trade-offs, it is also useful to look to historical analogs. A quick review of Valley freeways suggests that ADOT historically has found that there certainly is a benefit to construction of a depressed freeway. In those cases, clearly the costs and benefits must have been weighed and in those cases, a depressed freeway ended up being the selected alternative, despite having the same engineering concerns to overcome as stated in the South Mountain Freeway Final EIS. Granted, this is an imperfect comparison because locations differ and hydrologic conditions differ, as do land use conditions. But the fact that ADOT has not only analyzed but chosen to build depressed freeways in the past certainly raises a reasonable expectation that it is a valid alternative to at least consider in the context of an EIS.

In summary, from a hydrologic standpoint there certainly would be tradeoffs (both positive and negative) from building a depressed freeway, and there certainly could be technical challenges to overcome. As it seems doubtful those technical challenges rise to the level of impossibility, and as it seems that a depressed freeway alternative could still meet the stated Purpose and Need, it is reasonable that those tradeoffs should be analyzed in the context of an alternative in the EIS.

Sincerely,

Chris Garrett, P.HGW.
SWCA Environmental Consultants

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Code	Comment Document

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SWCA ENVIRONMENTAL CONSULTANTS

CHRIS GARRETT, B.S., P.HGW.

Tucson Office Director, Project Manager, Hydrologist

Years of Experience

20

Expertise

NEPA compliance

Hydrology and water resource permitting; water supply analysis

Groundwater/surface water interaction studies

Clean Water Act compliance

Groundwater modeling

Education

B.S., Hydrology; University of Arizona, Tucson; 1995

Registration/ Certification

Professional Hydrologist-Groundwater (P.HGW.), Certified and Registered by the American Institute of Hydrology (04-H-1623)

Training

Adjunct Faculty, Water Resources Technology Program, Gateway Community College; 2004–2008

Experience Summary

Mr. Garrett has served as the director of SWCA's Tucson office since 2011. In that role, he has overseen the execution of projects large and small, managing interdisciplinary, multi-phase projects involving a variety of tasks and sub-consultants. Mr. Garrett is an experienced NEPA planner and he has managed or participated in the preparation of more than a half dozen major Environmental Impact Statements.

Mr. Garrett has been centrally involved in two of the most controversial NEPA projects in Arizona in the past five years. Mr. Garrett is the project manager for the Rosemont Copper Project EIS for the Coronado National Forest, which has involved highly complex technical issues, numerous cooperating agencies, and vocal public comment. Mr. Garrett was also involved in the Northern Arizona Withdrawal EIS, developing the Reasonably Foreseeable Development scenario for numerous uranium mining claims.

As a registered Professional Hydrologist specializing in groundwater (P.HGW.), Mr. Garrett also coordinates hydrologic investigations and water resource assessments with federal and state agencies, water and energy utilities, commercial and industrial clients, developers, and private land owners, as well as providing hydrologic analysis for EISs and EAs.

Mr. Garrett has served as an adjunct faculty member in water resources technology at Gateway Community College, and as a guest speaker for the Bureau of Land Management training in aquifer testing.

Selected Project Experience

Southline Transmission EIS; Las Cruces, New Mexico, to Wilcox, Arizona; Southline Transmission LLC. SWCA serves as the third-party NEPA consultant to the BLM and the Western Area Power Administration (the co-lead federal agencies) and Southline Transmission LLC (the proponent). The project proposes more than 360 miles of new and rebuilt transmission line and will provide 1,000 megawatts of capacity in southern New Mexico and Arizona. *Role: Environmental Specialist. Provided hydrologic analyses and NEPA expertise.*

Rosemont Mine EIS; Coronado National Forest near Tucson, southeastern Pima County, Arizona; Rosemont Copper Company. As a third party contractor, SWCA worked with the U.S. Forest Service (USFS) to determine and document potential environmental impacts of a proposed open-pit copper, molybdenum, and silver mine on more than 5,000 acres of private and National Forest lands in the Santa Rita Mountains. *Role: Project Manager / Hydrologist. Since 2010, has served as lead hydrologist and Project Manager, responsible for oversight of expert peer review of groundwater modeling, geochemical modeling, and surface water modeling. Served a key role in designing mitigation and monitoring components for this project. Project required a sophisticated and robust approach to hydrologic and geochemical modeling, and assessment of impacts to riparian resources.*

GARRETT

Code	Issue	Response
204		Résumé.

Code	Comment Document

205

COMMENT 4

Response to Final Environmental Impact Statement (FEIS) Socioeconomic Factors
by
Kevin Kane

Code	Issue	Response
205		Title page.

Code	Comment Document

206

RESPONSE TO FINAL ENVIRONMENTAL IMPACT STATEMENT (FEIS)
SOCIOECONOMIC FACTORS
Comments prepared by Kevin Kane on behalf of PARC, et al.
October 29, 2014

The FEIS has addressed a number of concerns laid out in my original comment document, provided to ADOT in response to the DEIS on July 24, 2013. My original comments principally addressed (comment #1) the use of outdated input data, (comment #2) the DEIS's internal inconsistency of using short-term trends to predict long-range growth, and (comment #3) the uncertainty of predictive models of population and VMT growth. While the use of outdated input data appears to have been addressed, the differences between the old and new projections beg the question of whether the new figures were actually considered in determining whether the proposed action is needed.

The FEIS responds to the criticism of its use of outdated input data in comments 19 and 20. ADOT avers that Census 2010-based socioeconomic data had not yet been adopted by MAG at the time of the DEIS, and they are now integrated in the FEIS. Comment 20 notes that the newly updated projections in the FEIS are consistent with the county-wide estimates provided by the ADOA and presented in my response to the DEIS.

The response in comment 20 also states that, "While new projections based on the 2010 census showed a lower anticipated population and vehicle miles traveled in 2035 than the previous projections, the conclusions reached in the DEIS were validated in the FEIS." Namely, that the proposed action is needed. A comparison of DEIS and FEIS socioeconomic projections is included in Table 1:

Table 1: Comparison of DEIS vs. FEIS 2035 Projections

	2010 Census	Year 2035 Projections:		
		DEIS *(using 2005 Census input data)*	FEIS *(using 2010 Census input data)*	Pct. Difference
County Population	3,824,000	6,545,000	5,776,000	11.75%
Study Area Population	1,506,000	2,578,000	2,424,000	5.97%
County Employment	1,707,000	3,600,000	2,892,000	19.67%
Study Area Employment	509,000	1,236,000	1,067,000	13.67%

207

While the population and employment estimates now correctly use current data (which includes a period of substantially slowed employment and population growth in the County and Study Area from 2005-2010), these major differences are not accompanied by updated narrative conclusions or justification. The only acknowledgement of these differences is from the above-quoted response in comment 20. Therefore, while new figures are provided in the FEIS, ADOT did not sufficiently address my comment to the DEIS (comment #1), which stated that

1

Code	Issue	Response
206		Comments noted. Responses to specific comments are provided in the following pages. As noted on page xi of the Prologue to the Final Environmental Impact Statement, the purpose and need for the project was reevaluated using the new socioeconomic projections related to regional traffic, and the conclusions reached in the Draft Environmental Impact Statement were reconfirmed in the Final Environmental Impact Statement. Similarly, it is noted on page xi that the alternatives development and screening process was validated using the updated socioeconomic and traffic projections.
207	**Socioeconomic Projections**	The Maricopa Association of Governments continually updates databases containing known development projects and general plan land use amendments. The effects of changes to the known development projects and general plan land use updates, as well as the regional economic downturn and changes to population and employment control totals, are the main drivers of the differences between the socioeconomic data used in the Draft and Final Environmental Impact Statements. While new projections based on the 2010 Census showed a lower projected population and vehicle miles traveled in 2035 than the previous projections, the conclusions reached in the Draft Environmental Impact Statement were validated in the Final Environmental Impact Statement (see Chapter 1, *Purpose and Need*, and Chapter 3, *Alternatives*). The need for the project is based on socioeconomic factors and regional transportation demand and existing and projected transportation system capacity deficiencies (see text beginning on page 1-11 of the Final Environmental Impact Statement). Socioeconomic forecasts show population, housing, and employment increasing at high rates. Projections for 2035 are of a population of 5.8 million, housing of 2.3 million dwelling units, and an employment level of 2.9 million jobs. Increases in vehicle miles traveled are expected to meet or exceed growth of the three socioeconomic trends. Almost 50 percent of the projected regional growth is expected to occur in areas that will be immediately served by the freeway. The commenter is focused on the change in values from the Draft Environmental Impact Statement to the Final Environmental Impact Statement instead of the more relevant comparison between 2010 and the new 2035 values presented in the Final Environmental Impact Statement. This comparison still shows an increase of almost 2 million people and over 1 million jobs in the next 25 years. The project is needed to serve that growth. Without a major transportation facility in the Study Area, the region will suffer even greater congestion, travel delays, and limited options for moving people and goods safely through the Phoenix metropolitan region.

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justification for the proposed action was not based on current input data. The conclusions reached in the FEIS are identical to those in the DEIS, which were based on outdated data that provided an overly optimistic future growth scenario.

208 In other words, the only difference between the DEIS and the FEIS is that the reduced figures appear have now been "plugged in" to Figure 1-7 and the text on page 1-11. The fact that a nearly 20% decrease in projected 2035 values has no bearing on conclusions regarding the proposed action suggests that decisions regarding the proposed action were made irrespective of population and employment projections to begin with.

Furthermore, the sidebar on page 1-11 titled "How did the economic downturn affect growth rates" remains largely unchanged, stating in both the DEIS and FEIS that:

> *"An economic downturn associated with a given recession is, however, generally considered a short-term phenomenon with respect to the longer-term planning horizon established for the proposed action… the critical factors underlying these indicators remain unchanged."*

209 These remarks, in particular, show no regard for the fact that updating 2035 projections with 2005-2010 socioeconomic changes results in as much as a 19.67% decrease in 2035 figures. The difference between DEIS and FEIS figures proves that a short-term phenomenon (the economic downturn) changes future conditions on the longer-term planning horizon established for the proposed action. Thus, ADOT did not sufficiently address my comment to the DEIS (comment #2) that short-term growth rates do impact estimates of future conditions, instead brushing off this possibility using the above narrative statement even though the projections they present prove the opposite.

Further Concerns

210 The updated population and employment projections for the County and Study Area – found in Figure 1-7 of both the DEIS and FEIS – contain numerous questionable differences that are not addressed. For example, the projected 2035 population of the Southwest Valley was 809,000 (6.42% annual growth), but changed to 521,000 in the FEIS (3.84% annual growth). Meanwhile, the population projection increases substantially for Ahwatukee/Gila River Indian Community from 89,000 to 97,000 while this activity area's employment projection decreases from 45,000 to 41,000. The net growth projected for this activity area is inconsistent with the FEIS'

211 acknowledgement on page 4-5 that Ahwatukee is "nearly built out." A breakdown by activity area is included in Table 2.

210 Such significant changes – some increases, some decreases, need to be explained and justified if growth in the study area is to be used as justification for the need for the proposed action. In particular, employment in the Study Area is expected to grow much faster than the County

212 overall – a 3.00% annual increase to just over one million jobs – while Study Area population is only expected to grow by 1.92% annually. Why is Study Area employment expected to grow so much more rapidly than Study Area population? What new information became available between the DEIS and FEIS suggesting Chandler/Gilbert/Queen Creek will have a greater

2

Code	Issue	Response
208	**Purpose and Need**	An important point is that the purpose and need analysis presented in the Draft and Final Environmental Impact Statements demonstrated that the project is needed today and will continue to be needed into the future (see Final Environmental Impact Statement beginning on page 1-13). Even with the lower values for 2035, extensive growth is still projected for Maricopa County and the Study Area. As shown in the commenter's table, the change between the projections presented in the Draft Environmental Impact Statement and the Final Environmental Impact Statement are lower for the Study Area when compared with the entire county. So the effects of the lower projections were of less consequence for the analysis of the project. The purpose and need and analysis of alternatives were updated and reevaluated using these new socioeconomic projections and corresponding projections related to regional traffic. The conclusions presented in the Draft Environmental Impact Statement were validated and presented in the Final Environmental Impact Statement (see Chapter 1, *Purpose and Need*).
209	**Socioeconomic Projections**	In response to long-term trends, while the new projections for 2035 are lower than what was projected previously, the long-term trend still holds that those previously projected levels of population, housing, and employment will be reached, although they will be reached a few years later than originally projected.
210	**Socioeconomic Projections**	The new socioeconomic projections approved by the Maricopa Association of Governments in June 2013 were developed in close coordination with the local jurisdictions of Maricopa County. The assumptions related to land use, occupancy levels, residential and commercial development plans, job centers, and other factors are updated regularly and form the basis for any differences perceived in the modeling results. Once the Maricopa Association of Governments approved the new socioeconomic projections, they became the basis for the evaluation of purpose and need for the project. The Final Environmental Impact Statement presents the analysis of these new projections with respect to purpose and need and alternatives. While a general comparison between the values used in the Draft Environmental Impact Statement and Final Environmental Impact Statement is provided, a detailed side-by-side comparison is not presented because the values presented in the Draft Environmental Impact Statement no longer represent the best information available; the values in the Final Environmental Impact Statement do.
211	**Socioeconomic Projections**	While nearly built-out, developments are still planned in the Ahwatukee Foothills Village west of 17th Avenue (see Figure 4-4 on page 4-8 of the Final Environmental Impact Statement).
212	**Socioeconomic Projections**	The Maricopa Association of Governments continually updates databases containing known development projects and general plan land use amendments. The effects of changes to the known development projects and general plan land use updates, as well as the regional economic downturn and changes to population and employment control totals, are the main drivers of the differences between the socioeconomic data used in the Draft and Final Environmental Impact Statements. While new projections based on the 2010 Census showed a lower projected population and vehicle miles traveled in 2035 than the previous projections, the conclusions reached in the Draft Environmental Impact Statement were validated in the Final Environmental Impact Statement (see Chapter 1, *Purpose and Need*, and Chapter 3, *Alternatives*).

(Response 212 continues on next page)

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population growth rates (1.32% vs. 1.46% annually), but slower employment growth (2.60% to 2.21%) than previously projected?

Table 2: Comparison of Activity Area Growth Rates

	2035 Population – DEIS *(% Annual Growth)*	2035 Population – FEIS *(% Annual Growth)*	2035 Employment – DEIS *(% Annual Growth)*	2035 Employment – FEIS *(% Annual Growth)*
Central West Valley	809,000 *(1.53%)*	880,000 *(1.7%)*	378,000 *(3.7%)*	339,000 *(3.72%)*
Southwest Valley	809,000 *(6.42%)*	521,000 *(3.84%)*	282,000 *(6.08%)*	190,000 *(4.86%)*
Ahwatukee/Gila River Indian Community	89,000 *(0.27%)*	97,000 *(0.77%)*	45,000 *(1.85%)*	41,000 *(1.68%)*
Chandler/Gilbert/Queen Creek	871,000 *(1.32%)*	926,000 *(1.46%)*	531,000 *(2.6%)*	497,000 *(2.21%)*
Study Area Total	2,578,000 *(2.29%)*	2,424,000 *(1.92%)*	1,236,000 *(3.45%)*	1,067,000 *(3%)*
Maricopa County Total	6,545,000 *(1.94%)*	5,776,000 *(1.66%)*	3,600,000 *(2.44%)*	2,892,000 *(2.13%)*

213 This is important omitted information in the FEIS, since transportation between land uses in these activity areas are crucial to the volume of origin-destination pairs served by the proposed action. Significant changes in the projected population or employment of the Central West Valley and the Chandler/Gilbert/Queen Creek area directly impact the analysis of future demand for the proposed action since its intent appears to be, in part, to connect places of residence with places of employment that are in other parts of the region. These figures – which changed dramatically between the DEIS and FEIS – should be accompanied by a clear description of why and how employment and population by area are expected to grow and require a major transportation facility connecting them specifically. While the land use section of chapter 4 (pages 4-3 to 4-19) discusses land use in the study area, it does not discuss purpose and need based on socioeconomic factors of the population and employment centers the proposed action connects, rather focusing on land uses impacted by the various alignment options.

214 Finally, MAG provided projections of population, housing, and employment using 2010 input data, which was relied upon for the FEIS[1]. However, MAG's time horizon for projection is 30 years into the future, providing projections at 10-year intervals. The MAG report using 2005 input data[2] which was used in the DEIS provided 2005, 2015, 2025, and 2035 estimates, though

[1] Maricopa Association of Governments, *Socioeconomic Projections: Population, Housing, and Employment by Municipal Planning Area and Regional Analysis Zone.* Phoenix, 2013.
[2] Maricopa Association of Governments, *Socioeconomic Projections: Population, Housing, and Employment by Municipal Planning Area and Regional Analysis Zone.* Phoenix, 2007.

3

Code	Issue	Response
212 (cont.)		The need for the project is based on socioeconomic factors and regional transportation demand and existing and projected transportation system capacity deficiencies (see text beginning on page 1-11 of the Final Environmental Impact Statement). Socioeconomic forecasts show population, housing, and employment increasing at high rates. Projections for 2035 are of a population of 5.8 million, housing of 2.3 million dwelling units, and an employment level of 2.9 million jobs. Increases in vehicle miles traveled are expected to meet or exceed growth of the three socioeconomic trends. Almost 50 percent of the projected regional growth is expected to occur in areas that will be immediately served by the freeway. The commenter is focused on the change in values from the Draft Environmental Impact Statement to the Final Environmental Impact Statement instead of the more relevant comparison between 2010 and the new 2035 values presented in the Final Environmental Impact Statement. This comparison still shows an increase of almost 2 million people and over 1 million jobs in the next 25 years. The project is needed to serve that growth. Without a major transportation facility in the Study Area, the region will suffer even greater congestion, travel delays, and limited options for moving people and goods safely through the Phoenix metropolitan region.
213	**Socioeconomic Projections**	The Maricopa Association of Governments continually updates databases containing known development projects and general plan land use amendments. The effects of changes to the known development projects and general plan land use updates, as well as the regional economic downturn and changes to population and employment control totals, are the main drivers of the differences between the socioeconomic data used in the Draft and Final Environmental Impact Statements. Once the Maricopa Association of Governments approved the new socioeconomic projections, they became the basis for the evaluation of purpose and need for the project. The Final Environmental Impact Statement presents the analysis of these new projections with respect to purpose and need and alternatives (see Chapter 1, *Purpose and Need*, and Chapter 3, *Alternatives*). While a general comparison between the values used in the Draft Environmental Impact Statement and Final Environmental Impact Statement is provided, a detailed side-by-side comparison is not presented because the values presented in the Draft Environmental Impact Statement no longer represent the best information available; the values in the Final Environmental Impact Statement do. The analysis of the new traffic projections based on the new socioeconomic projections and land use plans are presented in Chapter 1 (see page 1-13) and in Chapter 3 (see pages 3-27 and 3-60) of the Final Environmental Impact Statement. As noted on page xi of the Prologue to the Final Environmental Impact Statement, the purpose and need for the project was reevaluated using the new socioeconomic projections related to regional traffic, and the conclusions reached in the Draft Environmental Impact Statement were reconfirmed in the Final Environmental Impact Statement. Similarly, it is noted on page xi that the alternatives development and screening process was validated using the updated socioeconomic and traffic projections.
214	**Socioeconomic Projections**	The Maricopa Association of Governments socioeconomic projections are reviewed with the Maricopa Association of Governments Population Technical Advisory Committee by traffic analysis zone. While the dataset for 2035 from the 2013 Maricopa Association of Governments socioeconomic projections was not adopted, the dataset was produced using the AZ-SMART model, which operates

(Response 214 continues on next page)

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215	the updated report provides 2010, 2020, 2030, and 2040. It is not clear how the FEIS uses the new MAG report to arrive at 2035 projections. In summary, ADOT appears to have updated the census data which provides the basis for the socioeconomic projections justifying the purpose and need of the proposed action. However, it has failed to integrate the updated results into the FEIS, choosing instead to present updated figures alongside the same conclusions, even though they serve to strengthen the argument that the proposed action is not needed. 4

Code	Issue	Response
214 (cont.)		on an annual basis, in line with the approved datasets for 2030 and 2040. The 2035 dataset conforms to the population control totals contained in the Arizona State Demographer's Office projections approved in December 2012. A detailed time line for the Maricopa Association of Governments 2013 socioeconomic projections can be found in the documentation available at <azmag.gov/Documents/IS_2013-06-25_MAG-Socioeconomic-Projections-Documentation-June-2013.pdf>. The Arizona Department of Transportation and Federal Highway Administration elected to continue to use 2035 as its horizon year and not change it to 2040 to keep the Draft Environmental Impact Statement and Final Environmental Impact Statement consistent. Changing the planning horizon would not change the reason the project is needed.
215	**Purpose and Need**	While new projections based on the 2010 Census showed a lower projected population and vehicle miles traveled in 2035 than the previous projections, the conclusions reached in the Draft Environmental Impact Statement were validated in the Final Environmental Impact Statement (see Chapter 1, *Purpose and Need*, and Chapter 3, *Alternatives*). The traffic analysis demonstrated that the project is needed today and will continue to be needed into the future (see Final Environmental Impact Statement beginning on page 1-13). For example, in 2012, the regional transportation system's operating capacity was able to meet 84 percent of existing travel demand. Even with the major transportation improvements planned in the *Regional Transportation Plan* (except for the proposed action), the 2035 system would be able to meet only 69 percent of projected travel demand. The commenter is focused on the change in values from the Draft Environmental Impact Statement to the Final Environmental Impact Statement instead of the more relevant comparison between 2010 and the new 2035 values presented in the Final Environmental Impact Statement. This comparison still shows an increase of almost 2 million people and over 1 million jobs in the next 25 years. The project is needed to serve that growth.

Code	Comment Document

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COMMENT 5

Response to ADOT 10/2014 Response to Comments on the Loop 202 South Mountain Freeway

by

George D. Thurston, Sc.D.

Code	Issue	Response
216		Title page.

Code	Comment Document

GEORGE D. THURSTON, SC.D.

AIR POLLUTION AND ENVIRONMENTAL HEALTH CONSULTANT
3 CATHERINE COURT CHESTER, NY 10918

Professor of Environmental Medicine
New York University School of Medicine
Tuxedo, NY 10987

November 24, 2014

Arizona Dept. of Transportation
Environmental Planning Group
1611 W. Jackson Street
Phoenix, Arizona 85007

Re: *Response to ADOT 10/2014 Responses to Comments on the Loop 202 South Mountain Freeway Draft Environmental Impact Statement ("DEIS")*

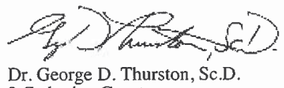
To Whom it May Concern,

This letter provides my responses to the Arizona Dept. of Transportation (ADOT) October, 2014 responses to my earlier comments that were submitted in July 2013, regarding the Draft FEIS. Those comments, to which I now respond, were contained in the document entitled: "ADOT SPECIAL INTEREST GROUP COMMENTS AND RESPONSES".

217 My specific responses to those ADOT responses are detailed in the following pages of this letter but, overall, the ADOT has been unresponsive to my earlier comments. In addition, I agree with the U.S. EPA, which stated in a July 23, 2013 letter to the ADOT that: "We also note that no air toxics risk assessment has been provided, even though there is a documented history of local public concern and requests to ADOT and FHWA for analysis of the potential health effects from the proposed new freeway. We do not believe the reasoning provided in the DEIS for not providing such an assessment is compelling, especially in light of the history of requests for such analysis." That EPA criticism is still applicable to the report, and the ADOT should conduct quantitative health effects analyses of the proposed project, as noted in my previous and attached point-by-point comments.

218

Sincerely,



Dr. George D. Thurston, Sc.D.
3 Catherine Court
Chester, NY 10918

Code	Issue	Response
217		Specific responses are provided in the following pages.
218	**Health Risk Assessment**	Specific responses are provided in the following pages.

Code	Comment Document

George Thurston Responses Regarding ADOT Responses to Prior Comments

219 **Response to Code 12 (page B323):** This ADOT response, merely identifying the pages in the report where air quality impacts are discussed, does not respond to the substance of my comments, which are regarding the human health implications of these emissions and human exposures, and which the ADOT FEIS report fails to properly assess quantitatively.

220 **Response to Code 13 (pp. B325-329):** This ADOT response concludes: "The total cumulative uncertainty involved in highway project health risk assessment is much larger than the change in emissions attributable to projects (typically a few percentage points). In this context, the information would not necessarily have a strong nexus to the requirements for high-quality information and accurate scientific analysis." This response thereby provides a false comparison in order to dismiss possible health effects associated with the proposed highway. In fact, the relative size of these two separate percent changes is not at issue here, misdirecting the ADOT response away from the issue actually raised by my comment. Indeed, a small percentage change in high pollution emissions (such as those from a highway) could result in a large change in absolute concentration exposures downwind, and in the resulting adverse human impacts (e.g., potentially adding asthma attacks, hospital emergency room visits, etc.). However, based on this specious ADOT argument, and despite already having the necessary inputs to quantitatively estimate these potential health impacts (e.g., via using the US EPA approved BenMAP model; Abt Associates, 2010), the ADOT has negligently failed to do any quantitative human health effects impact assessment. Furthermore, the fact that there is high uncertainty in the exposures and associated health effects is an indicator that there should be a *more cautious* approach to their assessment of potential human impacts, not that these impacts should be entirely dismissed, as is inappropriately done in this report and in this response to my comment. For example, the statement in this ADOT response that the air pollution concentrations have a "factor of 2" uncertainty means that the actual impacts could actually be double what the report lists! A conservative public health-minded approach, therefore, would require that the health impacts should be estimated at levels of highway air pollution impacts that are double the levels predicted by the ADOT model, in order to account for the possible "factor of 2" uncertainty in impacts to the public. Other uncertainties should be compounded likewise in order to achieve a conservative worst-case estimate of the potential health effects. The uncertainties around the estimation of the human exposures and health effects noted by the ADOT should be a red flag that *more* caution should be taken, not that the likely human health impacts should be dismissed, as implied by the ADOT report, and their response here.

221 **Response to Code 14 (pg. B330)**: This ADOT statement is unresponsive to my comment. My comment was in regard to the risk of asthma development and exacerbation, which this ADOT statement does not address. Also, no mention was made regarding chemicals in my comments here, so that discussion is also not

Code	Issue	Response
219	**Air Quality**	The response to code 12 was addressing the introductory information related to emissions. The response was noting where the analysis of mobile source air toxics could be found in the Final Environmental Impact Statement. A more detailed response related to the human health implications of these emissions was provided in subsequent responses (see page B325 in Volume III of the Final Environmental Impact Statement) and in the Final Environmental Impact Statement beginning on page 4-79. For more information, see the following responses to comments 220 and 222, as well as the responses to related comments made by the U.S. Environmental Protection Agency beginning on page A6 of this Appendix A of the Record of Decision.
220	**Health Risk Assessment**	As indicated in the response, given the uncertainty of a mobile source air toxics health risk assessment, the Federal Highway Administration instead addresses the potential impacts of mobile source air toxics through an emissions assessment in its National Environmental Policy Act documents. For smaller projects with a lower likelihood of a meaningful impact, this discussion is qualitative. For larger projects, emissions analysis is conducted. The Federal Highway Administration approach is consistent with the Council on Environmental Quality's direction in Section 1502.2(b) to discuss impacts in proportion to their significance. The results of an emissions analysis can be summarized concisely in a National Environmental Policy Act document and provide useful information for decision makers (e.g., an alternative that has lower emissions is likely to be "better" from a mobile source air toxics health risk standpoint than one that has higher emissions). The statement beginning, "Indeed, a small percentage change . . ." is incorrect in the context of highway air quality assessment; concentrations produced by the available dispersion models (CAL3QHCR and AERMOD) are directly proportional to emissions, so a "small percentage change" in emissions would produce an identical percentage change in concentrations, and resulting health impacts. Also note that "factor of 2 uncertainty" also means that the impacts could be half those predicted. In any event, the Final Environmental Impact Statement does include a quantitative health-based assessment of likely mobile source air toxics impacts, using emissions in the project area as an indicator of likely health outcomes. While the comment takes issue with the Federal Highway Administration's explanation of the shortcomings of health risk assessment as it applies in the context of highway projects, it does not contest the Federal Highway Administration's statements that changes in emissions in the area affected by the project are a reasonable indicator of changes in 70-year health risk. The Final Environmental Impact Statement also includes a summary of recent health risk assessments conducted for other highway projects, all of which showed very low risk.
221	**Noise, Air Quality**	The first part of the response to code 14 addresses the consideration of schools in the noise analysis. The second part, in relation to chemicals, should not have been included in that response because the comment did not discuss chemical exposure. The statements related to the risk of asthma development and exacerbation were addressed in the response to code 15.

Code	Comment Document
222	responsive to my comments. **Response to Code 15 (pp. B330-332):** The key assumption by this ADOT response that "the National Ambient Air Quality Standards-based assessment ensures adequate consideration of health-based issues" is incorrect. In fact, even if the EPA NAAQS were to be met after the construction of this major thoroughfare, this would not ensure that adverse human health effects will not occur, as the U.S. EPA has acknowledged. For example, in its 2013 rulemaking adopting the revised annual particulate matter NAAQS standard, EPA explained that "evidence- and risk-based approaches using information from epidemiological studies to inform decisions on $PM_{2.5}$ standards are complicated by the recognition that *no population threshold, below which it can be concluded with confidence that $PM_{2.5}$-related effects do not occur, can be discerned from the available evidence*." (emphasis added) (Fed. Register, Jan. 15, 2013). Furthermore, in its calculations of the benefits of reducing the $PM_{2.5}$ NAAQS limit, the U.S. EPA has acknowledged that there can be extant adverse health risks occurring *below* the NAAQS. For example, in a recent EPA Regulatory Impact Analysis for reducing the annual $PM_{2.5}$ standard from 15 µg/m^3 to 12 µg/m^3 (U.S. EPA, 2012), EPA included a figure (Fig. 5-7) summarizing the best, most current science regarding $PM_{2.5}$ health effects, which clearly documents that air pollution deaths occur below the existing $PM_{2.5}$ NAAQS (35 µg/m^3 for the daily standard, and 12 µg/m^3 for the annual standard). Finally, this comment tries to dismiss the contribution of the proposed increased traffic to toxic compounds, such as benzene, by stating that "indoor air concentrations of benzene are usually higher than outdoor levels and that indoor air in smokers' homes is a significant contributor to children's exposures." However, this is not a cause to dismiss the additional exposures caused by the roadway, but, to the contrary, makes them of greater concern because the road emission impacts are *in addition to* the other sources already in their lives. This is part of a deeply concerning pattern in the report and comment responses, wherein serious health concerns from the proposed added traffic are dismissed because the residents have potentially greater risks from other sources, but the opposite should be the case. The fact that these populations suffer from other risks should make adding to their woes of even greater concern to the ADOT, not less. 3

Code	Issue	Response
222	**Health Effects**	Please see the response in the Final Environmental Impact Statement regarding the air quality health risk assessment. The Arizona Department of Transportation and Federal Highway Administration believe the response adequately addresses the comment. The Clean Air Act framework requires the U.S. Environmental Protection Agency to adopt National Ambient Air Quality Standards that protect public health with an adequate margin of safety. In turn, the Clean Air Act requires the Federal Highway Administration to demonstrate that its projects do not cause violations of these standards, exacerbate existing violations of the standards, or delay attainment of the standards or any required interim milestones, which the Federal Highway Administration has accomplished for this project. The U.S. Environmental Protection Agency has determined that its National Ambient Air Quality Standards protect public health and the Federal Highway Administration has complied with those National Ambient Air Quality Standards. The Federal Highway Administration does not have authority to address inadequacies with respect to the National Ambient Air Quality Standards themselves. The Final Environmental Impact Statement accounts for the mobile source air toxic health risk impact of the project through the Study Area and subarea emissions analyses, which best represent the likely net change in 70-year health risk for the reasons described in the Final Environmental Impact Statement. The information on other sources of exposure to mobile source air toxic pollutants was not provided to diminish the impact of project emissions, but to help illustrate the complexity of meaningfully quantifying the health risk attributable to just one source of these pollutants, a source that most people are likely to be exposed to for only a small portion of their nominal 70-year lifetime at a fixed location adjacent to the roadway.

Code	Comment Document
223	References Abt Associates (2010). BenMAP Environmental Benefits Mapping and Analysis Program User's Manual. Prepared for the U.S. EPA Office of Air Quality Planning and Standards, RTP, NC. U.S. EPA (2012). Risk and Exposure Assessment to Support the Review of the Particulate Matter Primary National Ambient Air Quality Standard. EPA Document # EPA-452/R-12-005, Table 5-6. Office of Research and Development, Washington, DC. December, 2012. http://www.epa.gov/ttn/ecas/regdata/RIAs/finalria.pdf US EPA, National Ambient Air Quality Standards for Particulate Matter, 78 Fed. Reg. 3086 (Jan. 15, 2013) (Pg 3098).

Code	Issue	Response
223		References.

Code	Comment Document

224

COMMENT 6

Comments on the South Mountain Freeway/202 Loop Final Environmental Impact Statement (FEIS) Air Quality Component
by
Richard Haddow

Code	Issue	Response
224		Title page.

Code	Comment Document

South Mountain Freeway/202 Loop Federal Environmental Impact Statement (FEIS)
Air Quality Component

Comments on the FEIS of the Arizona Department of Transportation (ADOT)
by Rick Haddow, original Maricopa County ambient air monitoring network designer and program manager 1985-2002

Conformity links Air Quality and Transportation planning through air quality planning, State Implementation Plans (SIP) Transportation planning, metropolitan transportation plans and transportation Improvement Programs (TIP).

225 The Federal Environmental Impact Statement fails to meet existing federal transportation conformity and does not qualify or merit consideration as ADOT's designated route. The Clean Air Act and metropolitan transportation planning provisions of Title 23 and Title 49 of the United States Code require a planning process that integrates air quality and metropolitan transportation planning such that transportation investments support clean air goals. Title 23 & 49 of U.S.C. codify the transportation laws including the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users, SAFETEA-LU.

226 ADOT failed to adequately evaluate and comply with federal mandates of conformity by not conducting proper or technically adequate air quality modeling. All data sets used are not relevant to evaluate the highway's impact to local or downwind communities and air shed pollutant loading. Meteorological data and most atmospheric data used in the ADOT modeling had no relevance to the analysis. Simple Delta T measurements and uses show AQ modelers had no understanding of Air Quality Modeling. Modeling used by ADOT to support their claim of conformity is not representative of the proposed 202 route or for that matter any other valley location, particularly for the geographical area designated for the highway.

ADOT's own consultants from ASU show the ambient air drainage flow influence of pollutants near and adjacent to the valley's mountain ranges but failed to show the influence of South Mountain. ADOT failed to consider the diurnal flows of the valley and the influence of the South Mountain range on atmospheric air pollutants.

227 The influence of South Mountain will not only contain but also increase pollutant concentrations and will worsen local and transport pollutants. The areas to the south and east of I-10 and the proposed 202 route will experience the transport of high concentrations of ozone precursors that will be compounded by diurnal winds reducing timely attainment of nonattainment areas and increasing ozone concentrations in downwind locations of the new 202 highway, primarily in Pinal County, hence violating MAG Ozone SIP.

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Code	Issue	Response
225	**Air Quality**	The U.S. Environmental Protection Agency issued the transportation conformity regulations (40 Code of Federal Regulations Section 93) to implement the Clean Air Act requirements. The conformity regulations require that the metropolitan planning organization's transportation plan and Transportation Improvement Program must include the specific federal projects in the regional emissions analysis that must not exceed a certain emissions level for the area. As noted in the Final Environmental Impact Statement on page 4-76, the Preferred Alternative is included in the Maricopa Association of Governments' conforming plan and program. The Preferred Alternative, now the Selected Alternative, has complied with project level conformity requirements and is included in the Maricopa Association of Government's conforming plan and transportation improvement program, per the Clean Air Act and 40 Code of Federal Regulations Section 93.
226	**Air Quality**	In the Final Environmental Impact Statement, the Arizona Department of Transportation and Federal Highway Administration presented a quantitative particulate matter (PM_{10}) analysis to ensure that a state-of-the-art analysis was completed for the proposed action. The air quality technical report describes the various methodologies, model inputs, and modeled results for the particulate matter (PM_{10}) 24-hour and carbon monoxide hot-spot analyses and the quantitative mobile source air toxics analysis. The determination of models and associated methods was made through an extensive interagency consultation process with local agencies (Arizona Department of Environmental Quality, Maricopa County Air Quality Department, Federal Highway Administration, Arizona Department of Transportation, and Maricopa Association of Governments) and the U.S. Environmental Protection Agency. The Arizona Department of Transportation and Federal Highway Administration specifically consulted with the U.S. Environmental Protection Agency on met data, and the analysis follows the U.S. Environmental Protection Agency's recommendation for the source of these data.
227	**Air Quality**	While the U.S. Environmental Protection Agency's transportation conformity regulations (40 Code of Federal Regulations Part 93) require localized hot-spot analysis of carbon monoxide and particulate matter (PM_{10}) for some projects, no similar localized analysis is required for ozone. This is because ozone is a regional-scale pollutant. Ozone impacts are accounted for in the regional emissions analysis associated with the regional transportation plan and transportation improvement program conformity determination. The transportation conformity rule requires projects such as the South Mountain Freeway to be included in the regional emissions analysis. The Maricopa Association of Governments is responsible for developing state implementation plans to reduce emissions of ozone precursors in the Maricopa area. The Selected Alternative is included in the regional emissions analysis associated with the *Regional Transportation Plan*, which was determined by the U.S. Department of Transportation to conform to the State Implementation Plan on February 12, 2014.

Code	Comment Document

Depending on atmospheric conditions such as ambient air temperature inversion strength and duration, Tribal lands and those citizens along the proposed 202 route will experience compounding pollution wash based on South Mountain's range orientation. PM10, PM2.5 and reintrained disturbed surfaces (mostly tribal lands south of the proposed 202) will be a constant source of particulate matter inundating the entire 202 route. Heavy loading of particulates, air toxics and ozone precursors will build up along the southern mountain base at the I-10 interchange on the south east corner of the range. Heavy truck traffic and other vehicles will continue to emit pollutants that will be trapped against South Mountain in the morning. The mornings see slight winds pushing pollutants west for a few hours then shifting to the north approximately 10am to noon, then to the east from noon until evening. All the vehicle pollutants that have accumulated from evening and the morning will not have sufficient wind speed to clear the mountain during the northerly shift and all pollutants pushed west and north will return with existing mobile emissions to create enough concentrated ozone precursors and other harmful pollutants to disqualify this route as viable.

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Before any route can be considered viable for consideration ADOT must meet transportation conformity requirements. Transportation conformity is a process required by the Clean Air Act Section 176(c) which establishes the framework for improving air quality to protect pubic health and the environment. The goal of transportation conformity is to ensure that the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) funding and approvals are given to highway and public transportation activities that are consistent with air quality goals.

Clean Air Act Section 176(c)(1) states that the Federal Government can not support, finance, or approve any activity which does not conform to an EPA-Approved or promulgated State Implementation Plan that would adversely impact Maricopa County, Pinal County and Tribal Lands.

This section also indicates that metropolitan planning organization such as the Maricopa Association of Governments (MAG) can not approve any project, program or plan that does not conform to an EPA –approved or promulgated State Implementation Plan (SIP).

Conformity to a SIP means that such activities will not cause or contribute to any new violations of the national ambient air quality standards (NAAQS); increase the frequency or severity of NAAQS violations; or delay timely attainment of the NAAQS or any required interim milestone.

Under general conformity 40 CFR Part 93, Subpart B, describes the general conformity requirements of the Federal Government supported, financed, or approved activities which are located in Maricopa eight-hour ozone nonattainment area. Under transportation conformity- 40 CFR Part 93, Subpart A, clearly identifies the conformity requirements for plans, programs and projects developed, funded, or approved under federal highway and transit laws.

2

Code	Issue	Response
228	**Air Quality**	The project is included in the Maricopa Association of Governments' Fiscal Year 2014–2018 Transportation Improvement Program and *2035 Regional Transportation Plan*, which were found to conform to the ozone, carbon monoxide, and particulate matter (PM_{10}) State Implementation Plans by the U.S. Department of Transportation on February 12, 2014. The carbon monoxide and particulate matter (PM_{10}) hot-spot analyses demonstrated that the freeway will not contribute to any new localized violations, increase the frequency or severity of any existing violation, or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones (see text beginning on page 4-74 of the Final Environmental Impact Statement).

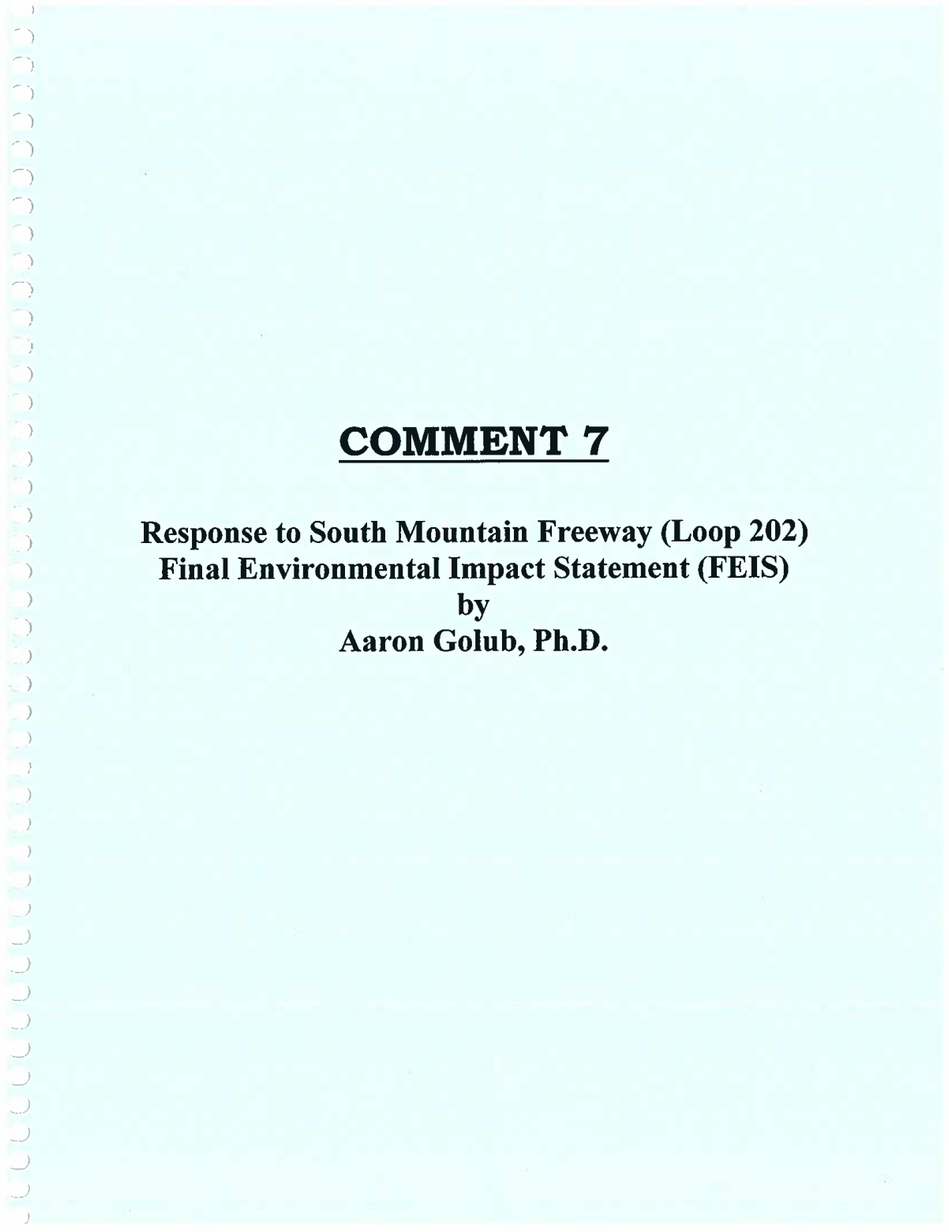
Code	Comment Document
229	MAG has failed to follow the requirements in 40 CFR §93.105 regarding the consultation process for transportation conformity determinations. MAG is the designated metropolitan planning organization for Maricopa County and portions of Pinal County, including Apache Junction, the Town of Florence, and the City of Maricopa. As such MAG is responsible for the preparing the Transportation Improvement Program (TIP), Regional Transportation Plan, and the associated transportation conformity analyses. On September 10, 2013, the EPA advised MAG to include conformity test results in the most recent conformity analysis for mobile source emissions budgets that had been submitted in air quality plans, but were not yet approved or found to be adequate by EPA. March 14, 2014 , the EPA signed a notice proposing approval of the MAG 2009 Eight-hour Ozone Redesignation Request and Maintenance Plan, including the 2025 conformity budgets for VOC and NOx. When finalized, the new 2025 budgets, as well as the 2008 budgets, will be utilized to demonstrate transportation conformity for ozone precursor emissions. To achieve conformity in areas not meeting the air quality standards for one or more criteria pollutants, the area is designated nonattainment. The federal Clean Air Act requires Arizona's areas that are failing to meet national ambient air quality standards to produce a State Implementation Plan (SIP). A SIP is an enforceable plan developed at the state and local level that explains how the plan will comply with air quality standards according to the federal Clean Air Act. As an enforceable plan each criteria pollutant is evaluated by use of air pollution strategies, state statutes and state and local rules implemented under Title I of the Clean Air Act. The SIP includes historical background information, description of the nonattainment area, assessment of air quality conditions and ambient air quality data, emissions inventory of source pollutants, control strategies, an attainment demonstration, and contingency plans. Maricopa Association of Governments (MAG) failed to apply their Congestion Mitigation and Air Quality Improvement (CMAQ) Program. Mobile source air toxic (MSAT) analysis during project development failed to show impact toward downwind nonattainment ozone areas and will violate MAG 2014 Eight hour Ozone plan. MAG failed to apply SIP requirements of their Transportation Control Measures (TCM) to reduce emissions of on road pollutants impact to the air shed created by the proposed 202 highway. MAG's 2012 5% Plans for PM10 for the Maricopa County nonattainment area and the Pinal County Township 1 North, Range 8 East Portion does not support this proposed 202 route thus violating their own commitments. 3

Code	Issue	Response
229	**Air Quality**	The consultation requirements described in 40 Code of Federal Regulations Part 93.105 are met by the Maricopa Association of Governments as part of the process of conducting regional transportation conformity analyses. Consultation with the Maricopa Association of Governments Management Committee and other public entities (Federal Transit Administration, Federal Highway Administration, Arizona Department of Transportation, Arizona Department of Environmental Quality, City of Phoenix Public Transit Department, Valley Metro, Maricopa County Air Quality Department, Central Arizona Governments, Pinal County Air Quality Control District, Sun Corridor Metropolitan Planning Organization, U.S. Environmental Protection Agency, and any other interested parties) occurs at the beginning of the conformity analysis process on the transportation projects to be assumed and the proposed models, associated methods, and assumptions for the upcoming analysis. Additional consultation, including a public hearing, occurs on the draft conformity analysis report before the final version is approved by the Maricopa Association of Governments Management Committee and Regional Council and then forwarded to the Federal Highway Administration for approval. In addition to consultation, to be approved by the Federal Highway Administration, a regional conformity analysis must 1) pass an emissions test with a budget found to be adequate or approved by the U.S. Environmental Protection Agency (or must pass an interim emissions test), 2) use latest planning assumptions and emissions models in force at the time the conformity analysis begins, and 3) ensure that the Transportation Improvement Program and *Regional Transportation Plan* provide for the timely implementation of transportation control measures contained in the approved air quality plans. The most recent Maricopa Association of Governments conformity analysis, which included the Final Environmental Impact Statement Preferred Alternative in the *Fiscal Year 2014–2018 Transportation Improvement Program* and *2035 Regional Transportation Plan*, was approved by the Federal Highway Administration on February 12, 2014. The Maricopa Association of Governments is also responsible for preparing the State Implementation Plan revisions that represent air quality plans for the Maricopa carbon monoxide, 8-hour ozone, and particulate matter (PM_{10}) nonattainment and maintenance areas. The U.S. Environmental Protection Agency approved the Maricopa Association of Governments 2003 Carbon Monoxide Redesignation Request and Maintenance Plan on March 9, 2005; the Maricopa Association of Governments 2009 Eight-Hour Ozone Redesignation Request and Maintenance Plan on September 17, 2014; and the Maricopa Association of Governments 2012 Five Percent Plan for PM-10 on May 30, 2014. Each of these plans, as well as the attainment plans for carbon monoxide (also approved on March 9, 2005) and 8-hour ozone (approved on June 13, 2012), established conformity budgets used by the Maricopa Association of Governments in performing regional conformity analyses. Transportation control measures and other emission control and maintenance measures in the U.S. Environmental Protection Agency-approved air quality plans continue to be implemented in the Maricopa area. The Maricopa Association of Governments also manages the distribution of Congestion Mitigation and Air Quality Improvement funds for the Maricopa area; this process includes evaluating the emission reductions and cost-effectiveness of proposed projects, preparing annual reports submitted to the Federal Highway Administration that assess the air quality benefits of projects that are being implemented, and ensuring that funded projects are being implemented in a timely manner.

(Response 229 continues on next page)

Code	Comment Document
230	EPA's nonattainment geographical areas represent the areas whose air quality does not meet federal air quality standards designed to protect public health. The Clean Air Act provides for how an FEIS can help develop strategies for not increasing pollutant concentrations. This FEIS has failed to follow the requirements of the National Environmental Policy Act (NEPA). ADOT has not shown the true scientific methodology used in their analysis in determining compliance of an Environmental Impact Statement. ADOT has clearly failed to describe the negative environmental effects of this proposed new highway by not following the basic standards of detailed information concerning significant environmental impacts. The intent of the NEPA is to help key decision makers and stakeholders balance the need to implement an action with its impacts on the surrounding human and natural environment. ADOT has failed to show or represent how the proposed highway would impact public health. ADOT has not shown any supporting technical information, analytical proof or included the correct use of air quality and air shed databases in their air quality models. Air Quality modeling outputs represented by ADOT do not even remotely represent the potential harm or impact facing this community or reflect their failure to comply with transportation conformity and legal and enforceable State Implementation Plans. 4

Code	Issue	Response
229 (cont.)		The Maricopa Association of Governments 2012 Five Percent Plan for PM-10 did not include the Final Environmental Impact Statement Preferred Alternative because the attainment date in the plan was 2012, which is prior to implementation of the project. The mobile source air toxics analysis did not show the impact of mobile source air toxics on ozone concentrations because ozone and mobile source air toxics are different pollutants with different health effects. As discussed in the Final Environmental Impact Statement beginning on page 4-72, the mobile source air toxics analysis is designed to present information on the trends in mobile source air toxics emissions with and without the project, providing an indication of likely change in health risks attributable to mobile source air toxics pollutants. Of the seven mobile source air toxics pollutants addressed in the Final Environmental Impact Statement, some are also considered volatile organic compounds, which are a precursor to ozone pollution. Volatile organic compounds are included by the Maricopa Association of Governments in the conformity regional emissions analyses for ozone, discussed above, and in the emissions inventories for the Maricopa Association of Governments ozone state implementation plans. Other mobile source air toxics, including diesel particulate matter, are not volatile organic compounds, but they do contribute to regional particulate matter (PM_{10}) emissions. The mobile source air toxics emissions that exist in particulate form are included in the Maricopa Association of Governments conformity regional emissions analyses for particulate matter (PM_{10}), and in the Maricopa Association of Governments particulate matter (PM_{10}) state implementation plans listed above.
230	**Air Quality**	The Selected Alternative meets all project level conformity requirements under the Clean Air Act and transportation conformity (40 Code of Federal Regulations Section 93). The U.S. Environmental Protection Agency was consulted on the conformity methodology presented in the Final Environmental Impact Statement. Additional details of this methodology and analysis can be found in the air quality technical report available on the project Web site: <azdot.gov/southmountainfreeway>. Page 4-83 of the Final Environmental Impact Statement provides a summary of health effects from mobile source air toxics.

Code	Comment Document
231	

COMMENT 7

Response to South Mountain Freeway (Loop 202)
Final Environmental Impact Statement (FEIS)
by
Aaron Golub, Ph.D.

Code	Issue	Response
231		Title page.

Code	Comment Document

Response to South Mountain Freeway (Loop 202) Final Environmental Impact Statement (FEIS)

Aaron Golub, Ph.D. (resume attached to the end of this statement)
Tempe, Arizona

As a Tempe resident, I thank you for the opportunity to comment on the Final Environmental Impact Statement for the South Mountain Freeway (Loop 202). This memo will comment on two items: the ADOT response to comments on page B132 of Vol 3 of Comment Response Appendix, and the alternatives analysis presented on page 3-27 of "Chapter 3 – Alternatives."

1. **ADOT response on page B132 of Vol 3 of Comment Response Appendix (Special Interest Group Comments and Responses).**

The commenter, Arizona PIRG, states: "Since transportation infrastructure lasts for decades, the investments we make in transportation infrastructure should be based not only on what is required to meet our needs today, but also on anticipated future needs. For decades, it was assumed that we would drive more miles, necessitating new highways to alleviate the crippling congestion that was sure to follow. For at least the past five years, though, those anticipated increases in driving have failed to materialize in Arizona. It does not appear that this draft EIS has taken these changes into account and instead assumes that Arizonans will continue to drive more and more. Our research indicates that a return to the previous patterns of driving ever more miles is unlikely." [Page B132 of Comment Response Appendix (Vol 3)]

Response this comment (2) includes the following statement: "The comment relies on national trends for travel; however the local conditions and setting of the Phoenix metropolitan area are not consistent with areas of high-density cities in other parts of the country. In Maricopa County, daily vehicle miles traveled levels increased by almost 2 percent between 2011 and 2012 and the 2012 daily vehicle miles traveled is approaching the prerecession peak in 2007. (Source: Arizona Department of Transportation Multimodal Planning Division Highway Performance Monitoring System Data for the Calendar Year 2012 and 2011). Even if the trend of vehicle miles traveled "per capita" decreasing continues, the total vehicle miles traveled in the region would still increase along with increases in total population." [Page B132 of Comment Response Appendix (Vol 3)]

232 ADOT inaccurately describes AZPIRG's statement as relying on national statistics. They state clearly in their comment that they are citing statistics from Arizona. Indeed, the data over the last 18 years shows significant stagnation in travel and per-capita travel, with such trends notably beginning before the recession (See figure below). Many of the trends cited by PIRG in their statement and in their report show additional and related demographic shifts in licensure rates which will only increase the rates of decline in travel over the coming decades. ADOT should formally recognize the increased unpredictability of VMT in the county, especially as far out as the planning year (2035) and formally recognize the growing and significant uncertainty with which it can predict the future travel impacts of the proposed project. In fact, the growing

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Code	Issue	Response
232	**Purpose and Need**	While the statement in the comment mentions Arizona, neither report cited in the footnotes to the Arizona PIRG comment presented any statistics specific to Arizona. Both reports presented statistics for the United States as a whole (see *Transportation and the New Generation*, Arizona PIRG Education Fund, April 2012, <arizonapirgedfund.org/reports/azf/transportation-new-generation> and *A New Direction*, Arizona PIRG Education Fund, May 2013, <arizonapirgedfund.org/reports/azp/new-direction>).
233	**Purpose and Need**	The Arizona Department of Transportation and Federal Highway Administration did disclose that projections could change (see text box on page 4-1 of the Final Environmental Impact Statement).

Code	Comment Document

uncertainly in travel behavior may overwhelm the small differences between the "build" and "no-build" scenarios presented in the Alternatives Analysis presented in Chapter 3.

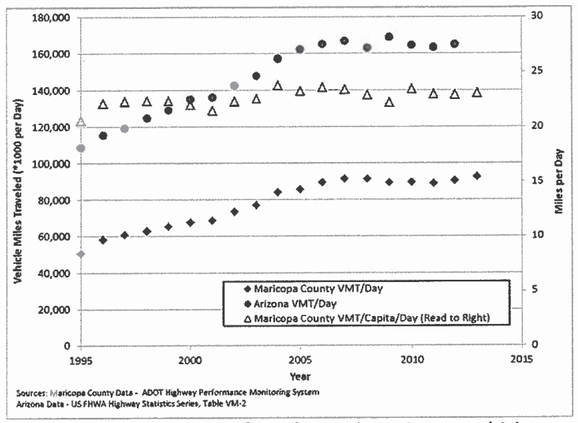

Figure. Historical measures of travel in Maricopa County and Arizona.

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2. **ADOT failed to include a "no-build" land use, population and employment projection in its analysis of the no-build travel scenario.**

On page 3-27 of "Chapter 3 – Alternatives" begins the analysis of the responsiveness of the proposed project to purpose and need criteria. Part of this analysis relies on a comparison between the "build" scenario and a "no-build" scenario for various measures of travel impact, including travel times, congestion duration, and traffic volumes. While the FEIS used the latest MAG socioeconomic projections for the planning year, these projections do not include a "no-build" scenario. MAG's responsibilities are to insure its regional plans, at some forecasted future year, meet air quality conformity rules. Its socioeconomic projections therefore are required to include projects included in long-range plans, whether or not they have passed NEPA approval at the current date. For various reasons, using socioeconomic projections in which it is assumed the SMF is implemented is inappropriate for use for forecasting travel impacts for the no-build scenario.

To proceed, it helps to understand how MAG's socioeconomic forecasting model works, which is described in Sections 3 and 4 of the Socioeconomic Projections Documentation (MAG, 2013)[1]. While extremely complex, in simple terms, the model forecasts the placement of jobs, housing,

[1] https://www.azmag.gov/Documents/IS_2013-06-25_MAG-Socioeconomic-Projections-Documentation-June-2013.pdf

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234	**Alternatives, No-Action Alternative**	The Arizona Department of Transportation and Federal Highway Administration appreciate the suggestion to use alternative methods to describe the No-Action Alternative and the possibility that future impacts could be different than those presented in the No-Action Alternative analysis in the Final Environmental Impact Statement (if these alternative methods were used). The comment assumes land use patterns, growth rates, and induced travel patterns would be different (from what is described in the Final Environmental Impact Statement) if the freeway were not in place. In essence, the comment is suggesting that the description of the No-Action Alternative (and its related impacts) in the Final Environmental Impact Statement is misleading. The Arizona Department of Transportation and Federal Highway Administration agree that scenario planning methods have application in some instances; however, in this case, the Arizona Department of Transportation and Federal Highway Administration believe that the methods used to describe the No-Action Alternative as presented in the Draft and Final Environmental Impact Statements are appropriate. At a basic level, the National Environmental Policy Act requires consideration of reasonable alternatives—meaning the No-Action Alternative should be reasonable as well. Speculation about what an alternative and the conditions surrounding the alternative in the future would look like is not appropriate; the effects of alternatives must be reasonably foreseeable. Under this premise, the description of the No-Action Alternative in the Final Environmental Impact Statement is appropriate. The description of this alternative is presented in the section, *Alternatives Studied in Detail*, in the Final Environmental Impact Statement on page 3-40. Its features include: not extending State Route 202L west of Interstate 10 (Maricopa Freeway), assuming all other projects in the *Regional Transportation Plan* are completed, and using population, employment, and housing projections officially approved by the Maricopa Association of Governments. The Arizona Department of Transportation and Federal Highway Administration believe that the depiction of impacts caused by the No-Action Alternative are, therefore, appropriate and correctly presented throughout the Final Environmental Impact Statement. In defining the transportation problem in Chapter 1, *Purpose and Need*, of the Final Environmental Impact Statement, the analysis illustrates the severity of the breakdown in the transportation network if no action were taken in the area. This is further supported by the impact analyses presented throughout Chapter 4, *Affected Environment, Environmental Consequences, and Mitigation*, of the Final Environmental Impact Statement. To summarize, durations and physical lengths of congestion would worsen, travel times would become longer over the same distances, congestion would continue to spill over into the arterial street network, and monetary costs to the State and its residents would increase. Further justification of why the No-Action Alternative description in the Final Environmental Impact Statement is most appropriate includes: · At certain points in the Phoenix metropolitan area's history, growth rates prior to planning for the region's freeway system exceeded growth rates after planning for and construction of the regional freeway system began. Chapter 1, *Purpose and Need*, and the sections, *Land Use* and *Economic Impacts*, in Chapter 4, establish cost of living, livability, mild climate, technological advancement (affordable air conditioning), employment opportunities, a development-oriented regulatory environment, and key location for industry as primary growth drivers in the Phoenix metropolitan area. Therefore, transportation is not the sole driver of growth.

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	and population (and therefore travel), based on an "agent-based" simulation where, in effect, these activities find their best locations among various available locations in the county. Activities choose a place based on market-type processes where existing vacancies and available land, development plans and permits, correspondence with other nearby activities, as well as "accessibility to jobs and shopping opportunities, etc.,"(page 24) among other things, all contribute to the attractiveness of a location to a particular activity. Furthermore, there is a feedback process (page 25) in their modeling wherein improvements in travel from a particular location, for instance, due to a transportation investment, or increases in congestion, for instance, due to overdevelopment in a location, is then factored in and activities are redistributed the next round of simulation. (This feedback doesn't take place each year, but when major changes are introduced to the travel network (page 25)). MAG asserts that its socioeconomic forecasting is the state of the art and meets the requirements for estimating impacts of plans on air quality conformity. It appears, however, to be inappropriate for comparing the impacts of a particular project to a no-build scenario. The MAG socioeconomic model does not include any no-build scenarios. Its projections are shaped strongly by the location of investments such as the SMF; locations near projects become more accessible to other locations and thus "attract" activities to it. When a travel model is run without the project, as in ADOT's "no-build" predictions, those activities are then stranded (for lack of a better term) in locations in which *they would never have ended up* without the assumption of the project. The socioeconomic projections bias any performance modeling (congestion, travel times, etc) in favor of the projects it includes. The socioeconomic model induces demand for the project because of the assumptions it must make to meet air quality conformity. This problem in the no-build scenario therefore taints all of the results on level of service, travel time projections, forecasted volumes, effects on other streets and freeways, etc. found on pages 3-27 to 3-36 of "Chapter 3 – Alternatives." ADOT should have developed a separate build and no-build socioeconomic scenario which would properly isolate the effect of the SMF on travel performance. The MAG socioeconomic model could easily be used to predict activity locations without the SMF investment for the no-build scenario. While it is difficult to estimate the magnitude of differences in the forecasted results if ADOT did so, it would with little doubt reduce the differences between the build and the no-build scenarios. This is because in the no-build scenario, activities would have located themselves in various other places with appropriate conditions – in other travel corridors across the valley with room to accept them, for example in areas in the West and North valley now served by the recently opened freeways. To close on this point, this is not a debate about the existence of induced travel. It is well proven that all transportation investments improve access to locations and those locations develop in ways they would not have otherwise, thus inducing demand for the investment. The MAG socioeconomic model appropriately includes this feedback process for the build scenario as they are required. This issue here is that the very modeling presented by ADOT to

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234 (cont.)		· As established in the Final Environmental Impact Statement, "pre-freeway" land use planning mimics "post-freeway" land use planning. In 1979, the *Phoenix Concept Plan 2000* was adopted by the City of Phoenix. The plan called for 25 Phoenix urban villages. Of those, it established 9 villages with instructions for village planning committees to prepare 25-year concept plans. The Laveen and Estrella Villages were included in the list of 25 suggested villages, although they were not among the 9 villages adopted in the initial plan. However, the intent was that Laveen and Estrella Villages would be developed at a later point in time. The freeway system considered in the plan included only Interstate 10, Interstate 17, and U.S. Route 60—it did not include the regional freeway system. The *Phoenix Concept Plan 2000* was replaced by the Phoenix *General Plan, 1985–2000*. The resolution adopting the *General Plan* directed the village planning committees to continue in the City of Phoenix's planning process. The resolution included Laveen and Estrella as villages. Planning for the Laveen and Estrella Villages was completed around the same time as the initial planning for the regional freeway system, including the South Mountain Freeway. Therefore, the land use planning and transportation planning were conducted in parallel, not with one effort depending on the other. To conclude that land use patterns would look different than they do today (as inferred in the U.S. Environmental Protection Agency's comment) is not consistent with past planning patterns. It is more reasonable to argue that the City of Phoenix would have continued to plan for the urban village core concept as has been envisioned since the late 1970s. In this case, scenario planning would be speculative for the following reasons: · Factors affecting growth vary (see above), and to assume only transportation as a growth driver would be speculative. · Continuation of "pre-freeway" historical land use planning patterns is reasonable to expect. The section, *Land Use*, documents the growth scenario under the No-Action Alternative and notes that the area would develop in a similar fashion with or without the project. This is supported by: › The Study Area already has good connecting transportation infrastructure (although congested) to support continued development without the freeway. It is also close to downtown Phoenix. Existing infrastructure plus location would result in growth without the freeway as described in the *Purpose and Need* chapter. The freeway is not opening up the area to development because existing roads (for example, Pecos Road, Baseline Road, and 51st Avenue) provide access. › To date, approximately 67 percent of the land in the Study Area has already been developed in accordance with the City of Phoenix's *General Plan* and zoning ordinance. It is assumed that such development would not be torn down and land uses redistributed if the freeway were not built. As documented in the section, *Land Use*, in Chapter 4 of the Final Environmental Impact Statement, agricultural (22 percent) and open space (11 percent) land uses in the Study Area represent only 33 percent of land area (it should be noted the 11 percent of open space is mostly not developable because of topographic challenges and floodplain constraints), while the remainder of the area is in some form of "built" land use. Distribution of zoning further supports the conclusion—12 percent of the Study Area is zoned for agricultural and open space uses while 88 percent is zoned for other more intensive land uses. › Factors contributing to historical and projected growth are well-documented in the Final Environmental Impact Statement in Chapter 1, *Purpose and Need*, and in the Chapter 4 sections, *Land Use* and *Economic Impacts*. The freeway will be built in an area planned for urban growth as established in local jurisdictions' land use planning activities for at least the last 25 years (see the section, *Induced Growth*, beginning on page 4-182 of the Final Environmental Impact Statement).

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235	understand the no-build scenario includes the induced demand from a project which in the no-build scenario is not built. This issue is well documented. Indeed, it has been addressed in NEPA based litigation previously. For example, in *Sierra Club, Illinois Chapter v. U.S. Dep't of Transp*. 962 F.Supp. 1037 (N.D. Ill. 1997), the Court included the following discussion, which is directly on point: > Plaintiffs' second argument is that even if the final impact statement's description of the project's purposes is not excessively narrow, the general objectives upon which defendants rely are not supported by the available evidence. As a result, plaintiffs argue that there was no rational basis for analyzing alternatives to the tollroad. Specifically, plaintiffs point out that defendants relied on a single population forecast and that the forecast was used to analyze the build *and* no-build scenarios. > Plaintiffs' argument is persuasive. Highways create demand for travel and expansion by their very existence. *Swain v. Brinegar,* 517 F.2d 766, 777 (7th Cir.1975); Def. 12(M) ¶ 86. However, the final impact statement in this case relies on the implausible assumption that the same level of transportation needs will exist whether or not the tollroad is constructed. In particular, the final impact statement contains a socioeconomic forecast that assumes the construction of a highway such as the tollroad and then applies that forecast to both the build and no-build alternatives. The result is a forecast of future needs that only the proposed tollroad can satisfy. As a result, the final impact statement creates a self-fulfilling prophecy that makes a reasoned analysis of how different alternatives satisfy future needs impossible. > Defendants respond that they unsuccessfully attempted to implement the kind of study suggested by plaintiffs and that such a study was not possible. HY 1–01160. However, when there is incomplete or unavailable information as to the impact of a proposed action, and that information is essential to make a reasoned choice among alternatives, NEPA requires an agency to make clear in the final impact statement that the study was not undertaken and that there are reasons the study was not undertaken. 40 C.F.R. § 1502.22. Here, unlike a case such as *Marita,* 46 F.3d at 623 (7th Cir.1995), the final impact statement does not indicate that this information is missing or that obtaining this information is infeasible or exorbitantly expensive. > NEPA, of course, does not require an agency to use the best scientific methodology available. *Id.* Thus, this court cannot conclude, as plaintiffs urge, that the final impact statement must contain a socioeconomic forecast that reflects the growth inducing effect of the tollroad. Rather, this court merely holds that information about the growth inducing impact of tollroad construction is crucial to a reasoned conclusion as to alternatives and that the final impact statement was at least required to explain in some meaningful way why such a study was not possible. 40 C.F.R. § 1502.22; *cf. Laguna Greenbelt, Inc. v. U.S. Dept. of Transp.,* 42 F.3d 517, 526–27 (9th Cir.1994) (suggesting that a final impact statement cannot rely on a single socioeconomic forecast unless the statement relies on existing needs or explains why an alternative study is not possible); *Seattle Audubon Society v. Espy,* 998 F.2d 699, 704 (9th Cir.1993) (an impact statement, which did not address in any meaningful way the uncertainties of the evidence it relied on, must undertake further study or explain why such study is not necessary or feasible). *See generally,* Dinah Bear, *Using the National Environmental Policy Act to Protect Biological Diversity,* 8 Tul. Envtl. L.J. 77, 93 (1994) ("[t]he requirements of Section 1502.22, which have received little attention since the controversial 'worst case' amendment of 1986,

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234 (cont.)		› The sections, *Induced Travel* and *Induced Growth*, beginning on pages 4-179 and 4-182, respectively, of the Final Environmental Impact Statement, establish that the freeway would contribute to minimal induced travel demand (which has, to a large degree, been accounted for in the Maricopa Association of Governments' model). › Section 93.110 of the U.S. Environmental Protection Agency's conformity rule requires that population and employment projections (which establish growth rates and distribution) used in a conformity analysis be the most recent estimates that have been officially approved by the Maricopa Association of Governments (as the metropolitan planning organization for the Maricopa County nonattainment and maintenance areas). In accordance with the Governor's Executive Order 2011-04, county-level population projections used for all State agency planning purposes were updated by the Arizona Department of Administration in December 2012, based on the 2010 U.S. Census. To use projections other than the approved demographic trends would be inconsistent with the projections required for use in the transportation conformity assessment. Even if one could argue the only reason the development has occurred as it has is because of the planned freeway (which is not the case—see above) for the last 30 years (in other words, if the freeway had not been planned, development would somehow have been different), the argument is irrelevant. Existing development is now there and, therefore, it is reasonable to assume that the land use distribution and related development will be there in the future The analysis documented in the Final Environmental Impact Statement leads to the conclusion that the No-Action Alternative and action alternative land uses would be similar, and thus, no "scenario planning" is required. Scenario planning could have application if the area was not developed, but the manner in which the No-Action Alternative was determined and presented in the Final Environmental Impact Statement is "state-of-the-practice." Defining the No-Action Alternative as including all projected socioeconomic growth and planned transportation projects in the *Regional Transportation Plan* except the proposed action is common practice. The approach taken in the Final Environmental Impact Statement has standard application in the transportation industry. In Arizona, this method to describe the No-Action Alternative has been commonplace in National Environmental Policy Act documents dating back to at least 1990. Further, the environmental impact statements for Legacy Parkway and Mountain View Corridor in Utah had a similar approach of using local land use plans, growth projections, and interviews with City representatives to determine whether the No-Action Alternative land use would be different than with the proposed action. All of these projects were in similar high-growth regions, and the conclusions were that the areas would develop with or without the project, although the timing may change. The No-Action Alternative as defined in the Final Environmental Impact Statement is appropriate. It satisfies reasonableness, withstands a hard look, and was fully disclosed.
235		Legal summary reviewed.

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should be used in the event of new and evolving scientific theories"). Accordingly, the final impact statement does not adequately justify its reliance on projected needs and thus fails to observe procedures required by law. 5 U.S.C. § 706(2)(D). Moreover, FHWA's decision, which does not require defendants to produce an appropriate socioeconomic forecast or to explain adequately why such a forecast is not possible, was arbitrary and capricious. 5 U.S.C. § 706(2)(A).

Defendants respond that even if the final impact statement should not have relied on a single population forecast, the tollroad still is the most effective way to satisfy *existing* transportation needs. Indeed, a reliance on existing needs is legally sufficient, even if the analysis of future needs is flawed. *Laguna,* 42 F.3d at 526; *Piedmont Heights Civic Club, Inc. v. Moreland,* 637 F.2d 430, 442 (5th Cir.1981); *National Wildlife Federation v. Lewis,* 519 F.Supp. 523, 533–34 (D.Conn.1981).

Plaintiffs reply that there is no evidence to support defendants' assertions as to current needs. Defendants identify six current needs, including the need to: (1) improve local travel; (2) accommodate increasing freight demand; (3) relieve congestion at critical locations on the interstate system; (4) provide a north-south transportation corridor; (5) accommodate shifting locations of employment; and (6) enhance community linkage. Def. 12(M) ¶ 18.

With respect to local travel and the need for community linkage, the final impact statement asserts that the growing regional population needs another way to cross the Des Plaines River because of increased travel times on local roads. Def. 12(M) ¶¶ 19, 23. However, plaintiffs correctly point out that the final impact statement contains no analysis that indicates how or to what extent the tollroad will improve travel times. Moreover, the claim that local travel times need to be improved is inconsistent with defendants' claim that the tollroad does not depend on current road congestion in Will County for its existence. Def. Resp. to Pl. 12(N)(3)(b) ¶ 1. Finally, FHWA itself stated that, "if [the tollroad is] going to reduce travel time then additional documentation would be needed in the final impact statement to support that claim." HY–1–01412. The final impact statement does not contain any such documentation, so there is no evidence of a need to improve local travel or enhance community linkage, and there is no evidence that the tollroad will alleviate any local transportation problems that do exist. Because this essential information is absent, the final impact statement does not provide a basis for analyzing alternatives as to these current needs. 40 C.F.R. § 1502.14.

With respect to regional transportation, the need for a north-south corridor, and the need to accommodate shifting locations of employment, defendants have provided evidence of a substantial increase in the number of jobs in suburban areas and a concomitant increase in vehicular trips to those locations. HY 3–01312–13. However, plaintiffs correctly point out that the final impact statement fails to analyze how and to what extent the tollroad would correct this problem. As mentioned above, FHWA has acknowledged that additional documentation is needed in order to demonstrate that the tollroad will improve travel times. This information is essential to determining whether the tollroad, as opposed to various alternatives, will meet current needs. 40 C.F.R. § 1502.14.

With respect to freight demands, plaintiffs correctly point out that this need is supported by a chart that shows national highway trends but fails to identify any needs in northeastern Illinois. Moreover, the final impact statement does not explain how the tollroad would alleviate any excessive freight demands that do exist. The

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final impact statement fails to explain why such a study, which is essential to determining whether the tollroad will meet current needs, was not undertaken. Accordingly, this justification for the tollroad is also legally insufficient. *Id.*

Id. at 1043-1044; *See, also, e.g., Swain v. Brinegar, 517 F.2d 766, 777 (7th Cir. 1975)*

(The National Environmental Policy Act is, as its name suggests, aimed at protecting the environmental health of the nation as a whole as well as that of each of its separate parts. In few areas is the importance of this broad policy as clear as it is in the area of highway construction, and in particular the area of major interstate and interurban highways. Such highways have a profound influence on "population growth, high-density urbanization, industrial expansion, (and) resource exploitation." 42 U.S.C. § 4331. While highways of this type are often needed desperately by a population with a real and particular need to travel and expand, it is also true that such highways often create demands for travel and expansion by their very existence. Thus, almost any sponsor of a major four lane highway project can say with some assurance that if the highway is built it will be used and auto travel will be safer, faster, and more efficient because of it. In short, "need" is often a self-fulfilling prophesy in the area of major highway construction.

Moreover, the apparent "need" for such a highway project may well seem the greatest to those closest to it. Certainly it can be predicted that for those whose responsibility it is to propose and construct such highways, the tendency will be to develop a dedication or loyalty to projects which have advanced to the public hearing stages or beyond. This can hardly be avoided given human nature. In the present instance, for example, the Lincoln-Peoria project had advanced well beyond the public hearing stages by 1970. In fact, construction had already begun for the northerly segment of that project. Under these circumstances there is at least a grave possibility that the EIS requirement was viewed by the state as merely a procedural hurdle to be contended with in order to complete an ongoing project to which the state had made relatively extensive financial and administrative commitments.).

3. Conclusion

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This memo commented on two items – the factually incorrect response of ADOT to the Arizona PIRG comments (page B132 of Vol 3 of Comment Response Appendix) and the variously misleading alternatives analysis results presented on pages 3-27 to 3-36 of "Chapter 3 – Alternatives." These two issues are in many ways related -- they both challenge long-held assumptions of continued growth in automobile travel. While it is highly likely that growth will occur, the PIRG statement and their broader research based on both local and national data, show that driving rates per capita are slowing. This is due to various factors - significant demographic, cultural and economic shifts - which will continue to confound current planning models. This relates to the second issue of socioeconomic projections and the "no-build" model, because any such projection is so dependent on assumptions of activity locations. Areas served by the SMF are not the only attractive areas in the valley. Without the SMF, they will locate in countless other locations – including near Light Rail and other investments in ways planners have not seen before, as the lure of urban living grows at rates not considered earlier. Combining these issues, it could easily be imagined that the valley could fit the additional two million residents, and accommodate their travel, without the South Mountain Freeway.

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236		See previous responses to specific comments.

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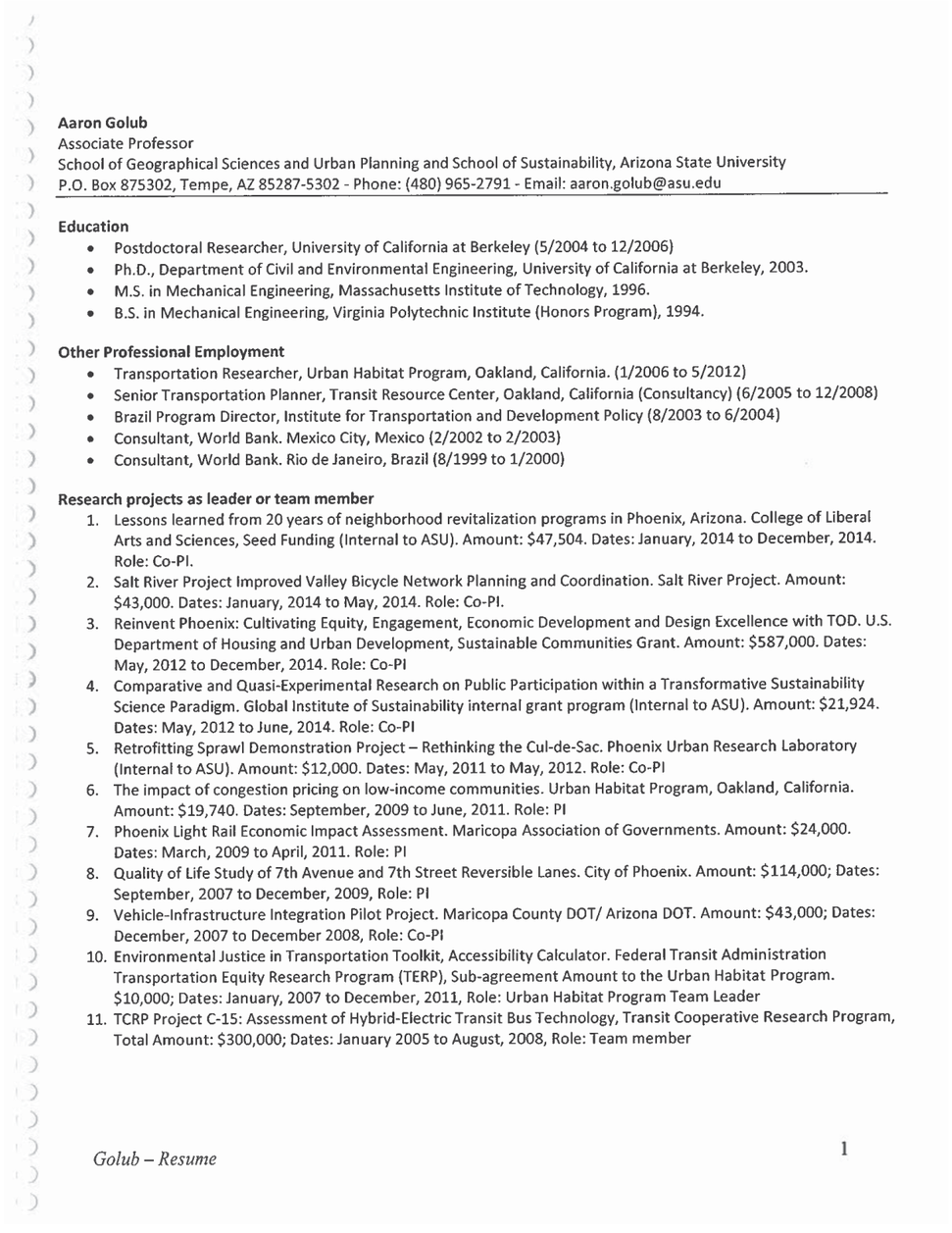
237	

Aaron Golub
Associate Professor
School of Geographical Sciences and Urban Planning and School of Sustainability, Arizona State University
P.O. Box 875302, Tempe, AZ 85287-5302 - Phone: (480) 965-2791 - Email: aaron.golub@asu.edu

Education

- Postdoctoral Researcher, University of California at Berkeley (5/2004 to 12/2006)
- Ph.D., Department of Civil and Environmental Engineering, University of California at Berkeley, 2003.
- M.S. in Mechanical Engineering, Massachusetts Institute of Technology, 1996.
- B.S. in Mechanical Engineering, Virginia Polytechnic Institute (Honors Program), 1994.

Other Professional Employment

- Transportation Researcher, Urban Habitat Program, Oakland, California. (1/2006 to 5/2012)
- Senior Transportation Planner, Transit Resource Center, Oakland, California (Consultancy) (6/2005 to 12/2008)
- Brazil Program Director, Institute for Transportation and Development Policy (8/2003 to 6/2004)
- Consultant, World Bank. Mexico City, Mexico (2/2002 to 2/2003)
- Consultant, World Bank. Rio de Janeiro, Brazil (8/1999 to 1/2000)

Research projects as leader or team member

1. Lessons learned from 20 years of neighborhood revitalization programs in Phoenix, Arizona. College of Liberal Arts and Sciences, Seed Funding (Internal to ASU). Amount: $47,504. Dates: January, 2014 to December, 2014. Role: Co-PI.
2. Salt River Project Improved Valley Bicycle Network Planning and Coordination. Salt River Project. Amount: $43,000. Dates: January, 2014 to May, 2014. Role: Co-PI.
3. Reinvent Phoenix: Cultivating Equity, Engagement, Economic Development and Design Excellence with TOD. U.S. Department of Housing and Urban Development, Sustainable Communities Grant. Amount: $587,000. Dates: May, 2012 to December, 2014. Role: Co-PI
4. Comparative and Quasi-Experimental Research on Public Participation within a Transformative Sustainability Science Paradigm. Global Institute of Sustainability internal grant program (Internal to ASU). Amount: $21,924. Dates: May, 2012 to June, 2014. Role: Co-PI
5. Retrofitting Sprawl Demonstration Project – Rethinking the Cul-de-Sac. Phoenix Urban Research Laboratory (Internal to ASU). Amount: $12,000. Dates: May, 2011 to May, 2012. Role: Co-PI
6. The impact of congestion pricing on low-income communities. Urban Habitat Program, Oakland, California. Amount: $19,740. Dates: September, 2009 to June, 2011. Role: PI
7. Phoenix Light Rail Economic Impact Assessment. Maricopa Association of Governments. Amount: $24,000. Dates: March, 2009 to April, 2011. Role: PI
8. Quality of Life Study of 7th Avenue and 7th Street Reversible Lanes. City of Phoenix. Amount: $114,000; Dates: September, 2007 to December, 2009, Role: PI
9. Vehicle-Infrastructure Integration Pilot Project. Maricopa County DOT/ Arizona DOT. Amount: $43,000; Dates: December, 2007 to December 2008, Role: Co-PI
10. Environmental Justice in Transportation Toolkit, Accessibility Calculator. Federal Transit Administration Transportation Equity Research Program (TERP), Sub-agreement Amount to the Urban Habitat Program. $10,000; Dates: January, 2007 to December, 2011, Role: Urban Habitat Program Team Leader
11. TCRP Project C-15: Assessment of Hybrid-Electric Transit Bus Technology, Transit Cooperative Research Program, Total Amount: $300,000; Dates: January 2005 to August, 2008, Role: Team member

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Project and Consulting Reports

1. **Golub, A.**, Wiek, A., et al. (2014) Suite of reports from Affordable Housing and Green Systems analyses for the HUD-funded Reinvent Phoenix project. For example: https://www.phoenix.gov/pddsite/Documents/reinvent_gw_sustainhousing.pdf
2. **Golub, A.**, Guhathakurta, S. & *Sollapuram, B. (2011). *Light Rail Economic Impact Analysis - Final Report*. School of Geographical Sciences and Urban Planning, Arizona State University. http://www.public.asu.edu/~agolub1/WP/LRT_Impact_Analysis_Task1_Final_Report_ASU_MAG.pdf
3. *Kelley, J. & **Golub, A.** (2011). *The Impact of Congestion Pricing for Greenhouse Gas Abatement on Low-Income Communities - Final Report*. Urban Habitat Program, Oakland, CA.
4. Kuby, M. & **Golub, A.** (Eds.). (2009). *From Here to There: Transportation Opportunities for Arizona*. Background Report for 94th Arizona Town Hall. http://www.aztownhall.org/pdf/94th_Background_Report2.pdf
5. Miller, M., & **Golub, A.** (2010). *Development of Bus Rapid Transit Performance Assessment Guide Tool.* California Partners for Advanced Transit and Highways (PATH) Research Report UCB-ITS-PRR-2010-37. http://www.path.berkeley.edu/PATH/Publications/PDF/PRR/2010/PRR-2010-37.pdf
6. Robinson, G., **Golub, A.**, Buckley, T., Nee, B., Hailu, Y & Grinshaw. J. (2008). *Environmental Justice and Transportation Toolkit, Volume 2*. Report to Federal Transit Administration, Office of Civil Rights. http://ejkit.com/the-toolkit/ej-toolkit/ej-toolkit-volume-2
7. **Golub, A.** (2008). *Quality of Life Study of the 7th Avenue and 7th Street Reversible Lanes*. (Various documents). School of Planning and Phoenix Urban Research Laboratory, ASU.
8. Chambers, C. & **Golub, A.** (2007). *Sacramento Long Range Transit Plan: Long range revenue and service projections* (Various documents). Sacramento Area Council of Governments.

Selected Publications *[Graduate student co-authors are noted with an asterisk.]*

1. **Golub, A.** & Martens, K. (2014) Using principles of justice to assess the modal equity of regional transportation plans. Journal of Transport Geography 41, 10-20. http://dx.doi.org/10.1016/j.jtrangeo.2014.07.014
2. **Golub, A.**, Robinson, G. & Nee, B. (2013). Making accessibility analyses accessible: A tool to facilitate the public review of the effects of regional transportation plans on accessibility. *Journal of Transportation and Land Use 6*(3). http://dx.doi.org/10.5198/jtlu.v6i3.352
3. **Golub, A.**, Guhathakurta, S., & *Sollapuram, B. (2012). Spatial and temporal capitalization effects of light rail in Phoenix: from conception, planning, and construction to operation. *Journal of Planning Education and Research 32*(4), 415-429. http://dx.doi.org/10.1177/0739456X12455523
4. *Machler, L. & **Golub, A.** (2012). Using a "Sustainable Solution Space" Approach to Develop a Vision of Sustainable Accessibility in a Low-Income Community in Phoenix, Arizona. *International Journal of Sustainable Transportation 6*(5), 298-319. http://dx.doi.org/10.1080/15568318.2011.605210
5. **Golub, A.** (2012). Perceived costs and benefits of reversible lanes in Phoenix, Arizona. *Journal of the Institute of Transportation Engineers, February, 2012*, 38-42. http://www.ite.org/membersonly/itejournal/pdf/2012/JB12BA38.pdf
6. *Syed, S., **Golub, A.** & Deakin, E. (2009). Regional rail park-and-ride users' response to parking price changes: system-wide results and detailed study of two stations. *Transportation Research Record: Journal of the Transportation Research Board 2110*, 155-162. http://dx.doi.org/10.3141/2110-19
7. Nurworsoo, C., **Golub, A.** & Deakin, E. (2009). Analyzing equity impacts of transit fare changes: Case study of Alameda–Contra Costa Transit, California. *Evaluation and Program Planning 32*(4), 360-368. http://dx.doi.org/10.1016/j.evalprogplan.2009.06.009
8. Cervero, R., **Golub, A.** & *Nee, B. (2007). City CarShare: Longer-Term Travel-Demand and Car Ownership Impacts. *Transportation Research Record: Journal of the Transportation Research Board 1992*, 70-80. http://dx.doi.org/10.3141/1992-09

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238	**COMMENT 8** **Comments on the South Mountain Freeway Final Environmental Impact Statement (FEIS) and Section 4(F) Evaluation Issued September 2014 Regarding Impacts to Cultural Resources** **by** **Samantha Skenadore, Of Counsel,** **The Shanker Law Firm, PLC**

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COMMENTS ON THE SOUTH MOUNTAIN FREEWAY FINAL ENVIRONMENTAL IMPACT STATEMENT ("FEIS") AND SECTION 4(F) EVALUATION ISSUED SEPTEMBER 2014 REGARDING IMPACTS TO CULTURAL RESOURCES
November 23, 2014

Samantha Skenandore
Of Counsel, The Shanker Law Firm PLC
November 24, 2014

The Federal Highways Administration (the "FHWA") and the Arizona Department of Transportation ("ADOT") (collectively referred to as the "Agencies") prepared and issued a Final Environmental Impact Statement and Section 4(f) Evaluation (the "FEIS") of the Freeway project pursuant to 42 U.S.C. §4332(2)(c), 49 U.S.C. §303 and 33 U.S.C. §1251 in September 2014. The FEIS particularly addresses the preferred alternative (the Eastern Section "E1 Alternative") for building a major highway known as the South Mountain Freeway (Loop 202) which will destroy and desecrate, at least in part, a mountain range, South Mountain, also referred to *Moadak Do'ag* (a.k.a. *Muhadag* and *Muhadagi Doag*) in the Pima language, *Avikwaxós* in the Maricopa language, and *Greasy Mountain* in the English language. Moadak Do'ag is identified as South Mountains Traditional Cultural Property (a "TCP")[1] and is held sacred by Native Americans from various tribes. The Agencies issued the FEIS and selected the E1 Alternative despite the known impacts of the alternative which include, *inter alia*: (1) irreversible damage to the sacred and historically significant South Mountain; and (2) profound negative impact on the religious, cultural and spiritual well-being of Native Americans. Portions of South Mountain lie within the exterior boundaries of a federally-recognized tribe – the Gila River Indian Community (the "GRIC").[2] The GRIC and other tribes, discussed below, have attached a significant traditional, cultural and religious value upon South Mountain and adjacent areas.

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In general, the Agencies failed to respond to adequately our specific and technical comments that addressed procedural and substantive noncompliance with applicable federal and related policies, principles and practices that guide the Agencies' requisite duty to substantially comply with applicable law. In addition, the Agencies have failed to make any reasonable and prudent efforts to address the noncompliance documented in our comments on the Draft Environmental Impact Statement (the "DEIS") process. i.e., failure to hold requisite, adequate, consistent and meaningful consultation with Native American tribes that attach significant traditional, cultural and religious value upon the South Mountain and adjacent areas; failure to properly identify, assess, evaluate, mitigate and/or avoid cultural resources and sites in the Section 4(f), NEPA and Section 106 processes, failure to adhere to applicable guidance manuals and bulletins applicable to the Agencies' duties, and failed to secure a Programmatic Agreement (the "PA") timely and effectively to observe agency duties under the law. Even if a PA is reached on or after the submission of the present comments, the timing of such a critical agreement unfairly and detrimentally disadvantages Native American tribes, tribal communities and interested persons that attach value to South Mountain and the vicinity affected by the project. More importantly, last minute decisions based on faulty and incomplete data will likely result in irreversible harm to cultural resources and historic properties within the project's scope. All comments submitted in the DEIS process are hereby incorporated into these updated comments submitted for FEIS and other purposes. *See* FEIS, ¶¶ B520-B541.

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[1] The Agencies determined that the South Mountain qualified as a Traditional Cultural Property. *See* FEIS at 4-142-4-144.

[2] For more information on the Gila River Indian Community, please see the official page available at: http://www.gilariver.org/ (viewed November 22, 2014).

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239	**Cultural Resources**	Consultation with Native American Tribes has been extensive and demonstrates a reasonable and good faith effort to include all interested Native American Tribes in the process to take their concerns seriously in the planning effort. As discussed on page 4-159 of the Final Environmental Impact Statement, a Programmatic Agreement was developed for the project to establish a process for consultation, review, and compliance with federal and State preservation laws as the effects of the project on historic properties become known. As noted in Table 4-47 on pages 4-151 through 4-153 of the Final Environmental Impact Statement, the Programmatic Agreement for the project was executed in 2006 by the signatories, the Federal Highway Administration and the Arizona State Historic Preservation Officer. For the Programmatic Agreement to be executed, only the signatories and invited signatories need to sign the Programmatic Agreement. The executed Programmatic Agreement can be found in Appendix 4-6 of the Final Environmental Impact Statement. Other stakeholders were offered several opportunities to sign the Programmatic Agreement as a concurring party, but some elected not to do so. Concurring party signatures are not required for the Programmatic Agreement to be executed in compliance with the National Historic Preservation Act or the National Environmental Policy Act.

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I. <u>The Agencies failed to make reasonable and good faith efforts to consult all federally recognized Indian tribes that may attach religious and cultural significance to the Area of Potential Effects.</u>

The Agencies identified the following seven (7) tribal nations as consulting parties: Ak-Chin Indian Community, Gila River Indian Community, Hopi Tribe, Salt River Pima-Maricopa Indian Community, Tohono O'odham Nation, Yavapai-Apache Nation, and the Yavapai-Prescott Indian Tribe. In addition, the Agencies later consulted another fifteen (15) tribes within the process to include the Chemehuevi Indian Tribe, Cocopah Indian Tribe, Colorado River Indian Tribes, Fort Mojave Indian Tribe, Fort Yuma-Quechan Tribe, Havasupai Tribe, Hualapai Tribe, Kaibab-Band of Paiute Indians, Navajo Nation, Pascua Yaqui Tribe, Pueblo of Zuni, San Carlos Apache Nation, San Juan Southern Paiute, Tonto Apache Tribe, and the White Mountain Apache Tribe. *See* FEIS Table 4-47 at 4-144. As we pointed out in our comments on the DEIS process, the Agencies failed to consult with the tribes that attach a significant traditional, cultural and religious value upon South Mountain and adjacent areas. Table 4-47 confirms that in the course of 11 years since the onset of the Section 106 process, only ten events or periods of consultation with tribes exist. Find below a summary of Table 4-47 that succinctly summarizes the purpose of the consultation, applicable date or dates, the number of tribes consulted and an approximate percentage of tribal responses.

Purpose of Consultation	Date	# Tribes Consulted	~% Response
Initiate Section 106	8/20/03	7	71% no response, 14% concur, 14% defer to Southern Tribes
Request concurrence on draft PA	12/9/03	1	100% deferred PA participation to GRIC, reserved participation in consultation
Request concurrence on Darling 2005 Field Survey, TCP, PA	7/7/05	23	83% no response, 9% concur, 8% defer to Southern Tribes
Request participation in final PA and discuss effects on TCPs	8/17/05	21	90% no response, 10% concur
Request concurrence on additional cultural resources report (Brodbeck 2006a), solicit TCP concerns	6/26/06	22	73% no response, 14% concur, 9% No TCP concern, 5% provided input
Request signatures on final PA	12/11/06	22	86% no response, 14% signed PA
Ongoing consultation	12/20/06-8/8/12	1	Only consulted the GRIC
Request concurrence on project effects on resources near Chandler Blvd. extension	8/8/12	22	68% no response, 27% concur, 5% defer to the GRIC
Ongoing consultation	9/6/12 – 1/31/13	1	Only consulted the GRIC
Request concurrence on TCP summary report, NRHP eligibility, findings of effects to TCPs, management recommendations for treatment of TCP	1/31/13	21	48% no response, 43% concur, 10% no information provided by the Agencies

In summarizing Table 4-47 with the table above, it is clear that the Agencies only initiated consultation with 7 tribes and later consulted varying numbers of tribes from 1 to 22 tribes thereafter, excluded consultation with 95% of tribes for approximately 5 years and 11 months of the project (nearly half of the life of the project under Section 106 review to date) and acquiring an average of 74% of no responses by tribes, 19% of concurrence by tribes on the average of all consultation efforts. The summary derived from Table 4-47 evidences that the Agencies have failed to make reasonable and good faith efforts to bring all interested and impacted tribes to the table. As pointed out in our comments concerning the DEIS, the tribes

Code	Issue	Response
240	**Cultural Resources**	Consultation with Native American Tribes in compliance with Section 106 of the National Historic Preservation Act has been extensive and demonstrates a reasonable and good faith effort to include all interested Native American Tribes in the process to take their concerns seriously in the planning effort (see page 4-145 of the Final Environmental Impact Statement).

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have been left almost entirely out of a project that has been under development since 2001. The summary of Table 4-47 reaffirms alarmingly low response numbers by tribes to a project of this magnitude, in combination with low concurrence numbers on consultation efforts which strongly reaffirms our previous comments that consultation was late, inconsistent, sporadic, inadequate and not meaningful.

241 The Agencies attribute their untimely identification of impacted tribes – a period of nearly 2 years (2003-2005), to their own failure to scope their own project and identify aboriginal lands of impacted tribes. *See* FEIS at B524. Without identifying some 15 tribes and inviting them to the Section 106 review process (and contrary to 36 C.F.R. § 800.3(f)(2)), the Agencies completed the founding field work, the Darling Field Survey. Therefore, the Agencies' statement that, "…all tribes were contacted early in the study and have been consulted on many aspects of the study, including the cultural resource-related reports produced over the course of the study" is inaccurate. *See* FEIS at B524.

242 Table 4-47 demonstrates that the tribes were insufficiently consulted, if at all, about key substantive and procedural decisions involving the technical studies needed to fully comply with Section 106 early in the process. In other words, the Agencies failed to observe their obligations in accordance with Section 106 and applicable guidance manuals.[3] The most significant report throughout the Section 106 process is arguably the 2005 Darling field survey report (the "Darling Field Survey"). *See* FEIS, Ch. 4, ¶4-141. The Darling Field Survey identified 19 archaeological sites and 191 isolated occurrences. *See Id.* Note that Table 4-47 indicates that the FHWA initiated Section 106 process on August 20, 2003, however, the record evidences that the tribes were not consulted on the any aspect of the scope of the field work, specialized studies, historic property surveys, the credentials of the field archaeologist/s or any other experts or contractors that may have been involved, and other preservation issues. Instead the tribes were asked to concur on the adequacy of the completed field survey on July 1, 2005. *See* FEIS, at 4-145 & 4-146. The record of inadequate consultation early in the project's timeline is relevant to the current inadequacy of a lack of a PA late into the project's review processes. Table 4-47 affirms that the Agencies relied heavily on the Darling field report for the majority of the Section 106 process on the record. Additional supplemental surveys yielded the additional identification and, in some cases, evaluation of numerous other sites missed by the original Darling Field Survey. *See Id.* at Ch. 4, ¶ 4-142. The later phases of the record indicate that the majority of the tribes have not concurred with the findings from the Darling Field Survey and other technical reports and warrants the conclusion that serious and significant shortcomings exist in the substantive and procedural aspects of the Section 106 process.

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II. The Agencies did not properly identify, assess and evaluate the South Mountain Traditional Cultural Property.

As a result of inadequate consultation with Tribes and reliance upon inadequate archaeological surveys, supplemental and other reports, the Agencies reached an inaccurate conclusion that the project's

[3] *See* 36 CFR §800.1(a) & (c), §800.2(c)(2)(ii)(A), §800.8(a)(1). *See also* CONSULTATION WITH INDIAN TRIBES IN THE SECTION 106 REVIEW PROCESS: A HANDBOOK, ADVISORY COUNCIL ON HISTORIC PRESERVATION (NOVEMBER 2008) which states, "…[t]ribal consultation should commence early in the planning process, in order to identify and discuss relevant preservation issues and plan how to address concerns about confidentiality of information obtained during the consultation process…" and COUNCIL ON ENVIRONMENTAL QUALITY EXECUTIVE OFFICE OF THE PRESIDENT AND ADVISORY COUNCIL ON HISTORIC PRESERVATION NEPA AND NHPA: A HANDBOOK FOR INTEGRATING NEPA AND SECTION 106 (MARCH 2013) (identifies a key concept of integrating NEPA and Section 106 compliance procedures as the development of an integrated strategy to accomplish specialized studies to provide information and analysis needed under NEPA and Section 106 and recommends that agencies establish the schedule, geographic area, and specifications for specialized studies, including historic property surveys, for more than the preferred alternative when there are adverse effects, to have the information they need in each step of the NEPA and Section 106 processes).

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241	**Cultural Resources**	The identification of unknown resources in the Study Area is part of the National Environmental Policy Act process and does not represent a failure. As information became known, additional stakeholders were identified and were added to the consultation process.
242	**Cultural Resources**	The survey was performed by the Gila River Indian Community's Cultural Resource Management Program archaeologists that met the Secretary of the Interior's Professional Qualification Standards (36 Code of Federal Regulations Part 61; 48 Federal Regulations 44716). None of the consulting parties objected to the scope of the field work, specialized surveys, historic property surveys, or credentials of the field archaeologists in the responses to the consultation on the adequacy of the field survey report.
243	**Cultural Resources**	As noted in Table 4-47 on pages 4-151 through 4-153 of the Final Environmental Impact Statement, the Programmatic Agreement for the project was executed in 2006 by the signatories, the Federal Highway Administration and the Arizona State Historic Preservation Officer (see Appendix 4-6 on page A674 in Volume II of the Final Environmental Impact Statement). Other stakeholders were offered several opportunities to sign the Programmatic Agreement as a concurring party, but some elected not to do so. Concurring party signatures are not required for the Programmatic Agreement to be executed in compliance with the National Historic Preservation Act or the National Environmental Policy Act.

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244 adverse effects on the South Mountain Traditional Cultural Property would not require mitigation. *See* FEIS at 4-144 which states, "[t]he E1 (Preferred) Alternative would not significantly adversely affect qualities of SMPP [South Mountain Park/Preserve] that qualify it for listing in the NRHP." Further, the Agencies' conclusion that the "Native Americans would not be kept from the practicing their beliefs, access to the mountain would be maintained, and mitigation measures would be implemented based on input from members of the Gila River Indian Community" is flawed and speculative at best. *See* FEIS at B520. The fact remains that no PA has been reached. In other words, consulting parties have yet to come to an agreement about the identification, assessment, evaluation, avoidance and mitigation of adverse impacts to historic properties. The Agencies repeatedly recommend that the project should move forward with mitigation of adverse impacts to the South Mountain Traditional Cultural Property. *See* FEIS at B42. Despite the input and applicability of impacts to some 22 tribes, the Agencies purport mitigation measures for access to the South Mountain Traditional Cultural Property to be limited to members of only one tribe: the GRIC. *See* FEIS at B523. Even the GRIC acknowledge that other tribes attach a significant traditional, cultural and religious value upon South Mountain and adjacent areas. To ignore and/or bar other tribes from cultural and religious practice at South Mountain is an unsubstantiated mitigation resolution.

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247 We pointed out that the DEIS did not adequately include crucial data to assist the Agencies and consulting parties in the determination of impacts upon cultural sites and resources. The Agencies made statements in the FEIS that are unresponsive as to whether the Agency found that air, ground, or water attributes were important to certain historic properties. *See* FEIS at B529. In other words, the Agencies were unresponsive to our DEIS comments concerning the adequacy of the identification and evaluation of historic properties. The Agencies should have been able to affirmatively respond if they evaluated air, ground or water attributes and whether such attributes were properly weighed against National Registry criterion. Because of the unresponsiveness by the Agencies, compliance with Bulletin 38 by the National Park Service and the Department of Interior is at issue.[4]

For example, the Agencies failed to properly assess the South Mountain Traditional Cultural Property, particularly, the preservation of its viewshed. It is not clear if the Agencies lacked input in the record of the viewscape and/or other attributes, ignored the comments and the record, or misevaluated them. If the viewshed was properly identified as an intrinsic attribute to the South Mountain Traditional Cultural Property, then the Agencies may have concluded the site should be avoided, cannot be mitigated, or at least more accurately reflect the viewscape's "space" in the record. More specifically, if the Agencies assessed the viewscape in addition to the "less than .03 percent of the total area" of the project's impact to the mountain, the fractionalized impact would vastly be increased beyond .03 percent. *See* FEIS at B520. Even if the Agencies attributed the applicable viewscape to Section 106 review, they failed to address the impacts that the large project would have on the viewscape to the integrity of the TCP and more importantly, the adverse

[4] *See* NATIONAL REGISTER BULLETIN (BULLETIN 38): GUIDELINES FOR EVALUATING AND DOCUMENTING TRADITIONAL CULTURAL PROPERTIES U.S. DEPARTMENT OF THE INTERIOR, NATIONAL PARK SERVICE (1998, AS AMENDED) (requiring careful consideration and inclusion of viewsheds in boundary definition). "The fact that the boundaries of a traditional cultural property may be drawn more narrowly than they would be if they included all significant viewsheds or lands on which noise might be intrusive on the practices that make the property significant does not mean that visual or auditory intrusions occurring outside the boundaries can be ignored. In the context of eligibility determination or nomination, such intrusions if severe enough may compromise the property's integrity. In planning subsequent to nomination or eligibility determination, the Advisory Council's regulations define "isolation of the property from or alteration of the character of the property's setting" as an adverse effect "when that character contributes to the property's qualification for the National Register" (36 CFR 800.9(b)(2)). Similarly, the Council's regulations define as adverse effects "introduction of visual, audible, or atmospheric elements that are out of character with the property or alter its setting" (36 CFR 800.9(b)(3))."

Code	Issue	Response
244	**Cultural Resources**	The commenter has taken this statement out of context. The statement is from footnote 'g' of Table 4-46 on page 4-144 of the Final Environmental Impact Statement. The table's title is "NRHP-eligible Historic Sites (non-TCP), Action Alternatives." Given the title of the table, this statement was not in reference to the South Mountains Traditional Cultural Property (TCP), but to the park itself and its eligibility for the National Register of Historic Places.
245	**Cultural Resources**	As noted in Table 4-47 on pages 4-151 through 4-153 of the Final Environmental Impact Statement, the Programmatic Agreement for the project was executed in 2006 by the signatories, the Federal Highway Administration and the Arizona State Historic Preservation Officer. For the Programmatic Agreement to be executed, only the signatories and invited signatories need to sign the Programmatic Agreement. The executed Programmatic Agreement can be found in Appendix 4-6 of the Final Environmental Impact Statement. Other stakeholders were offered several opportunities to sign the Programmatic Agreement as a concurring party, but some elected not to do so. Concurring party signatures are not required for the Programmatic Agreement to be executed in compliance with the National Historic Preservation Act or the National Environmental Policy Act.
246	**Cultural Resources**	The project will not preclude access to the South Mountains by any person from any Native American Tribe. Adverse effects on traditional cultural practices, including religious activities, will be mitigated by the development and implementation of the traditional cultural property mitigation program for the project through ongoing National Historic Preservation Act Section 106 consultations and by mitigation identified in Chapter 4 of the Final Environmental Impact Statement that will avoid, reduce, minimize, or otherwise mitigate air, ground, and water-related impacts. These commitments are confirmed in Table 3, beginning on page 38, of the Record of Decision. This applies equally to any impacts during construction of the freeway. The Final Environmental Impact Statement describes a proposed action that, after consultation and coordination efforts, would accommodate and preserve (to the fullest extent possible from the available alternatives) access to the South Mountains for religious practices. Native Americans would not be kept from practicing their beliefs, access to the mountain would be maintained, and mitigation measures would be implemented based on input from members of the Gila River Indian Community and other Native American Tribes.
247	**Cultural Resources**	In cases where air, ground, or water attributes were considered important to their eligibility for listing in the National Register of Historic Places, this information would have been addressed during the consultation process. If the Federal Highway Administration had no information suggesting the significance of air, ground, or water attributes, and none of the consulting parties responded to consultation by saying those attributes were important and requesting they be considered, the Federal Highway Administration would have no reason to consider them, and further Section 106 consultation on these attributes would not have been required.

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adverse effects on the South Mountain Traditional Cultural Property would not require mitigation. *See* FEIS at 4-144 which states, "[t]he E1 (Preferred) Alternative would not significantly adversely affect qualities of SMPP [South Mountain Park/Preserve] that qualify it for listing in the NRHP." Further, the Agencies' conclusion that the "Native Americans would not be kept from the practicing their beliefs, access to the mountain would be maintained, and mitigation measures would be implemented based on input from members of the Gila River Indian Community" is flawed and speculative at best. *See* FEIS at B520. The fact remains that no PA has been reached. In other words, consulting parties have yet to come to an agreement about the identification, assessment, evaluation, avoidance and mitigation of adverse impacts to historic properties. The Agencies repeatedly recommend that the project should move forward with mitigation of adverse impacts to the South Mountain Traditional Cultural Property. *See* FEIS at B42. Despite the input and applicability of impacts to some 22 tribes, the Agencies purport mitigation measures for access to the South Mountain Traditional Cultural Property to be limited to members of only one tribe: the GRIC. *See* FEIS at B523. Even the GRIC acknowledge that other tribes attach a significant traditional, cultural and religious value upon South Mountain and adjacent areas. To ignore and/or bar other tribes from cultural and religious practice at South Mountain is an unsubstantiated mitigation resolution.

We pointed out that the DEIS did not adequately include crucial data to assist the Agencies and consulting parties in the determination of impacts upon cultural sites and resources. The Agencies made statements in the FEIS that are unresponsive as to whether the Agency found that air, ground, or water attributes were important to certain historic properties. *See* FEIS at B529. In other words, the Agencies were unresponsive to our DEIS comments concerning the adequacy of the identification and evaluation of historic properties. The Agencies should have been able to affirmatively respond if they evaluated air, ground or water attributes and whether such attributes were properly weighed against National Registry criterion. Because of the unresponsiveness by the Agencies, compliance with Bulletin 38 by the National Park Service and the Department of Interior is at issue.[4]

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For example, the Agencies failed to properly assess the South Mountain Traditional Cultural Property, particularly, the preservation of its viewshed. It is not clear if the Agencies lacked input in the record of the viewscape and/or other attributes, ignored the comments and the record, or misevaluated them. If the viewshed was properly identified as an intrinsic attribute to the South Mountain Traditional Cultural Property, then the Agencies may have concluded the site should be avoided, cannot be mitigated, or at least more accurately reflect the viewscape's "space" in the record. More specifically, if the Agencies assessed the viewscape in addition to the "less than .03 percent of the total area" of the project's impact to the mountain, the fractionalized impact would vastly be increased beyond .03 percent. *See* FEIS at B520. Even if the Agencies attributed the applicable viewscape to Section 106 review, they failed to address the impacts that the large project would have on the viewscape to the integrity of the TCP and more importantly, the adverse

[4] *See* NATIONAL REGISTER BULLETIN (BULLETIN 38): GUIDELINES FOR EVALUATING AND DOCUMENTING TRADITIONAL CULTURAL PROPERTIES U.S. DEPARTMENT OF THE INTERIOR, NATIONAL PARK SERVICE (1998, AS AMENDED) (requiring careful consideration and inclusion of viewsheds in boundary definition). "The fact that the boundaries of a traditional cultural property may be drawn more narrowly than they would be if they included all significant viewsheds or lands on which noise might be intrusive on the practices that make the property significant does not mean that visual or auditory intrusions occurring outside the boundaries can be ignored. In the context of eligibility determination or nomination, such intrusions if severe enough may compromise the property's integrity. In planning subsequent to nomination or eligibility determination, the Advisory Council's regulations define "isolation of the property from or alteration of the character of the property's setting" as an adverse effect "when that character contributes to the property's qualification for the National Register" (36 CFR 800.9(b)(2)). Similarly, the Council's regulations define as adverse effects "introduction of visual, audible, or atmospheric elements that are out of character with the property or alter its setting" (36 CFR 800.9(b)(3))."

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248	**Cultural Resources**	The area of impact presented is specific to the boundary of the Phoenix South Mountain Park/Preserve. As stated in the text box on page 4-141 of the Final Environmental Impact Statement, "... the South Mountains are part of a continuum of life and not an individual entity that can be isolated and analyzed. The South Mountains TCP extends beyond SMPP" (Figure 5-8). The Arizona Department of Transportation has committed to funding a National Register of Historic Places eligibility report for the South Mountains Traditional Cultural Property to be prepared by the Gila River Indian Community (see page 4-159 of the Final Environmental Impact Statement).

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impacts to future religious practices. In other words, the Agencies failed to comply with expectations outlined in Bulletin 38 regarding the South Mountain site and perhaps other sites.

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Finally, the Agencies suggest that if such attributes were not made known to them, they would not need to consider them (nor further Section 106 consultation would be required). *See* FEIS at B529. The Agencies are certainly bound to consider all attributes brought to the table during Section 106 review. The Agencies admit that the Section 106 review is ongoing and continues "until any commitments in a record of decisions are completed." *See* FEIS at B528. Therefore and as the date of these comments, the Agencies did not properly identify, assess and evaluate the South Mountain Traditional Cultural Property.

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III. The Agencies ignored critical input by the Gila River Indian Community.

The Gila River Indian Community (the "GRIC"), through in large part, its Tribal Historic Preservation Office provided the Agencies with input and consultation feedback on impacts to cultural resources and historic properties that would likely be impacted by the project. *See* FEIS, ¶¶ B38-B60. The GRIC's commentary largely focuses on the Community's longstanding and reaffirmed position for a No-Action Alternative "to avoid impacts to cultural resources…" *See Id.* The Agencies profess that they "have listened closely to the members of the Gila River Indian Community and their concerns…" yet conclude that "…the proposed action might be perceived as severing the Gila River Indian Community's spiritual connection to the mountains…" *See Id.* The Agencies erroneously resolve any "perception" of a severed spiritual connection to the South Mountain Traditional Cultural Property by suggesting that access would be maintained and impacts mitigated to the "small fraction" of the mountains affected. *See Id.* The GRIC disagrees and reasserted its position that the project should avoid the South Mountain Traditional Property and any proposed mitigation is not a feasible option.

The Agencies continue to ignore the GRIC's clear position to avoid any adverse impacts to the South Mountain Traditional Property. The Agencies commit themselves in the FEIS to yet "conduct a full evaluation of the South Mountains Traditional Property" based on outdated 2010 communications with a sitting Lieutenant Governor of the GRIC that is contrary to the GRIC's current comments, positions and community input so reflected in two referendums concerning the project. *See* FEIS at B43. Therefore, the Agencies are on record and commit to further evaluate the TCP at issue for adverse impacts.

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IV. The FEIS confirms the Section 106 process is incomplete and only affirms partial "proposed" mitigation with no compliant Programmatic Agreement reached.

The Agencies confirm that they have not yet secured a PA nor, after 11 years, concluded Section 106 review requirements. Note that the Council on Environmental Quality, Office of the President and the Advisory Council on Historic Preservation state in their March 2013 Handbook Integrating NEPA and Section 106: "[b]y statute, the Section 106 requirements must be met prior to an agency approving the expenditure of funds on an undertaking… or prior to issuance of a license, permit, or approval needed by the undertaking to proceed. Further, an agency must complete the NEPA and Section 106 reviews before signing a decision document… The NEPA review may conclude with… a ROD. Under CEQ regulations…EISs are not decision documents. Agencies should avoid issuing NEPA documents that present a final agency decision before they have completed their Section 106 process because the Section 106 process may result in a finding that requires the NEPA document to be revised or supplemented.… Going forward, the NEPA and Section 106 review processes should never be considered in isolation or as sequential environmental reviews that never intersect and operate under different schedules and requirements. The current paradigm for environmental reviews advanced by CEQ and the ACHP envision these reviews occurring simultaneously, continually exchanging information, and allowing determinations and recommendations in one to inform the

Code	Issue	Response
249	**Cultural Resources**	The Section 106 process will continue beyond the Record of Decision to ensure avoidance, minimization, or mitigation of adverse effects to known historic properties and any historic properties identified during design and construction. Cultural and religious places of importance, such as the South Mountains, are acknowledged in the Final Environmental Impact Statement in several locations, notably on pages 4-142 and 5-26. Since the beginning of the environmental impact statement process, the Federal Highway Administration and Arizona Department of Transportation have been carrying out cultural resource studies and engaging in an ongoing, open dialogue with the Gila River Indian Community Tribal Historic Preservation Office and other Tribes regarding the identification and evaluation of places of religious and cultural importance to Native Americans that may be adversely affected by the freeway. Specific to the South Mountains Traditional Cultural Property, the Arizona Department of Transportation and Federal Highway Administration will fund a traditional cultural property evaluation of the South Mountains Traditional Cultural Property to be prepared by the Gila River Indian Community. That and other mitigation are presented in Table 3, beginning on page 38, of the Record of Decision.
250	**Cultural Resources**	The Final Environmental Impact Statement on page 2-4 acknowledges that the Gila River Indian Community Council passed Resolution GR-64-96 that strongly opposed any future alignment of the South Mountain Freeway on Gila River Indian Community land. In addition, the comments received from Gila River Indian Community Governor Gregory Mendoza (see letter dated July 11, 2013, on page B38 in Appendix 7, Volume III, of the Final Environmental Impact Statement and letter dated December 15, 2014, on page A24 in this Appendix A) confirm the Gila River Indian Community's position. In a coordinated referendum held in February 2012, and Gila River Indian Community members voted in favor of the no-build option. The environmental impact statement process allows these actions to be taken into account as one of many factors to consider in terms of the National Environmental Policy Act decision making intent to promote a more informed decision with regard to the proposed action. In a letter dated July 3, 2012, the Gila River Indian Community Tribal Historic Preservation Officer concurred with the determinations of eligibility for the traditional cultural properties and archaeological sites that would be affected by the project. While the Tribal Historic Preservation Officer maintained and reinforced the significance of the South Mountains Traditional Cultural Property, the mitigation treatment plan and its recommendations were accepted. In closing, the Gila River Indian Community Tribal Historic Preservation Officer shared appreciation of "the Federal Highway Administration and Arizona Department of Transportation for acknowledging and accepting the GRIC worldview" (see Volume II, page A389, of the Final Environmental Impact Statement).
251	**Cultural Resources**	The commenter is inaccurate in her statements related to the status of the Programmatic Agreement. As stated in previous responses, the Programmatic Agreement for the project was executed in 2006 (see Appendix 4-6 on page A674 in Volume II of the Final Environmental Impact Statement) by the signatories, the Federal Highway Administration and the Arizona State Historic Preservation Officer (see Table 4-47 on pages 4-151 through 4-153 of the Final Environmental Impact Statement). For the Programmatic Agreement to be executed, only the signatories and invited signatories need to sign the Programmatic Agreement.

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other."[5] In other words, in order to comply with applicable law, the Agencies need to have a PA in place before they can issue a ROD. In the rare and undesirable event that an Agency falls short in timing requirements, the handbook warns that NEPA documents may need to be modified or supplemented. The record as found in the FEIS suggests that the Agencies will face this very rare and unfortunate situation in the instant case.

When the record clearly indicates that consultation with some 22 tribes was late, inconsistent, sporadic, inadequate and not meaningful, compliance with the NEPA and Section 106 Handbook is questionable, at best. The Agencies suggest that mitigation measures will continue to reduce effects on the mountains, however, such measures are not secured - no timelines other than referencing completion of the Section 106 review up until the ROD is noted. In terms of irreversible and adverse impacts to cultural resources and historic sites, this equates to the Agencies prematurely reaching faulty decisions. *See* FEIS at B41 (in response to the GRIC's comments). The Agencies also cite that the Community has "concurred" on identification of resources, effects and proposed mitigation, but could not and did not confirm that the Community concurred on any substantive agreements that address such findings. Therefore, the Section 106 process is incomplete and non-compliant with applicable requirements.

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V. The Agencies' conclusions concerning impacts and mitigation of adverse impacts to cultural resources is unsupported by other federal agencies.

Table 4-47 indicates that the Agencies consulted the Advisory Council on Historic Preservation on three occasions. In 2004 and in 2005, the ACHP responded with a declination to comment and participate in the process. The final consultation to the ACHP in 2007 involved a "no response required" communication of a purported final PA. Note that no final and signed PA involving Section 106 exists on the record to date. The Agencies admit that despite the ACHP's last election some 7 years ago to not participate in the Section 106 process, it notes that the ACHP conveyed its concern with the development of the PA. *See* FEIS at B531.

Even the U.S. Department of the Interior reviewed the DEIS and concurred in July 2013 "that there is no feasible or prudent alternative to the Preferred Alternative selected in the document… however, that this concurrence is contingent upon successful completion of the Programmatic Agreement among the consulting parties (emphasis added)." *See* FEIS at B4.

In short, the two agencies required to observe federal trust responsibilities under the NEPA and NHPA to federally recognized tribes, maintain significant concerns and reservations regarding the lack of the successful completion of a PA among consulting parties in the present case.

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VI. Because the FEIS inadequately identifies, assesses and evaluates adverse impacts to the South Mountain Traditional Cultural Property the Agencies' Section 4(f) conclusions are flawed.

The Agencies blame the GRIC for eliminating options to build the project on their land in their Department of Transportation Section 4(f) analysis to proceed with adverse impacts to the South Mountain Traditional Cultural Property. *See* FEIS at B534. The GRIC provided analysis on the same and correctly concluded that in light of the value of the TCP and the options on the record before the Agencies, the No Build Alternative or avoidance is the most prudent and feasible option going forward. *See* FEIS at B38-B60.

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[5] COUNCIL ON ENVIRONMENTAL QUALITY, EXECUTIVE OFFICE OF THE PRESIDENT AND ADVISORY COUNCIL ON HISTORIC PRESERVATION NEPA AND NHPA: A HANDBOOK FOR INTEGRATING NEPA AND SECTION 106 (MARCH 2013).

Code	Issue	Response
251 (cont.)		Other stakeholders were offered several opportunities to sign the Programmatic Agreement as a concurring party, but some elected not to do so. Concurring party signatures are not required for the Programmatic Agreement to be executed in compliance with the National Historic Preservation Act or the National Environmental Policy Act.
252	**Cultural Resources**	The commenter is inaccurate in her statements related to the status of the Programmatic Agreement. As stated in previous responses, the Programmatic Agreement for the project was executed in 2006 (see Appendix 4-6 on page A674 in Volume II of the Final Environmental Impact Statement) by the signatories, the Federal Highway Administration and the Arizona State Historic Preservation Officer (see Table 4-47 on pages 4-151 through 4-153 of the Final Environmental Impact Statement). For the Programmatic Agreement to be executed, only the signatories and invited signatories need to sign the Programmatic Agreement. Other stakeholders were offered several opportunities to sign the Programmatic Agreement as a concurring party, but some elected not to do so. Concurring party signatures are not required for the Programmatic Agreement to be executed in compliance with the National Historic Preservation Act or the National Environmental Policy Act. The response text included a typo. The statement should have said that the Advisory Council on Historic Preservation "concurred" with the development of the Programmatic Agreement. The letter from the Advisory Council on Historic Preservation confirming their support for development of the Programmatic Agreement can be found on page A267 in Appendix 2-1 of Volume II of the Final Environmental Impact Statement. The Advisory Council on Historic Preservation was invited to be a signatory to the Programmatic Agreement, but declined the invitation.
253	**Cultural Resources**	The Final Environmental Impact Statement on page 2-4 acknowledges that the Gila River Indian Community Council passed Resolution GR-64-96 that strongly opposed any future alignment of the South Mountain Freeway on Gila River Indian Community land. In addition, the comments received from Gila River Indian Community Governor Gregory Mendoza (see letter dated July 11, 2013, on page B38 in Appendix 7, Volume III, of the Final Environmental Impact Statement and letter dated December 15, 2014, on page A24 in this Appendix A) confirm the Gila River Indian Community's position. In a coordinated referendum held in February 2012, and Gila River Indian Community members voted in favor of the no-build option. The environmental impact statement process allows these actions to be taken into account as one of many factors to consider in terms of the National Environmental Policy Act decision making intent to promote a more informed decision with regard to the proposed action.

Code	Comment Document

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COMMENT 9

Response to Final Environmental Impact Statement (FEIS) Section 4(F) Resources

Code	Issue	Response
254		Title page.

Code	Comment Document
255 256 257 258	 **RESPONSE TO FINAL ENVIRONMENTAL IMPACT STATEMENT (FEIS) SECTION 4(F) RESOURCES** In the DEIS, I pointed out that the Section 4(f) recreational trails located on South Mountain were not accurately inventoried and shown. While it is understood that these trails fall outside the half mile area of potential effects, the trails were discounted and not properly evaluated for proximity impacts from the proposed freeway. In a proper Section 4(f) analysis, resources such as parks and trails which can be affected by proximity impacts, such as noise impacts and changes in viewsheds, are typically assessed to determine what the effects will be of the proposed project. This was not conducted in the DEIS nor is it accurately completed in the FEIS. While the FEIS amended the map to show additional trails on South Mountain, it still does not accurately identify and list the trails (specifically the Bursera trail) and it does not correctly evaluate the existing conditions and the use of the Bursera and Pyramid trail. The lack of knowledge and understanding about the trails, the surrounding social and biophysical environment and the user's experience on the trails in the south west portion of South Mountain trail has resulted in a flawed analysis of the proximity impacts of the proposed freeway on the trails. ADOT has failed to conduct a thorough and proper assessment of the Section 4(f) resource in the project area, and has not accurately evaluated the impacts of the freeway on the resource. The following points show where the analysis fails: **1. The FEIS does not properly inventory and include trail information that was omitted from the DEIS: the Pyramid and Bursera trails.** While the Pyramid trail was added to the map on page 5-8 the Bursera trail is not depicted on the map. Instead the revised map depicts the National Trail (Seg.6 of the Maricopa County Regional and Sun Circle Trail) and the Pyramid trail. There is no alignment on the map to show the Bursera trail. The Bursera trail is a separate trail located south of the Segment 6 trail. It is NOT part of the Maricopa County Regional Trail. In fact it is this trail that will be most significantly impacted due to its sensitivities to noise and view shed activities. **2. The FEIS does not accurately represent and describe the environment at the south and west end of the South Mountain Preserve.** The west end of South Mountain Preserve is an area which is secluded, quiet and offers an experience to users that is not seen or experienced on the northern and eastern trails in the preserve. The National trail has a proximity to Phoenix and noise and visual intrusion are commonplace to trail users given the urban environment which surrounds the north side of the mountain. This is not the same for the Bursera trail; which offers a very different experience due to its isolation from the city. The FEIS does not make a distinction between the trail conditions, environment and the users experience with the remainder of the park. Instead it makes a generalized statement about the trail conditions and users groups that represents the north and east side of the trail (the more popular trails in the preserve) but not the Bursera nor the Pyramid trails **3. The ADOT response does not accurately assess the current conditions and use of the trails.** The statement made to B964 in the Citizens Comments and Response Appendix (see Fig. 1): "These trails are typically used for high-intensity recreational activities such as running, hiking and biking, not noise or viewshed sensitive activities." is incorrect. If a site visit had been conducted to analyze the existing conditions on the Bursera or Pyramid trails, the FEIS would have noted that passive and reflective activities are the norm on both of these trails. While biking and running do occur (these users also enjoy the quietness and the viewshed), the trails are very steep and difficult and result in most users being hikers who move at a slower pace and stopping to enjoy the peaceful views and the solitude. Trail users come to enjoy the spectacular views of the Estrella's and far reaching views onto the Gila Indian Reservation. The trail places users on a ridgeline promontory where they are able to have an expansive and peaceful view of the open space below. The location of this ridgeline trail protects users from the noise of the urban environment to the north and east while offering users a contemplative setting.

Code	Issue	Response
255		Introductory comments noted. Responses to specific comments are provided in the following rows.
256	**Section 4(f) and Section 6(f)**	The map and table in Figure 5-5 on pages 5-8 and 5-9 of the Final Environmental Impact Statement include only those trails that would be directly affected by an action alternative. In this case, the Bursera Trail is not included based on its distance from any of the action alternatives. Figure 5-8 on page 5-15 of the Final Environmental Impact Statement presents the prominent resources of the park, including the Bursera Trail in its alignment as shown in the City of Phoenix trail map (see <phoenix.gov/parkssite/Documents/062880.pdf>).
257, 258, 259	**Section 4(f) and Section 6(f)**	Figure 5-8 on page 5-15 of the Final Environmental Impact Statement presents prominent resources of Phoenix South Mountain Park/Preserve (park), including the Bursera Trail in its alignment as shown on a City of Phoenix trail map (see <phoenix.gov/parkssite/Documents/062880.pdf>). The section, *Public Parkland Resources (SMPP) Associated with the South Mountains*, beginning on page 5-14 of the Final Environmental Impact Statement, acknowledges: · the high Section 4(f) value of the park in its entirety as the centerpiece of the Phoenix Sonoran Preserve System · the important contribution of the park's many attributes, like the Bursera Trail, as contributing to the park's value as a Section 4(f) resource—pointing out that the park offers opportunities to over 3 million annual visitors for hiking, bicycling, horseback riding, and interacting with the natural Sonoran Desert adjacent to the metropolitan area, with each park user seeking his or her own benefits from visiting the park The discussion of the park as a Section 4(f) resource recognizes that many prominent features of the park contribute to its value. These include its setting as one of the largest urban parks in the country, its function in the Phoenix Sonoran Preserve System, and many prominent features within the park, including its trails. As noted in the response to a comment on page B964 in Volume III of the Final Environmental Impact Statement, "These trails are typically used for high-intensity recreational activities such as running, hiking, and biking, not noise- or viewshed-sensitive activities." To clarify, amenities such as the park's trail system are not the sole contributors to the park's Section 4(f) value, and trails throughout the park are used for both active and passive activities. The Bursera Trail is located in a lesser-used area of the park. Points along the trail allow some trail users to enjoy expansive views to the south and away from the urban setting to the north. Other permitted uses of the trail include more active activities, such as biking. Some trail users seek peaceful solitude while others, perhaps to a lesser extent, seek physical activity. It is important to note that viewsheds are not contributing attributes to a determination of a resource as being afforded protection under Section 4(f). While direct use of the park (the conversion of approximately 31.3 acres of the park for freeway use) is presented, the text also acknowledges the intrusion of the freeway section that would displace parkland, the proximity of other freeway sections that would alter views from certain park locations (see the *Visual Resources* section beginning on page 4-167 and page 5-14 in the Final Environmental Impact Statement), the introduction of an intensive human-made use into an otherwise passive and natural setting (as evidenced by the remainder of the park to the north and the Gila River Indian Community to the south), and the alteration of biological resources associated with the park's southwestern section.

(Response 257, 258, 259 continues on next page)

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4. The ADOT response does not conduct an accurate analysis of the impact of the freeway on the trails which ARE noise and viewshed sensitive. The Bursera trail follows the ridgeline of the Guadalupe Range which is one of the ridges destroyed by a cut into (the ridge is visible in Figure 2 and 3). While the Bursera Trail ends one mile east of the location where the freeway will be constructed, its position above the end of the Guadalupe Range means that the construction of the freeway into the ridge at the end of the trail will forever destroy the quietness and views that are an important part of the trails passive recreational experience. The proposed freeway would introduce and cause a substantial increase in noise and destroy the immediate and distant views currently experienced on the Bursera Trail. Photos below show the views users have on the Bursera Trail while on the ridge. This viewshed would be significantly and negatively impacted by the proposed freeway on the end of the ridge line. The noise from the construction and subsequent traffic would change the quietness and peacefulness of the Bursera and Pyramid trail experience forever.

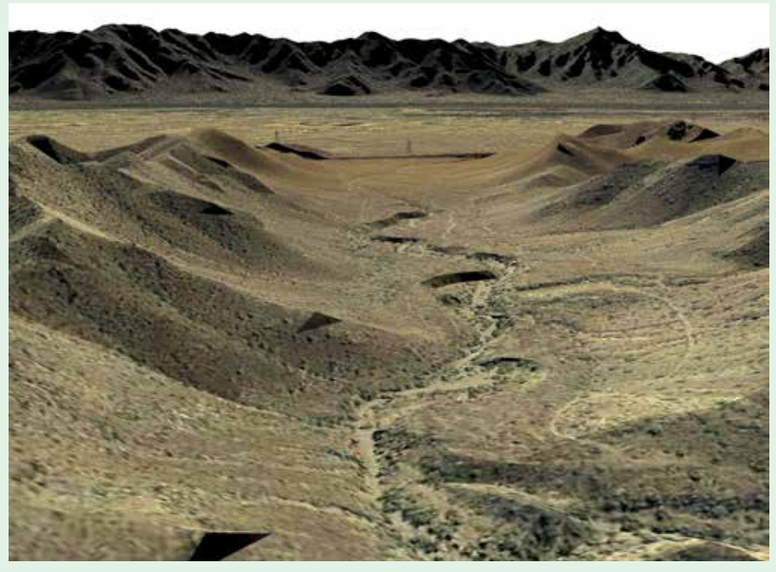
By Section 4(f) guidelines, there are clearly proximity impacts to this Section 4(f) resource, despite the fact that the proposed freeway will not physically use a portion of any of the trails.

The FEIS response demonstrates that a proper and complete assessment of the Section 4(f) resources as well as the impacts of the proposed freeway on the trails has not been conducted. ADOT has not followed Section 4(f) guidance for assessing proximity impacts to a noise and viewshed sensitive resource. ADOT demonstrated that it does not have an understanding of the project area where this 4(f) resource is located nor the ability to accurately assess the real impacts of the freeway on the trails within this public preserve.

The FEIS did not conduct an accurate proximity impacts assessment and therefore it fails in its assessment of the impact to the resource. This needs to be completed.

Code	Issue	Response
1	Section 4(f) and Section 6(f)	South Mountain's newest trails are the Bursera and Pyramid Trails (see Final Environmental Impact Statement page 5-8). The E3 Alternative is approximately 1 mile south of the Pyramid Trail and even farther from the Bursera Trail; thus, it would not affect either trail. The trails have walk-in access from Chandler Boulevard and 19th Avenue, with on-street parking. This walk-in access would be north of and adjacent to the planned extension of Chandler Boulevard and, thus, would not be directly affected. The walk-in access point and the part of the Pyramid Trial at the access point are located adjacent to a residential neighborhood and the City of Phoenix's planned Chandler Boulevard Extension. These trails are typically used for high-intensity recreational activities such as running, hiking, and biking, not noise- or viewshed-sensitive activities. All proposed action alternatives would span existing and proposed trails to avoid impacts. However, during construction (if an action alternative were selected), trails that would be spanned or would be near potential freeway construction would be closed for limited times for safety reasons. Closures would necessitate that trail users detour around construction sites to rejoin the trails farther along their length. According to Phoenix South Mountain Park/Preserve rangers, the Gila Trail—although well-defined—is not a designated trail within the park. That said, the Gila Trail would not be affected by the proposed freeway or by the Chandler Boulevard Extension. The Draft Environmental Impact Statement Appendix A394 contains information directly from the Phoenix General Plan and early coordination with the City of Phoenix Parks Department. The trails in the preserve are exceptions to this statement and were always meant as such. The trails within 1/4 mile of the proposed alternatives were treated separately, as in the case of the Maricopa County Regional Trails System. Should an alternative be selected, the Arizona Department of Transportation and Federal Highway Administration would work closely with the City of Phoenix during final design to ensure the connectivity of trails is maintained, whether they are eligible as Section 4(f) resources or not.

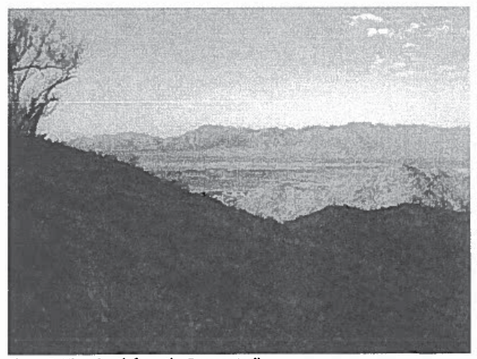
Figure 1. Response from ADOT to citizen comment B964

Code	Issue	Response
257, 258, 259 (cont.)		Sections of the freeway will be visible from certain vantage points along the Bursera Trail. The figure below depicts the scale at which the freeway will likely be viewed. As part of the planning to minimize harm to the park, measures to minimize the effects of altering the views include: · reducing the freeway's footprint from the original 40 acres as proposed in 1988 to the 31.3 acres planned for under the current design · skirting the park as much as possible to avoid bisecting the 16,000-acre park · providing replacement lands to compensate for the use of 31.3 acres of the park · using slope treatments, rock sculpting, native vegetation landscaping and buffering, and native vegetation transplanting to blend the appearance of the freeway and slope cuts with the surrounding natural environment, as feasible · working with park stakeholders through the City of Phoenix in finalizing these improvements  *View from the Bursera Trail southwest across the valley between Main Ridge North and Main Ridge South, with the Sierra Estrella in the background. The freeway passes through the far western end of the ridges and is represented by the dark shading next to the towers for the high-voltage overhead power lines.* The comment infers that the expansive views to the south and west are unencumbered open space. Where the Bursera Trail would be closest to the freeway (at a distance of approximately 4,000 feet), a private land developer has submitted plans to the City of Phoenix to construct over 100 homes in the area immediately south of the park limits between two ridgelines. As of February 2015, the developer had begun developing a road across the mountain ridgeline to the east to access the area for home development. This development, along with others such as the recent expansion of the Vee Quiva Casino on Gila River Indian Community land southwest of the park, illustrate the planned growth that is turning undeveloped lands into urbanizing areas in the Study Area. This

(Response 257, 258, 259 continues on next page)

Code	Comment Document

Code	Issue	Response
257, 258, 259 (cont.)		urbanization is discussed in the section, *Land Use*, in Chapter 4 of the Final Environmental Impact Statement. The freeway will also generate noise that will be audible from certain points along the trail as acknowledged in the Final Environmental Impact Statement; however, based on the distance of the freeway to the closest trail points (for example, the National Trail is 2,000 feet away and the Bursera Trail is 4,000 feet away), noise levels are not likely to be above the noise abatement criteria levels for recreational activities. Trail users located 2,000 feet or more away from the freeway will hear an increased hum, but the decibel levels will not be above noise abatement criteria levels for recreational activities. While noise mitigation was evaluated to minimize harm, the use of mitigation, such as noise barriers, would have little effect for receptors 2,000 feet or more away from the freeway (and at elevated positions). Even if it were shown that noise levels are higher on the trail, noise impacts would be temporary because trail users would be moving along the trail and because only a short portion of the trail is in a direct line to the freeway. Although noise barriers were not feasible in this case, the Arizona Department of Transportation has decided to use quiet pavement on the South Mountain Freeway to minimize noise along the corridor.

Code	Comment Document
260	 Figure 2. View South from the Bursera trail  Figure 3. View west from the Bursera trail. Ridgeline to the right of center would have freeway cutting through it.

Code	Issue	Response
260		Photos reviewed.

Code	Comment Document

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COMMENT 10

Lakewood Community Association's Concerns & Response to FEIS for Loop 202 (South Mountain Freeway) by Lakewood Community Association Board of Directors

Code	Issue	Response
261		Title page.

Code	Comment Document

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LAKEWOOD COMMUNITY ASSOCIATION'S CONCERNS & RESPONSE TO FEIS FOR LOOP 202 (SOUTH MOUNTAIN FREEWAY)

Prepared for

Protect Arizona's Resources and Children (PARC), et al.
Phoenix, Arizona

by
Lakewood Community Association Board of Directors
November 17, 2014

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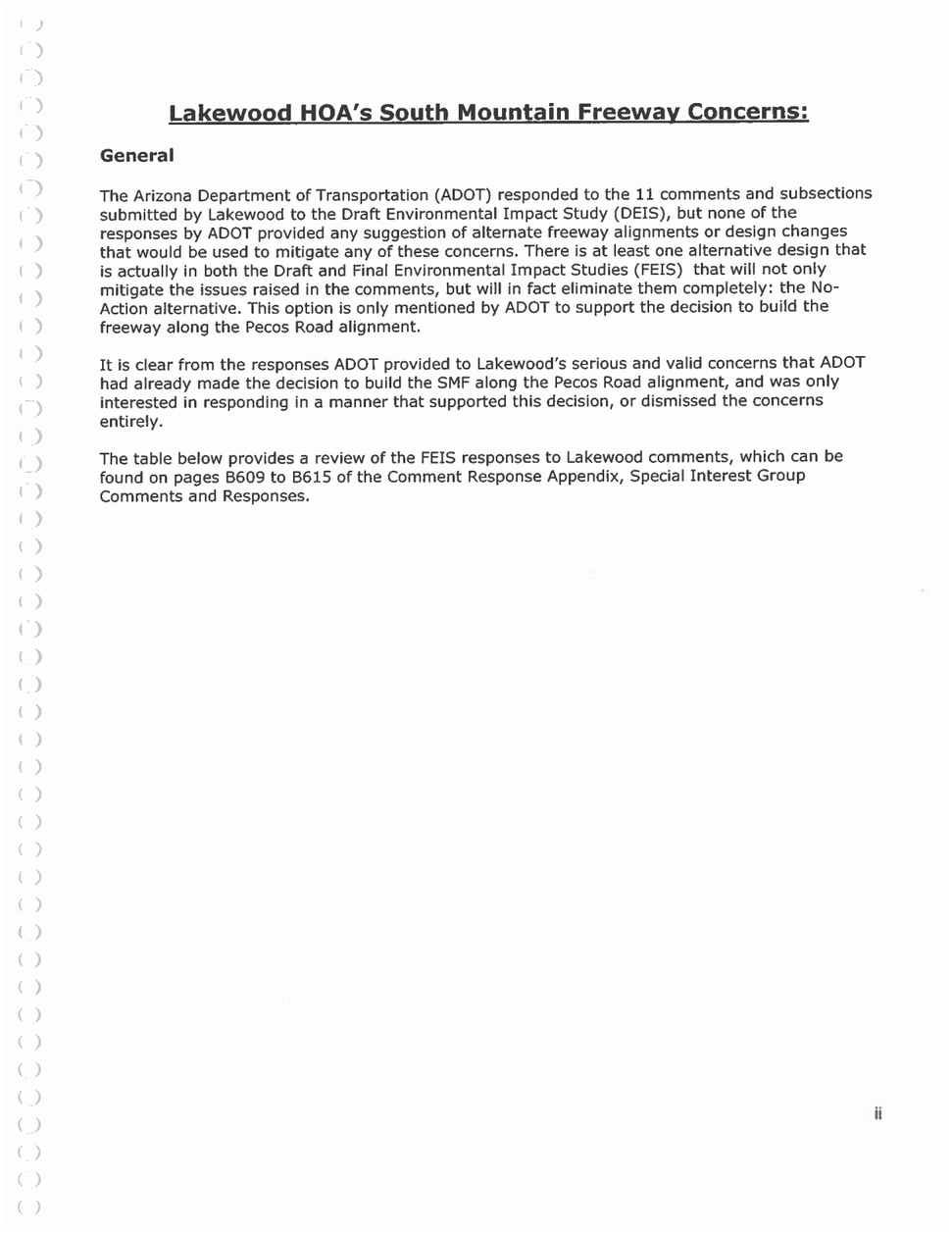
Code	Issue	Response
262		Title page.

Code	Comment Document
263	

Lakewood HOA's South Mountain Freeway Concerns:

General

The Arizona Department of Transportation (ADOT) responded to the 11 comments and subsections submitted by Lakewood to the Draft Environmental Impact Study (DEIS), but none of the responses by ADOT provided any suggestion of alternate freeway alignments or design changes that would be used to mitigate any of these concerns. There is at least one alternative design that is actually in both the Draft and Final Environmental Impact Studies (FEIS) that will not only mitigate the issues raised in the comments, but will in fact eliminate them completely: the No-Action alternative. This option is only mentioned by ADOT to support the decision to build the freeway along the Pecos Road alignment.

It is clear from the responses ADOT provided to Lakewood's serious and valid concerns that ADOT had already made the decision to build the SMF along the Pecos Road alignment, and was only interested in responding in a manner that supported this decision, or dismissed the concerns entirely.

The table below provides a review of the FEIS responses to Lakewood comments, which can be found on pages B609 to B615 of the Comment Response Appendix, Special Interest Group Comments and Responses.

Code	Issue	Response
263	**No-Action Alternative**	In accordance with the National Environmental Policy Act, a range of reasonable action alternatives to carry forward for further analysis was determined through application of multidisciplinary criteria in a logical, step-wise progression. Alternatives were not disposed of or dismissed without a thorough evaluation using the multidisciplinary criteria outlined in the systematic alternatives development and screening process presented in Chapter 3 of the Draft and Final Environmental Impact Statements. This process, which occurred early in the environmental impact statement process, was revisited and validated in the Final Environmental Impact Statement (see page 3-2). As discussed on page 5-18 of the Final Environmental Impact Statement, many alternatives were examined to avoid use of the South Mountains; however, none of these alternatives are feasible and prudent. As stated on page 3-40 of the Final Environmental Impact Statement, the No-Action Alternative would not satisfy the purpose and need of the freeway because it would result in further difficulty in gaining access to adjacent land uses, increased difficulty in gaining access to Interstate and regional freeway systems from the local arterial street network, increased levels of congestion-related impacts, continued degradation in performance of regional freeway-dependent transit services, increased trip times, and higher user costs. Further, the No-Action Alternative would be inconsistent with Maricopa Association of Governments' and local jurisdictions' long-range planning and policies. The No-Action Alternative was included in the Draft and Final Environmental Impact Statements for detailed study to compare impacts of the action alternatives with the consequences of doing nothing (as impacts can result from choosing to do nothing). The impacts associated with the No-Action Alternative are discussed in each section of Chapter 4, *Affected Environment, Environmental Consequences, and Mitigation*, in the Final Environmental Impact Statement. These impacts are also summarized in Table S-3 beginning on page S-10 of the Summary chapter of the Final Environmental Impact Statement. The comparison of traffic operational characteristics between the action alternative and the No-Action Alternative is presented in the Final Environmental Impact Statement, beginning on page 3-27. The analysis shows that the action alternatives are responsive to the project's purpose and need and will: · reduce overall traffic on the arterial street system (see Figures 3-12 and 3-13) · optimize travel on the region's freeway system (see Figure 3-12) · reduce the capacity deficiency to levels better than experienced today (see Figures 1-12 and 3-14) · reduce the duration of level of service E or F conditions in key areas of the region's freeway system (see Figure 3-15) · improve travel times on trips within the Study Area and across the region (see Figure 3-17 and Table 3-8) · provide improved regional mobility for areas projected to experience growth in the next 25 years (see Figures 1-7 and 3-18) When all of this is considered in the realm of travel time savings for motorists in the region, the user benefits total approximately $200 million per year (see Table 4-27). Responses to specific comments follow.

Code	Comment Document

ADEQUACY OF FEIS RESPONSES TO LAKEWOOD HOA COMMENTS

	FEIS Page(s)	Lakewood Item Number	ADOT Response Number	Lakewood Comment on Draft EIS	ADOT Responses to Comments on Draft EIS	Lakewood Comments on Final EIS
264	B610	1	473	**Loss of Water from Community Wells** The lakes are a centerpiece of the Lakewood community, losing the existing groundwater well supply will have a significant negative impact on the entire community, which consists of approximately 2,800 units. With respect to the Foothills Community Association, the DEIS makes the statement that "It is assumed that a new well location could be found that would produce water comparable in quality and quantity to the acquired well, and that no change in the existing groundwater right would result." The Lakewood Community Association has an even greater dependence on water than the Foothills, and the DEIS statement ignores the significant difficulty that was originally encountered in finding a source of water when Lakewood was incorporated. It is unclear whether or not the loss of the existing well even could be replaced, regardless of costs. With the state of Arizona currently restricting or disallowing man-made lakes in new property development, it is also unclear whether or not municipal water could be used as a source. As a result of the loss of the lakes, the property values in Lakewood would be negatively impacted with grave consequences to the entire community.	Because of the public concern expressed during the environmental impact statement process, page 4-100 of the Draft Environmental Impact Statement, focuses on the Foothills Community Association to provide more details on the well acquisition, condition assessment, and replacement process used by the Arizona Department of Transportation. The Arizona Department of Transportation understands, and states on page 4-100 of the Draft Environmental Impact Statement, respectively, that finding a suitable location for a new well in this area may be difficult. Depending on whether an action alternative were to become the Selected Alternative, it may be possible to keep certain wells in their current location, but move the well controls and associated piping to outside of the right-of-way. Such an analysis would be performed later in the design process.	ADOT acknowledges that finding a suitable well location may be difficult. This underscores the need to perform additional analyses prior to adopting a specific build alternative in order to consider the ramifications should a suitable replacement well be impossible to procure. Waiting until later in the design process indicates that ADOT already considers the Pecos Road alignment a fait accompli, and as such does not need to consider alternatives such as the No-Action alternative as possible mitigations to the loss of Lakewood wells. This is a critical concern of the Lakewood community. Given the very real possibility that a suitable replacement water supply cannot be obtained, a detailed analysis should be performed prior to any decision to build in order to determine specific remedies that might be applied, including the No-Action Alternative.
264	B610	1	474	**Loss of Water from Community Wells** In addition to financial impacts, there are environmental as well, migratory birds would no longer have Lakewood as a possible stopping point along their migration route, and the destruction of the natural riparian area south of Pecos will be a detriment to the wildlife in the area.	The project would not adversely affect any of the artificial lakes and ponds along Pecos Road and, therefore, would not affect migratory birds using those water features. There are no natural riparian areas or riparian vegetation adjacent to Pecos Road; the vegetation growing along the drainage ditch on the southern side of Pecos Road would not be removed.	ADOT fails to consider the impact to Lakewood lakes should a suitable water supply not be available. No analysis was performed regarding this possibility, but it is very certain that without a water supply, the Lakewood lakes would fail
265	B610	2	475	**Home Valuation** A. Reduction in property values based health/environmental impacts such as air and noise pollution.	The reader is referred to the section, Social Conditions, beginning on Final Environmental Impact Statement page 4-20, to learn about criteria applied when considering impacts on social conditions and what mitigation is under consideration. Mitigation measures proposed can be found throughout Chapter 4. These have direct application to the reduction of impacts that could affect certain definitions of quality of life.	ADOT refers to a review of the literature, but provides a reference to only one document, from which they only pull information that supports their decision to build the SMF along the Pecos Road alignment. Among the key findings, several suggest a negative impact to home values (items 1-3 are from page iv of the Superstition Freeway case study paper cited, item 4 is from page 7 of
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Code	Issue	Response
264	**Water Resources**	In the specific case of the Lakewood wells, it is anticipated that because the wells are located south of Pecos Road, they may not be directly affected by the freeway and could remain in place. The pipes associated with the water delivery system would need to be protected as they pass under the freeway, but production would not be affected. Page 4-108 of the Final Environmental Impact Statement defines the procedure that the Arizona Department of Transportation will use to replace adversely affected wells, and also identifies the general costs the Arizona Department of Transportation will incur to replace the lost water sources. As noted in this discussion, if it were necessary to provide replacement water instead of a new well, the Arizona Department of Transportation would, in negotiations with the well owner, include the difference between the costs of pumping the well and the costs of the new replacement water source.
265	**Property Values**	The Arizona Department of Transportation compensates only for properties that are within the project right-of-way and are acquired (see Final Environmental Impact Statement page 4-52). A review of the literature revealed few detailed and comprehensive analyses of the relationship between transportation infrastructure and residential property values (Transportation Research Record: Journal of the Transportation Research Board, No. 2174, Transportation Research Board of the National Academies, Washington, D.C., 2010, pp. 138-47; "Residential Property Values and the Build Environment; Empirical Study in the Boston Massachusetts Metropolitan Area"). A local case study from the U.S. Route 60 (Superstition Freeway) found that 1) freeway construction may have an adverse impact on some properties but, in the aggregate, property values tend to increase with freeway development; 2) freeways do not affect all properties' values in the same way (proximity to the freeway was observed to have a negative effect on the value of detached single-family homes in the corridor but a positive effect on multifamily residential developments and most commercial properties); 3) the most important factor in determining negative impact on property values appears to be the level of traffic on any major roads in the proximate area, which implies that regional traffic growth is more significant than the presence of a freeway per se (Journal of the Transportation Research Board, No. 1839, Transportation Research Board of the National Academies, Washington, D.C., 2003, pp. 128-135; "Impact of Highways on Property Values: Case Study of Superstition Freeway Corridor"). The California Department of Transportation has studied this subject for a number of years. Its *Standard Environmental Reference Handbook, Volume 4, Appendix D, Transportation Effects on Property Value* concludes that while a majority of studies found that properties abutting the freeway do not appreciate as rapidly as other properties a little farther away from the freeway, there is a net gain in value in the general vicinity of the freeway attributable to increased accessibility to the regional freeway system. In other words, houses in both the abutting and the nearby zones appreciated more than comparable properties a few miles away from the freeway. Further clarification related to individual aspects identified in the comment follow.
266	**Air Quality, Noise**	The Arizona Department of Transportation compensates only for properties that are within the project right-of-way and are acquired (see Final Environmental Impact Statement page 4-52).

(Response 266 continues on next page)

Code	Comment Document

ADEQUECY OF FEIS RESPONSES TO LAKEWOOD HOA COMMENTS

FEIS Page(s)	Lakewood Item Number	ADOT Response Number	Lakewood Comment on Draft EIS	ADOT Responses to Comments on Draft EIS	Lakewood Comments on Final EIS
				As to property values and the effects of proximity of freeway, numerous studies have been done on the subject and in general, results have varied but with an underlying consensus that many variables contribute to property values. A review of the literature reveals few detailed and comprehensive analyses of the relationship between the transportation infrastructure and residential property values (Transportation Research Record: Journal of the Transportation Research Board, No. 2174, Transportation Research Board of the National Academies, Washington, D.C., 2010, pages 138–47; "Impact of Highways on Property Values: Case Study of the Superstition Freeway Corridor"). A recent study by the California Department of Transportation concluded that freeway facilities did not substantially affect sales prices in residential areas adjacent to the facility. The study concluded that it is the visibility of the freeway that may influence selling price and not distance or noise. As a result, the researchers generally concluded that the more the visibility of a new freeway is reduced, the less it would determine the sales price of homes sold in the area.	the same document): 1. In the US60 corridor, proximity to the freeway was observed to have an adverse effect on the sales prices of detached single-family residences In Lakewood, a substantial fraction of properties are detached single-family homes. 2. The key factor in determining negative impacts of the US60 freeway appeared to be the level of traffic in the corridor. Since the SMF will provide an east-west conduit to bypass the downtown Phoenix area, increased traffic, especially truck traffic, is guaranteed. 3. Most residential units in the study area were constructed after the Superstition Freeway alignment had been determined The study talks about increased property values due to heightened developer interest in vacant land, given freeway access. This scenario does not apply to Lakewood. 4. An important effect of highway development is the traffic generated in the area. This may have a positive effect on local business, and hence employment levels, but may also have negative effects on residential areas. In addition to the oft-cited impacts of noise and pollution, growth in traffic may be associated with increased transience and diminished neighborhood safety (e.g. risk of pedestrian-related crashes) and other declines in neighborhood quality Langley, 1981). If there is generated traffic, the net impact will be greater. As traffic is concentrated in a developed area, more people may be exposed to its effects (Hibbard, et al, 1974). Lakewood is a predominantly residential area, with no open land available for additional commercial growth. As a practical matter, anticipation of freeway construction has already negatively impacted property values in

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266 (cont.)		The results of the air quality and noise analyses are described in the representative sections in the Final Environmental Impact Statement (see page 4-68 for Air Quality and page 4-88 for Noise). Mitigation for noise impacts and construction-related air quality impacts will be provided in accordance with relevant federal and State laws, regulations, and policy. These commitments are confirmed in the Record of Decision in Table 3, beginning on page 38.

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					Lakewood.
					The commenter could not find the California study cited, as it is not referenced by name, and a search on the California Department of Transportation web-site did not locate a document that fit the description in the ADOT response. With no available reference it is impossible to determine if the same type of one-sided analysis of the literature as shown above exists for this document. Under NEPA, ADOT is obligated to make documents/information available to the public. ADOT has failed to meet this obligation.
B610 – B611	2	476	**Home Valuation** B. Substantial reduction in property values if access to water is hindered which could endanger the existence of the Lakes. The whole community is based on the existence and proximity to the Lakes. Current property values are based on a lake community and lifestyle. C. Substantial reduction in property values for lake-front homes if Lakes are compromised by water access.	The procedure identified on page 4-100 of the Draft Environmental Impact Statement, defines the procedure that the Arizona Department of Transportation would use to replace adversely affected wells, and also identifies the general costs the Arizona Department of Transportation would incur to replace the lost water sources. As noted in this discussion, if it were necessary to provide replacement water instead of a new well, the Arizona Department of Transportation would, in negotiations with the well owner, include the difference between the costs of pumping the well and the costs of the new replacement water source. Which of these outcomes would take place would become known during the final design of the Selected Alternative, should an action alternative be selected. Depending on whether an action alternative were to become the Selected Alternative, it may be possible to keep certain wells in their current location, but move the wells controls and associated piping to outside of the right-of-way. Such an analysis would be performed later in the design process.	ADOT fails to provide any analysis of the consequences of the loss of Lakewood lakes on property values. Homeowners with properties that border on a lake without water, essentially a concrete bowl, can certainly expect to see their property values reduced substantially. Without any analysis of the probability of loss of a water source to fill the lakes, it is impossible to make any determination of the impact to property values given this outcome. In addition, the cited reference on the Superstition Freeway from ADOT Response Number 475 contains the following (page 12): 1. Not all highway studies show increases in land values. There has been increasing interest in secondary impacts resulting from highway improvements (Spawn, et al, 1997). There is a growing realization that, under certain conditions or in some locations, there are negative effects from highways on land values. A less desirable effect on property values is created by adverse highway influences which may affect certain locations and/or types of land use. Improvements that result in externalities such as the degradation of water quality or increased safety hazards can effectively decrease property values (HBS, Inc., 1996). Even if we assume, arguendo, that the other basic conclusions in this paper are correct, the paper cited calls out explicitly negative secondary

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267	**Water Resources**	As stated previously, in the specific case of the Lakewood wells, it is anticipated that because the wells are located south of Pecos Road, they may not be directly affected by the freeway and could remain in place. The pipes associated with the water delivery system would need to be protected as they pass under the freeway, but production would not be affected. However, in the extreme situation where avoidance is not possible, page 4-108 of the Final Environmental Impact Statement defines the procedure that the Arizona Department of Transportation will use to replace adversely affected wells, and also identifies the general costs the Arizona Department of Transportation will incur to replace the lost water sources. As noted in this discussion, if it were necessary to provide replacement water instead of a new well, the Arizona Department of Transportation would, in negotiations with the well owner, include the difference between the costs of pumping the well and the costs of the new replacement water source.

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					effects on property values. A specific example they give is degradation of water quality, which is exactly the concern of this item. ADOT fails to address this concern.
B611	2	477	**Home Valuation** D. Ability to resell a Lakewood home would be deleteriously impacted due to air and noise pollution. E. Freeway would disrupt a quiet and clean Lakewood environment which would drive property values lower.	The reader is referred to the text box, "Freeway Awareness," beginning on Draft Environmental Impact Statement page 4-12, and the text box, "If My Property Would Be Affected, Can ADOT Purchase the Land in Advance?", on page 4-43. Property acquisition is governed in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970. This process outlines determination of property values through the acquisition process. Environmental analyses and noise analyses conducted for and documented in the Draft Environmental Impact Statement comply with the Federal Highway Administration's regulations for implementing National Environmental Policy Act at 23 Code of Federal Regulations 771 and for conducting noise analyses at 23 Code of Federal Regulations 772. These issues are addressed in the Draft Environmental Impact Statement. Sensitive receivers for noise and air are already included in the air quality and noise analyses in accordance with State and federal guidance. The air quality assessment for the proposed freeway analyzed impacts from carbon monoxide and particulate matter (PM10) and followed U.S. Environmental Protection Agency guidelines. For mobile source air toxics, the analysis showed that for the Study Area, constructing the freeway would have a marginal effect on annual emissions in 2025 and 2035 (less than a 1 percent difference in total annual emissions between the Preferred Alternative and No-Action Alternative). With the Preferred Alternative in 2035, modeled mobile source air toxics emissions would decrease by 57 percent to more than 90 percent, depending on the pollutant, despite a 47 percent increase in vehicle miles traveled in the Study Area compared with 2012 conditions. The air quality analyses were updated for the Final Environmental Impact Statement, including a quantitative particulate matter (PM10) analysis, and are more fully described beginning on page 4-68 of the Final Environmental Impact Statement. According to the air quality analyses conducted for the proposed freeway, no violations of either the carbon monoxide or particulate matter (PM10) standards were identified, even at worst-case locations along the project corridor. Thus, the carbon monoxide and particulate analyses demonstrated that the proposed freeway would not contribute to any new localized violations, increase the frequency or severity of any	1. The Washington study also estimated the negative effects of proximity on properties nearest to the highway. Sufficient noise data were available to estimate damages for three locations. Despite comparable levels of ambient noise, the negative impacts varied considerably between neighborhoods, from a reduction in property value of 0.2 percent to 1.2 percent per 2.5 dBA above the ambient noise level. The magnitude of the noise impact was also correlated with income, with the most expensive homes experiencing the most detrimental effects. This occurred despite the lowest noise readings in the most affluent location. Although some property values were damaged by noise, the net regional effect on property values was determined to be positive. Even if there are net positive regional effects on property values, which is not at all clear from any analysis provided by ADOT, especially since the Ahwatukee area is largely built out, the cited reference provides conclusions that support the position that Lakewood property values will decrease with the current Pecos Road alignment of the freeway, especially given the proximity of the freeway to Lakewood. In this section, ADOT provides a summary of air quality and noise assessments, but does not address the concern of this comment, which is the impact of property values due to these issues. This is true despite the fact that data from

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Code	Issue	Response
268	**Air Quality, Noise**	The Arizona Department of Transportation compensates only for properties that are within the project right-of-way and are acquired (see Final Environmental Impact Statement page 4-52). The results of the air quality and noise analysis and the proposed mitigation measures to minimize harm from these impacts are described in the representative sections in the Final Environmental Impact Statement (see page 4-68 for *Air Quality* and page 4-88 for *Noise*). Mitigation for each will be provided in accordance with relevant federal and State laws, regulations, and policy. These commitments are confirmed in the Record of Decision in Table 3, beginning on page 38.

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				existing violation or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones, therefore, no mitigation of these effects is required. The noise analysis was also updated for the Final Environmental Impact Statement using most recent Federal Highway Administration and Arizona Department of Transportation policy and traffic projections provided by the Maricopa Association of Governments in August 2013. This updated analysis begins on page 4-88 of the Final Environmental Impact Statement. No substantial differences between the analyses presented in the Draft and the Final Environmental Impact Statements resulted. A review of the literature reveals few detailed and comprehensive analyses of the relationship between the transportation infrastructure and residential property values (Transportation Research Record: Journal of the Transportation Research Board, No. 2174, Transportation Research Board of the National Academies, Washington, D.C., 2010, pages 138–47; "Impact of Highways on Property Values: Case Study of the Superstition Freeway Corridor"). A recent study by the California Department of Transportation concluded that freeway facilities did not substantially affect sales prices in residential areas adjacent to the facility. The study concluded that it is the visibility of the freeway that may influence selling price and not distance or noise. As a result, the researchers generally concluded that the more the visibility of a new freeway is reduced, the less it would determine the sales price of homes sold in the area.	the cited journal article contained conclusions that could be used to decide whether or not mitigations to reduce the effect of noise and air quality issues on property values are warranted. ADOT provides only explanations that support the decision to build the freeway along the Pecos Road alignment, once again suggesting that the decision has already been made.
B612	2	478	**Home Valuation** F. Lost revenue to HOA from Lakewood home displacements would decrease community facilities and amenities causing downward pressure on property values.	Land acquisition and relocation assistance services for the project shall be available to all individuals without discrimination in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (Uniform Act). The Uniform Act provides uniform, fair, and equitable treatment of people whose property is impacted or who are displaced as a result of the project, including those with special needs. Advisory assistance services and compensation practices are described in detail in the Arizona Department of Transportation's Right-of-way Procedures Manual, located at <azdot.gov/business/RightofWay_Properties/booklets-and-manuals>. For further discussion, see page 4-51 of the Final Environmental Impact Statement and Appendix 4-1. For questions on specific properties, contact the Arizona Department of Transportation Right-of-Way Group at (602) 712-7316.	ADOT's response to this comment on the DEIS is not responsive.

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269	**Acquisitions and Relocations**	As stated in the response to the comment on the Draft Environmental Impact Statement, there will be no home displacements in the Lakewood community.

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FEIS Page(s)	Lakewood Item Number	ADOT Response Number	Lakewood Comment on Draft EIS	ADOT Responses to Comments on Draft EIS	Lakewood Comments on Final EIS
				There would be no home displacements in the Lakewood community. For other communities, the compensation to the homeowners' association is dependent on how the subdivision and/or homeowners' association is legally structured.	
B612	2	479	**Home Valuation** G. Freeway would have negative lifestyle impacts which would reduce the value of living in Lakewood and thus cause home values to fall. Lifestyle impacts include reduced access to safe recreation like cycling and roller-blading around community roads due to increased and altered traffic. Freeway noise would also impact outdoor leisure and activities such as community picnics, swimming and outdoor dining.	The reader is referred to the section, Social Conditions, beginning on Draft Environmental Impact Statement page 4-20, to learn about criteria applied when considering impacts on social conditions and what mitigation is under consideration. Mitigation measures proposed can be found throughout Chapter 4. These have direct application to the reduction of impacts that could affect certain definitions of quality of life. As to property values and the effects of proximity of freeway, numerous studies have been done on the subject and, in general, results have varied but with an underlying consensus that many variables contribute to property values. A review of the literature reveals few detailed and comprehensive analyses of the relationship between the transportation infrastructure and residential property values (Transportation Research Record: Journal of the Transportation Research Board, No. 2174, Transportation Research Board of the National Academies, Washington, D.C., 2010, pages 138–47; "Impact of Highways on Property Values: Case Study of the Superstition Freeway Corridor"). A recent study by the California Department of Transportation concluded that freeway facilities did not substantially affect sales prices in residential areas adjacent to the facility. The study concluded that it is the visibility of the freeway that may influence selling price and not distance or noise. As a result, the researchers generally concluded that the more the visibility of a new freeway is reduced, the less it would determine the sales price of homes sold in the area.	ADOT provides the same references as given above in Lakewood Item Number 2, ADOT Response Number 475 and 477; see Lakewood Comments on Final EIS in those sections above. ADOT also references the FEIS section on Social Conditions. From that section, Table 4-9 on page 4-27 of the FEIS states the following under the heading "Effect on Characteristics" [of the Community]: [The freeway] "Would visually and audibly intrude on the less-intensive, passive, residential character of the area. The magnitude of impact would be offset by the fact the alternative would replace the existing four-lane Pecos Road. Pecos Road, although to a lesser degree than would occur with the action alternative, now visually and audibly intrudes on the village. Further, the impact would not be "new" to the village, considering that I-10 and the I-10/SR 202L/Pecos Road system traffic interchange border the village on the east and that either or both are used regularly by village residents." ADOT acknowledges that the freeway will have an impact on social conditions of the community. However, ADOT downplays the difference between the current noise due to Pecos Road, and the increased noise due to the freeway. With no east-west access through Ahwatukee, Pecos Road does not currently carry a substantial number of large trucks. This will change dramatically with the new freeway, as long-distance truckers will use the freeway to bypass the downtown Phoenix area. Truck traffic will substantially alter the traffic characteristics along the Pecos Road alignment, which ADOT fails to consider. In addition, the visible intrusion of the freeway will also be substantially more severe than the

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270	**Community Impacts**	The Arizona Department of Transportation compensates only for properties that are within the project right-of-way and are acquired (see Final Environmental Impact Statement page 4-52). While the E1 Alternative is adjacent to the largely residential areas of Ahwatukee Foothills Village (to the north), a freeway has been planned in this location for many years (see Final Environmental Impact Statement pages 4-17 and 4-21). Where existing residential uses are adjacent to the freeway, noise mitigation will be implemented according to Arizona Department of Transportation policy (see Final Environmental Impact Statement page 4-91 and Table 3 in the Record of Decision, beginning on page 38). The study has considered concepts for parallel multiuse paths; however, the main line of the freeway will not have a bicycle route as part of the design. While not currently included, enhancements such as pedestrian bridges or multiuse paths may be added as a separate project by the City of Phoenix (see page 3-60 of the Final Environmental Impact Statement). The cost and maintenance of these enhancements would be the responsibility of the City of Phoenix. In 2006, the City of Phoenix conducted a traffic circulation study to evaluate the impacts of the freeway on the local street system. The City of Phoenix study found no adverse effects on the local street system from the freeway (see Appendix 3-1 of the Final Environmental Impact Statement). Page 4-170 in the Final Environmental Impact Statement lists measures that should help to avoid, reduce, or mitigate aesthetic impacts. Larger saguaro cacti, mature trees, and large shrubs that would likely survive the transplanting and sitting-in period would help in visually sensitive or critical roadway areas. These commitments are confirmed in the Record of Decision in Table 3, beginning on page 38.

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					current Pecos Road, due to exit/entrance ramps at 40th Street, and an overpass at 32nd Street, both of which will be many feet higher than Pecos Road. ADOT completely fails to respond to our comments regarding lifestyle impacts and recreational opportunities.
B612 – B613	2	480	**Home Valuation** H. Freeway could disrupt the reliable performance of the primary aquifer which supplies Lakewood with its water and thus Lakes. These disruptions could include deviations to surface and ground water flows which feed the aquifer. As this reliable source of water is endangered, the reliability of the Lakes and irrigation of community vegetation would be endangered. This would lead to negative impacts to lake recreation and appearance of the community. Ultimately, the existence of the Lakes themselves could be threatened. This would make Lakewood a much less attractive place to live and substantially decrease home and property valuation.	The procedure identified on page 4-100 of the Draft Environmental Impact Statement, defines the procedure that the Arizona Department of Transportation would use to replace adversely affected wells, and also identifies the general costs the Arizona Department of Transportation would incur to replace the lost water sources. As noted in this discussion, if it were necessary to provide replacement water instead of a new well, the Arizona Department of Transportation would, in negotiations with the well owner, include the difference between the costs of pumping the well and the costs of the new replacement water source. Which of these outcomes would take place would become known during the final design of the Selected Alternative, should an action alternative be selected. Depending on whether an action alternative were to become the Selected Alternative, it may be possible to keep certain wells in their current location, but move the well controls and associated piping to outside of the right-of-way. Such an analysis would be performed later in the design process.	ADOT provided the same comment in this section as in their response 476 above. In this section, ADOT fails to provide an analysis of disruptions in water flow that feed the aquifers that Lakewood uses to replenish lake water. They also do not provide any rationale for why the absence of analysis is warranted. Given the critical nature of well water to the Lakewood community, a thorough analysis of the possible consequences of the freeway should be undertaken prior to the decision to build, and not after the design process has already started.
B613	3	478	**Home Displacement** A. Freeway right-of-way could encroach on existing Lakewood homes requiring destruction of several family homes. B. Local community neighborhoods within Lakewood would see a serious negative impact or cease to exist due to destruction of homes and relocation of neighbors. C. Loss of community integrity and relationships, especially for small children separated from friends who would be forced to move away due to home displacement.	Land acquisition and relocation assistance services for the project shall be available to all individuals without discrimination in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (Uniform Act). The Uniform Act provides uniform, fair, and equitable treatment of people whose property is impacted or who are displaced as a result of the project, including those with special needs. Advisory assistance services and compensation practices are described in detail in the Arizona Department of Transportation's Right-of-way Procedures Manual, located at <azdot.gov/business/RightofWay_Properties/booklets-and-manuals>. For further discussion, see page 4-51 of the Final Environmental Impact Statement and Appendix 4-1. For questions on specific properties, contact the Arizona Department of Transportation Right-of-Way Group at (602) 712-7316.	Not Responsive.

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271	**Water Resources**	As stated previously, in the specific case of the Lakewood wells, it is anticipated that because the wells are located south of Pecos Road, they may not be directly affected by the freeway and could remain in place. The pipes associated with the water delivery system would need to be protected as they pass under the freeway, but production would not be affected. The potential cumulative impacts on groundwater and water availability are described on page 4-186 of the Final Environmental Impact Statement.
272	**Acquisitions and Relocations**	As stated in the response to the comment on the Draft Environmental Impact Statement, there will be no home displacements in the Lakewood community.

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				There would be no home displacements in the Lakewood community. For other communities, the compensation to the homeowners' association is dependent on how the subdivision and/or homeowners' association is legally structured.	
B613	4	481	**Lost Revenue to HOA** A. Direct assessment revenue losses of $350/home per year for each home displaced. B. Further loss of assessments if vacancy rate increases due to image of Lakewood being a less attractive place to live due to deleterious lifestyle impacts of the freeway. C. Vicious cycle of revenue loss leading to reduction of community services leading to further revenue loss (as vacancy rates increase).	The reader is referred to the section, Social Conditions, beginning on page 4-20 of the Draft Environmental Impact Statement, to learn about criteria applied when considering impacts on social conditions and what mitigation is under consideration. Mitigation measures proposed can be found throughout Chapter 4. These have direct application to the reduction of impacts that could affect certain definitions of quality of life. As to property values and the effects of proximity of freeway, numerous studies have been done on the subject and, in general, results have varied but with an underlying consensus that many variables contribute to property values. A review of the literature reveals few detailed and comprehensive analyses of the relationship between the transportation infrastructure and residential property values (Transportation Research Record: Journal of the Transportation Research Board, No. 2174, Transportation Research Board of the National Academies, Washington, D.C., 2010, pages 138–47; "Impact of Highways on Property Values: Case Study of the Superstition Freeway Corridor"). A recent study by the California Department of Transportation concluded that freeway facilities did not substantially affect sales prices in residential areas adjacent to the facility. The study concluded that it is the visibility of the freeway that may influence selling price and not distance or noise. As a result, the researchers generally concluded that the more the visibility of a new freeway is reduced, the less it would determine the sales price of homes sold in the area.	ADOT provides the same references as given above in Lakewood Item Number 2, ADOT Response Number 475, 477, and 479; see Lakewood Comments on Final EIS in those sections above. ADOT provides no information regarding vacancy rate increases due to freeway construction and proximity. It is not clear if data exists on this point, but with no references cited, and no rationale provided for the absence of a response to the specific comment, there can be no informed discussion on the commenter's concerns.
B614	5	482	**Air Quality** A. The air quality cause by increased traffic and trucks will decrease the air quality in our community and pose a serious health risk to the residents of the community.	Air Quality analyses conducted for and documented in the Draft and Final Environmental Impact Statements complies with the Federal Highway Administration's regulations for implementing the National Environmental Policy Act at 23 Code of Federal Regulations 771. These issues are addressed in the Draft and Final Environmental Impact Statements. Sensitive receivers for air are already included in the air quality analyses in accordance with State and federal guidance. The air quality assessment for the proposed freeway analyzed impacts from carbon monoxide and particulate matter (PM10) and followed U.S. Environmental Protection Agency guidelines. The air quality analyses were	ADOT refers to the EPA regulations and acceptable levels, as well as the results of their analyses in the FEIS. Although their analyses do not show any violations of health standards, the response to this comment fails to point out that the ADOT predictions show the No-Action alternative has a lower overall Modeled Mobile Source Air Toxics (MSAT) Emissions versus the Preferred alternative for the Eastern Subarea (FEIS page 4-80, Table 4-35): • No-Action Alternative is 10% lower than the

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273	**Acquisitions and Relocations**	As stated in the response to the comment on the Draft Environmental Impact Statement, there will be no home displacements in the Lakewood community. The Arizona Department of Transportation compensates only for properties that are within the project right-of-way and are acquired (see Final Environmental Impact Statement page 4-52). The homeowner association has legal authority to collect assessments. The references provided were in response to concerns expressed and reveal few clear conclusions related to the relationship between transportation infrastructure and residential vacancy rates.
274	**Air Quality**	As explained in the Final Environmental Impact Statement and response to comments, Federal Highway Administration mobile source air toxics emissions assessments in the agency's National Environmental Policy Act documents are designed to evaluate emissions changes within a study area, including roadway segments where traffic volumes change as a result of the project. The U.S. Environmental Protection Agency's risk estimates for mobile source air toxics pollutants are based on 70-year lifetime exposure. As explained in the Final Environmental Impact Statement and response to comments, it is more likely that a person will be within a study area for 70 years than at a fixed location near the proposed corridor for 70 years. Thus, emissions changes in a study area are a more reliable indicator of potential changes in health risk. Emissions from Interstate 10 and other roadway segments affected by the project are included because people will be exposed to changes in emissions from those roadway segments as well as those from the South Mountain Freeway. The Final Environmental Impact Statement mobile source air toxics analysis covers a study area including all roadways affected by the project, which is standard practice for mobile source air toxics analysis for Federal Highway Administration projects. The analysis also presents results for two smaller subareas, given community interest in those areas. The commenter is correct in stating that if the analysis areas were made even smaller, the changes in emissions would become more pronounced. However, as the analysis areas become smaller, they also become less representative of changes in 70-year exposure (because the estimated changes in emissions would be meaningful only if a person stayed in that smaller area 24 hours a day for 70 years). The most important health finding of the mobile source air toxics analysis is that mobile source air toxic emissions will decline by at least 80 percent between 2012 and 2025 and between 2012 and 2035 under both the Preferred and No-Action Alternatives. This is true for the Eastern Subarea as well as for the larger mobile source air toxics study area.

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				updated for the Final Environmental Impact Statement, including a quantitative particulate matter (PM10) analysis, and are more fully described beginning on page 4-68 of the Final Environmental Impact Statement. According to the air quality analyses conducted for the proposed freeway, no violations of either the carbon monoxide or particulate matter (PM10) standards were identified, even at worst-case locations along the project corridor. Thus, the carbon monoxide and particulate analyses demonstrated that the proposed freeway would not contribute to any new localized violations, increase the frequency or severity of any existing violation or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones. 40 Code of Federal Regulations Section 1500.1(b) also directs the Federal Highway Administration to focus its National Environmental Policy Act analysis and documentation on issues that are truly significant to the action in question. In the context of mobile source air toxics, the Federal Highway Administration must consider whether changes in mobile source air toxics emissions attributable to a project have the potential for significant health risk. Using cancer risk as an example, the U.S. Environmental Protection Agency estimates that the overall risk of cancer in the United States is approximately 330,000 in a million, and that air toxics (from all sources) are responsible for a risk of approximately 50 in a million. In its most recent mobile source air toxics rule-making, the U.S. Environmental Protection Agency estimated mobile source air toxics cancer risk, after implementation of emissions controls, at approximately 5 in a million (or 0.0015 percent of overall cancer risk from any cause). For the South Mountain Freeway project, the mobile source air toxics emissions analysis for the Study Area found little difference in total annual emissions of mobile source air toxics emissions between the Preferred and No-Action Alternatives (less than a 1 percent difference) in 2025 and 2035. With the Preferred Alternative in 2035, modeled mobile source air toxics emissions would decrease by 57 percent to more than 90 percent, depending on the pollutant, despite a 47 percent increase in vehicle miles traveled in the Study Area compared with 2012 conditions (see discussion beginning on page 4-77 of the Final Environmental Impact Statement). Like most highway projects that have received a mobile source air toxics emissions analysis, the South Mountain Freeway project would result in a negligible change to a very small component of overall cancer risk, and this risk	Preferred Alternative in 2025 (total MSAT of 5.99 tons/year vs. 6.69 tons/year). • No-Action Alternative is 16% lower than the Preferred Alternative in 2035 (total MSAT of 5.1 tons/year vs. 6.1 tons/year). The MSAT estimates for the Eastern Subarea shown above were derived from a model that includes all of the South Mountain Park Preserve, and the existing I-10 freeway between Pecos Road and just south of the I-60 interchange (FEIS page 4-79, Figure 4-25). Since much of the area modeled is distant from the proposed South Mountain Freeway, it is reasonable to assume that the actual MSAT difference in the immediate vicinity of Lakewood between the No-Action and Preferred Alternatives will be much higher. Referring to page 4-80, table 4-35, the stated diesel particulate matter toxics for the No-Action Alternative in 2025 is 2.30 tons/year, and the Preferred Alternative is 2.54 tons/year. This represents a difference of only10%. The likely explanation for why the difference is so small is that the Eastern Subarea contains the existing I-10 freeway. For Lakewood, the diesel particulate matter difference will certainly be much higher, considering that the No-Action Alternative would have zero long-distance diesel truck traffic near Lakewood, and the Preferred Alternative would have substantially more truck traffic. ADOT does not address the air quality impact near Lakewood at all. It appears that the stated "less than a 1 percent difference" between the No-Action Alternative and the Preferred Alternative is based upon the total study area, and not the Eastern Subarea that includes Lakewood. Once again ADOT has constructed their arguments to support the decision to build the freeway along the Pecos Road alignment, rather than using the data to guide a discussion of alternatives.

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FEIS Page(s)	Lakewood Item Number	ADOT Response Number	Lakewood Comment on Draft EIS	ADOT Responses to Comments on Draft EIS	Lakewood Comments on Final EIS
				is declining regardless of alternative.	
B615	6	483	**Traffic Flow and Increased Congestion** A. Without access to the freeway at 32nd Street, there will be an increase in traffic flow and congestion between 24th Street and 40th Street within the Lakewood Community boundary.	The determination to not include an interchange at 32nd Street was made in coordination with the City of Phoenix (see Figure 3-8 on page 3-15 of the Final Environmental Impact Statement). The interchange would have displaced over 100 homes and would have been located near an existing high school. In 2006, the City of Phoenix conducted a traffic circulation study to evaluate the impacts of the proposed freeway on the local street system, including the shift of access to Foothills Reserve and Calabrea from Pecos Road to Chandler Boulevard. The City study found no adverse effects on the local street system from the freeway (see Appendix 3-1 in the Final Environmental Impact Statement).	ADOT does not address this concern at all. The cited City of Phoenix study looks only at traffic along Pecos Road, Chandler Boulevard, and the major north/south streets between them (17th Avenue, Desert Foothills Parkway, 24th Street, 32nd Street, and 40th Street). No analysis was performed on surface streets within the Lakewood community. The analysis contains insufficient detail to understand how traffic within Lakewood will be impacted by the freeway. This concern is still relevant and valid to members of the Lakewood community.
B615	7	484	**Increase in Noise from Freeway Traffic** B. The noise level will dramatically increase due to the proximity of the freeway and the increase in traffic and trucks in and around our community.	Noise analyses conducted for and documented in the Draft and Final Environmental Impact Statements comply with the Federal Highway Administration's regulations for implementing the National Environmental Policy Act at 23 Code of Federal Regulations 771 and for conducting noise analyses at 23 Code of Federal Regulations 772. These issues are addressed in the Draft and Final Environmental Impact Statement. Sensitive receivers for noise are already included in the noise analysis in accordance with State and federal guidance. As stated on page 4-62 of the Draft Environmental Impact Statement, over 220 sensitive receivers were evaluated from a traffic noise perspective. All of the receivers represent noise sensitive land uses in proximity to the proposed project; therefore, these receivers would have higher noise levels than the schools more distant from the proposed action. The noise analysis was also updated for the Final Environmental Impact Statement using most recent Federal Highway Administration and Arizona Department of Transportation policy and traffic projections provided by the Maricopa Association of Governments in August 2013. This updated analysis begins on page 4-88 of the Final Environmental Impact Statement. No substantial differences between the analyses presented in the Draft and the Final Environmental Impact Statements resulted.	On page 4-91 of the FEIS, ADOT states: "Noise impacts from the No-Action Alternative would be caused by vehicle traffic along arterial and other area surface streets. Based on projected growth throughout the region, traffic congestion would increase under this alternative, which would reduce travel speeds and thereby reduce traffic noise levels. As such, the No Action Alternative would generally result in lower noise levels at the selected receivers than would any of the action alternatives, but would result in higher noise levels at other locations, such as along arterial streets. Noise from this alternative would be generated by traffic on neighborhood and arterial streets, as well as by nontraffic noise sources and other general neighborhood activity. Therefore, it is difficult to quantify the projected noise levels from the No-Action Alternative." ADOT acknowledges that the No-Action alternative will result in lower noise than the Preferred Alternative. Their statement that "it is difficult to quantify the projected noise levels from the No-Action Alternative," is ridiculous. This is what exists in the area right now, so it is not only not difficult, it is actually quite feasible to measure the existing noise level. This is yet another instance of ADOT constructing their arguments to support the decision to build the freeway along the Pecos

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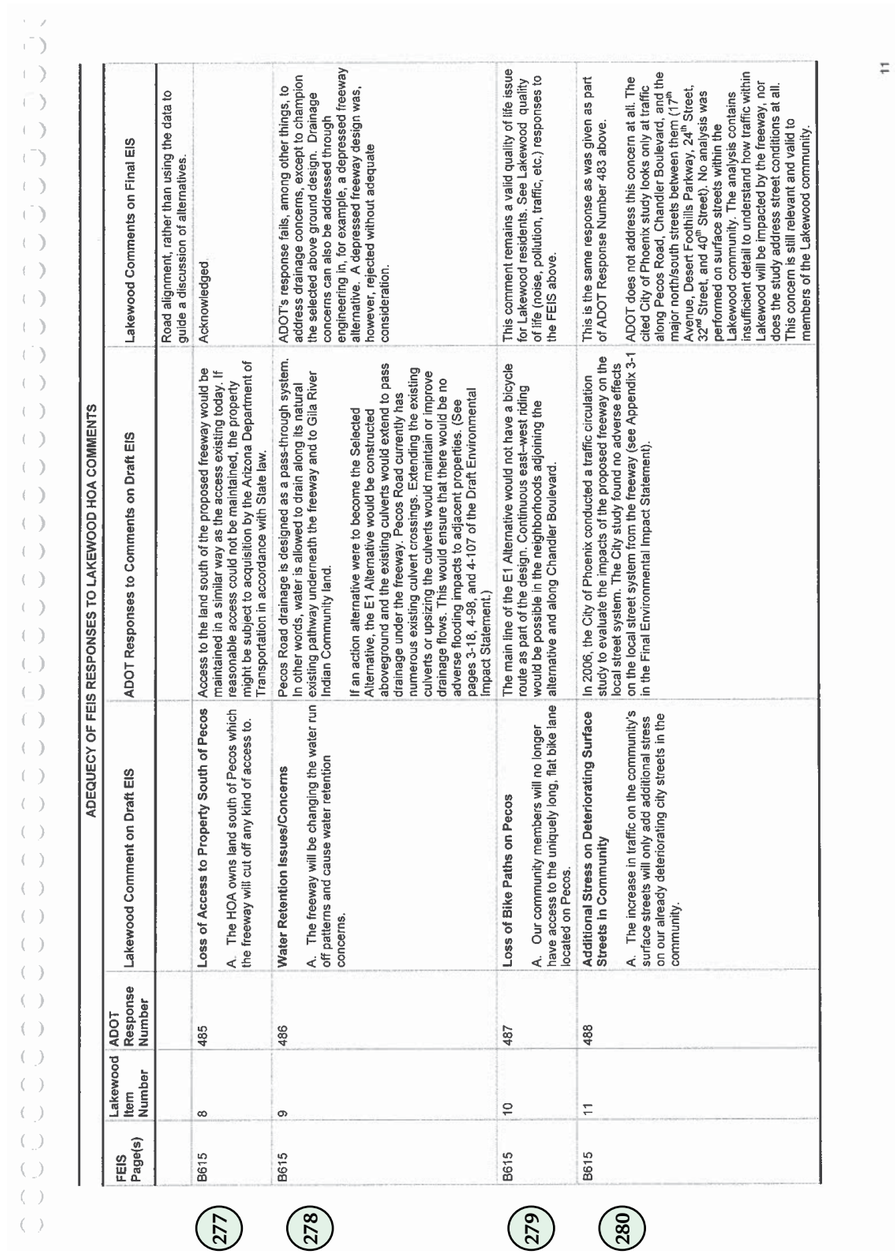
Code	Issue	Response
275	**Traffic**	The Arizona Department of Transportation and Federal Highway Administration position has not changed regarding how the analysis was performed and regarding our responses to similar comments made on the Draft Environmental Impact Statement.
276	**Noise**	The noise analysis conducted for and documented in the Draft and Final Environmental Impact Statements complied with the Federal Highway Administration's regulations for conducting noise analyses in 23 Code of Federal Regulations § 772. The statement made in the Final Environmental Impact Statement related to the No-Action Alternative was generalized for the entire Study Area. The commenter is focused on only the Pecos Road area, which under the No-Action Alternative would continue to experience similar noise levels as today because the area is already relatively built-out.

Code	Comment Document



ADEQUECY OF FEIS RESPONSES TO LAKEWOOD HOA COMMENTS

FEIS Page(s)	Lakewood Item Number	ADOT Response Number	Lakewood Comment on Draft EIS	ADOT Responses to Comments on Draft EIS	Lakewood Comments on Final EIS
					Road alignment, rather than using the data to guide a discussion of alternatives.
B615	8	485	**Loss of Access to Property South of Pecos** A. The HOA owns land south of Pecos which the freeway will cut off any kind of access to.	Access to the land south of the proposed freeway would be maintained in a similar way as the access existing today. If reasonable access could not be maintained, the property might be subject to acquisition by the Arizona Department of Transportation in accordance with State law.	Acknowledged
B615	9	486	**Water Retention Issues/Concerns** A. The freeway will be changing the water run off patterns and cause water retention concerns.	Pecos Road drainage is designed as a pass-through system. In other words, water is allowed to drain along its natural existing pathway underneath the freeway and to Gila River Indian Community land. If an action alternative were to become the Selected Alternative, the E1 Alternative would be constructed aboveground and the existing culverts would extend to pass drainage under the freeway. Pecos Road currently has numerous existing culvert crossings. Extending the existing culverts or upsizing the culverts would maintain or improve drainage flows. This would ensure that there would be no adverse flooding impacts to adjacent properties. (See pages 3-18, 4-98, and 4-107 of the Draft Environmental Impact Statement.)	ADOT's response fails, among other things, to address drainage concerns, except to champion the selected above ground design. Drainage concerns can also be addressed through engineering in, for example, a depressed freeway design was, however, rejected without adequate consideration.
B615	10	487	**Loss of Bike Paths on Pecos** A. Our community members will no longer have access to the uniquely long, flat bike lane located on Pecos.	The main line of the E1 Alternative would not have a bicycle route as part of the design. Continuous east–west riding would be possible in the neighborhoods adjoining the alternative and along Chandler Boulevard.	This comment remains a valid quality of life issue for Lakewood residents. See Lakewood quality of life (noise, pollution, traffic, etc.) responses to the FEIS above.
B615	11	488	**Additional Stress on Deteriorating Surface Streets in Community** A. The increase in traffic on the community's surface streets will only add additional stress on our already deteriorating city streets in the community.	In 2006, the City of Phoenix conducted a traffic circulation study to evaluate the impacts of the proposed freeway on the local street system. The City study found no adverse effects on the local street system from the freeway (see Appendix 3-1 in the Final Environmental Impact Statement).	This is the same response as was given as part of ADOT Response Number 483 above. ADOT does not address this concern at all. The cited City of Phoenix study looks only at traffic along Pecos Road, Chandler Boulevard, and the major north/south streets between them (17th Avenue, Desert Foothills Parkway, 24th Street, 32nd Street, and 40th Street). No analysis was performed on surface streets within the Lakewood community. The analysis contains insufficient detail to understand how traffic within Lakewood will be impacted by the freeway, nor does the study address street conditions at all. This concern is still relevant and valid to members of the Lakewood community.

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Code	Issue	Response
277		Comment noted.
278	**Design**	The original comment did not mention a depressed freeway, only concerns with runoff concerns, which was addressed in the response. As noted beginning on page 3-15 of the Final Environmental Impact Statement, depressing the Pecos Road sections would entail installation of pump stations to drain the main line freeway. A depressed freeway would also need a drainage channel to capture the off-site flows to prevent their entering the freeway. Pump stations were not used because of the high cost of construction and maintenance needed for their operation. The recommended freeway configuration has the E1 Alternative aboveground and the existing culverts extending to pass the drainage under the freeway. Pecos Road currently has numerous existing culvert crossings. Depressing the freeway in this area would eliminate the existing culvert crossings and potentially have adverse flooding impacts on adjacent properties. Extending the existing culverts or upsizing the culverts would maintain or improve drainage flows. This would ensure that there would be no adverse flooding impacts on adjacent properties. To reduce impacts by depressing the freeway in the Eastern Section, the Arizona Department of Transportation would: · need to spend an additional $400 million for right-of-way acquisition and construction · displace an additional 300 residences · maintain additional pump stations and detention basins for the life of the freeway · would still have noise-related impacts requiring mitigation (i.e., noise barriers and their associated costs and visual impacts) Because the below-ground option would result in substantially greater costs and residential displacements, this option was eliminated from further study.
279	**Community Impacts**	The study has considered concepts for parallel multiuse paths; however, the main line of the freeway will not have a bicycle route as part of the design. While not currently included, enhancements such as pedestrian bridges or multiuse paths may be added as a separate project by the City of Phoenix (see page 3-60 of the Final Environmental Impact Statement). The cost and maintenance of these enhancements would be the responsibility of the City of Phoenix.
280	**Traffic**	The Arizona Department of Transportation and Federal Highway Administration position has not changed regarding how the analysis was performed and regarding our responses to similar comments made on the Draft Environmental Impact Statement.

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COMMENT 11

Comments on the FEIS and Specific Responses to Lawlis DEIS comments (FEIS pages B545-B592)

Code	Issue	Response
281		Title page.

Code	Comment Document

Comments on the FEIS and Specific Responses to Lawlis DEIS Comments (FEIS Pages B545 – B592)

Introduction

The FEIS appears to be a blatant attempt to overload the reader with so much verbiage (including a plethora of repeated material) that is it difficult for the average reader to be able to sort through the FEIS to find what is pertinent to a thoughtful analysis and review. Rather than provide enlightenment, especially in those areas where DEIS reviewers expressed repeated concerns, the FEIS provides generalizations, justifications, and faulty modeling.

Overarching issues

In general, the FEIS failed to address specific concerns with respect, interest, or acknowledgement that they may, indeed, be reasons for concern. Continuing denial of concerns is contrary to the intent of the review cycle.

There are a number of areas where analyses are insufficient to support the cost expectations of this proposed action. Expressed concerns make clear that sufficient mitigation may not be possible or the extent of sufficient mitigation may be very costly. Yet the FEIS indicates that detailed analyses will be performed during design to determine how to mitigate these concerns. The putting off of addressing significant issues is but one of the ways the FEIS fails to address specific concerns. The public will bear the cost of overruns caused by insufficient analyses! And the actual cost would likely be close to double the current estimate – based on my experience of typical results from analyses completed after final decisions have been made prematurely on other projects with unacknowledged complexities. 282

With continued concerns being submitted about the SMF becoming a truck bypass, truck traffic is never treated as a legitimate concern in the FEIS even after being pointed out as a major concern in comments to the DEIS [#365, Pp. B552-3]. Trucking companies located near the western path of the proposed freeway would realize shortcuts and/or improved roadway (limited access freeway as opposed to open access roads) with the SMF. Trucks servicing Union Pacific's new "inland port" near Picacho Peak would benefit from use of the SMF as a shortcut. Failure to plan for a freeway on the official "truck bypass" route (providing amenities and limited access) would encourage trucks to use SMF instead as a shortcut. Sun Corridor plans that include lack of funding for a dedicated CANAMEX route could result in SMF becoming the defacto CANAMEX route because of better roadways than the existing official truck bypass. Significant dangers are posed by hazmat trucks traveling next to a highly populated area in Ahwatukee where there is a great potential for sickening or deadly fumes being "trapped" in the community and evacuation from the community would be difficult or impossible because of the geography of the 283

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Code	Issue	Response
282	**Project Costs, Total Cost**	The current level of engineering is used to determine the limits of environmental and construction impacts attributable to the freeway. The location and profile of the freeway are evaluated to minimize potential changes to the freeway as the design level would progress. The current level of engineering is an accepted industry standard for determining impacts. (See Final Environmental Impact Statement sidebar on page 3-40 for more discussion.) As noted on page 3-59 and in the text box on page 3-60 of the Final Environmental Impact Statement, planning-level cost estimates are used in the preparation of environmental documents. Figure 3-36 summarizes overall planning-level cost estimates for each action alternative. These estimates include design, right-of-way acquisition, and construction. Costs will be updated during the design phase and will be reflected in the *Regional Transportation Plan* update process. Updating costs is critical to account for cost fluctuations for materials, land acquisition, and design refinements. From October 28 through October 30, 2014, a formal cost estimate review was conducted in accordance with Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users guidelines. The official review determined a probability and range for the cost of the Selected Alternative in the expected year of expenditure and in current year dollars. The year of expenditure total cost was $1.9 billion. The costs associated with planned mitigation are included in the total project cost.
283	**Trucks, Hazardous Materials**	The Maricopa Association of Governments regional travel demand model projects that truck traffic will represent approximately 10 percent of the total traffic on the freeway. As with all other freeways in the region, trucks will use it for the through-transport of freight, for transport to and from distribution centers, and for transport to support local commerce. Nevertheless, the primary vehicles using the freeway will be automobiles. The purpose of the project is not to create a truck bypass and the freeway will not be part of the CANAMEX corridor. Issues related to a severe accident exist for many portions of the Phoenix metropolitan area. A fast and effective response is critical in the emergency response plans prepared by emergency service providers and is discussed on page 4-166 of the Final Environmental Impact Statement.

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	area. All of the above are legitimate concerns that are summarily dismissed and not properly discussed in the FEIS.
284	ADOT's failure to address truck traffic concerns leads to several other failures in the FEIS. In light of the incentives (noted above) for an abundance of truck traffic, the FEIS fails to consider that the volume of truck traffic on the SMF would be considerably more than the 10% that is characterized as "typical" of area freeways. The FEIS fails to look at the differences in the South Mountain ecosystem with or without truck traffic traveling through the mountain. Further, the FEIS fails to consider either banning all truck traffic or at least banning hazmat traffic on the SMF. The FEIS also fails to consider hazmat dangers as significant when the possibility of a disaster in Ahwatukee is very real. Although the expectation of a hazmat accident is quite small for any particular instant, the danger of a hazmat disaster occurring at some time in the future is too significant to ignore when so many lives are at stake.
285	If, as ADOT claims, truck traffic concerns can be minimized, then truck traffic can be completely eliminated from the determination of a need for the SMF. Then there is no need for the SMF. The SMF solves no problem except for providing a truck shortcut. Discounting truck traffic, other modes of transportation in the South Mountain corridor become far preferable to a freeway. ADOT has failed to seriously consider the use of different modes of transportation to satisfy any true need for "regional" transportation for individuals.
	The FEIS fails to address properly Ahwatukee specifics that relate to the proposed action. This failure includes the introduction of hazmats and the modeling of potential hazmat spills, air quality modeling, noise, crime, and the cost of replacing well water when wells are destroyed by the proposed action.
	The FEIS shows a general failure to respect the South Mountain Park Preserve. A preserve should be vigorously preserved without exception. The one exception built into a 1990 Phoenix law that may permit this freeway through the mountain [South Mountain Preserve Act, 1990] is nothing but a political excuse for ignoring the value of the preserve, and the validity of the applicability of that law could be questioned [#420, P. B582]. The preserve's value is still protected by Section 4(f) of the Transportation Act, and the statement that there is no alternative to a freeway through the mountain is absurd. The South Mountain Park Preserve is not only highly valued natural wilderness to most of the residents of the area, it is also sacred land to many Native American tribes in the area. These concerns cannot be minimized by a stroke of the pen. South Mountain is a natural part of the geography of the area that should be accepted and enjoyed for what it is rather than trying to destroy it by manufacturing excuses for having a freeway in the South Mountain corridor and only there.
	The FEIS shows a general failure to address the many types of costs of the proposed action in realistic terms. Monetary costs are vastly underestimated because so much
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Code	Issue	Response
284	**Trucks, Hazardous Materials**	The Maricopa Association of Governments regional travel demand model projects that truck traffic will represent approximately 10 percent of the total traffic on the freeway. As with all other freeways in the region, trucks will use it for the through-transport of freight, for transport to and from distribution centers, and for transport to support local commerce. Nevertheless, the primary vehicles using the freeway will be automobiles. The analysis of potential freeway impacts, such as noise and air quality, included the influence from truck traffic. The purpose of the project is not to create a truck bypass, and the freeway will not be part of the CANAMEX corridor. Arizona highways, as are most highways across the United States, are open to all kinds of traffic, so long as the cargo being carried is in accordance with U.S. Department of Transportation regulations for the specific type of cargo. The South Mountain Freeway will operate under the same rules as other similar facilities in the state; truck traffic will be permissible (see text box on Final Environmental Impact Statement page 4-166). Issues related to a severe accident exist for many portions of the Phoenix metropolitan area. A fast and effective response is critical in the emergency response plans prepared by emergency service providers and is discussed on page 4-166 of the Final Environmental Impact Statement.
285	**Purpose and Need**	The comparison of traffic operational characteristics between the action alternative and the No-Action Alternative is presented in the Final Environmental Impact Statement, beginning on page 3-27. The analysis shows that the action alternative would: · reduce overall traffic on the arterial street system (see Figures 3-12 and 3-13) · optimize travel on the region's freeway system (see Figure 3-12) · reduce the capacity deficiency to levels better than experienced today (see Figures 1-12 and 3-14) · reduce the duration of level of service E or F conditions in key areas of the region's freeway system (see Figure 3-15) · improve travel times on trips within the Study Area and across the region (see Figure 3-17 and Table 3-8) · provide improved regional mobility for areas projected to experience growth in the next 25 years (see Figures 1-7 and 3-18) When all of this is considered in the realm of travel time savings for motorists in the region, the user benefits approximate $200 million per year (see Table 4-27). The study has considered a variety of transportation modes: transportation system management/transportation demand management, mass transit (commuter rail, light rail, expanded bus service), arterial street improvements, land use controls, new freeways, and a No-Action Alternative. These alternatives alone or in combination would have limited effectiveness in reducing overall traffic congestion in the Study Area and, therefore, would not meet the purpose and need criteria; specifically, they would not adequately address projected capacity and mobility needs of the region.

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area. All of the above are legitimate concerns that are summarily dismissed and not properly discussed in the FEIS.

ADOT's failure to address truck traffic concerns leads to several other failures in the FEIS. In light of the incentives (noted above) for an abundance of truck traffic, the FEIS fails to consider that the volume of truck traffic on the SMF would be considerably more than the 10% that is characterized as "typical" of area freeways. The FEIS fails to look at the differences in the South Mountain ecosystem with or without truck traffic traveling through the mountain. Further, the FEIS fails to consider either banning all truck traffic or at least banning hazmat traffic on the SMF. The FEIS also fails to consider hazmat dangers as significant when the possibility of a disaster in Ahwatukee is very real. Although the expectation of a hazmat accident is quite small for any particular instant, the danger of a hazmat disaster occurring at some time in the future is too significant to ignore when so many lives are at stake.

If, as ADOT claims, truck traffic concerns can be minimized, then truck traffic can be completely eliminated from the determination of a need for the SMF. Then there is no need for the SMF. The SMF solves no problem except for providing a truck shortcut. Discounting truck traffic, other modes of transportation in the South Mountain corridor become far preferable to a freeway. ADOT has failed to seriously consider the use of different modes of transportation to satisfy any true need for "regional" transportation for individuals.

286 The FEIS fails to address properly Ahwatukee specifics that relate to the proposed action. This failure includes the introduction of hazmats and the modeling of potential hazmat spills, air quality modeling, noise, crime, and the cost of replacing well water when wells are destroyed by the proposed action.

287 The FEIS shows a general failure to respect the South Mountain Park Preserve. A preserve should be vigorously preserved without exception. The one exception built into a 1990 Phoenix law that may permit this freeway through the mountain [South Mountain Preserve Act, 1990] is nothing but a political excuse for ignoring the value of the preserve, and the validity of the applicability of that law could be questioned [#420, P. B582]. The preserve's value is still protected by Section 4(f) of the Transportation Act, and the statement that there is no alternative to a freeway through the mountain is absurd. The South Mountain Park Preserve is not only highly valued natural wilderness to most of the residents of the area, it is also sacred land to many Native American tribes in the area. These concerns cannot be minimized by a stroke of the pen. South Mountain is a natural part of the geography of the area that should be accepted and enjoyed for what it is rather than trying to destroy it by manufacturing excuses for having a freeway in the South Mountain corridor and only there.

The FEIS shows a general failure to address the many types of costs of the proposed action in realistic terms. Monetary costs are vastly underestimated because so much

Code	Issue	Response
286	**Community Impacts**	Each of these topics is appropriately analyzed and disclosed in the Final Environmental Impact Statement. The topic of hazardous materials transport can be found on page 4-166, air quality beginning on page 4-68, noise beginning on page 4-88, crime and other community concerns beginning on page 4-20, and wells on page 4-108.
287	**Section 4(f) and Section 6(f)**	If feasible, avoidance of Section 4(f) resources is always the Federal Highway Administration and Arizona Department of Transportation's first option. As summarized in Figure 5-2 on page 5-4 of the Final Environmental Impact Statement, numerous alignment adjustments were made to avoid use of existing and planned Section 4(f) resources. As discussed on page 5-18 of the Final Environmental Impact Statement, many alternatives were examined to avoid the use of the South Mountains; however, none of these alternatives are prudent and feasible. The Department of the Interior reviewed the Final Environmental Impact Statement and commented, "The Department agrees that the South Mountain Park and Preserve (SMPP) is a Land and Water Conservation Fund (LWCF) assisted site that will be directly impacted by the subject project. These documents assess the direct use of park land for freeway purposes to be 31.3 acres. We agree with the conclusions stated. We note that the "*Measures to Minimize Harm*" on the Section 4(f) Statement pages 5-23, 5-24, and 5-25 have annotated a commitment to provide replacement land for the converted park land. The Department concurs with the assessment of the impacts to the LWCF-assisted resource and acknowledges the mitigation commitment." The complete letter can be found in page A5 of this Appendix A.

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288	design has been left to be done after project approval. There is no consideration whatsoever for the lives that would be lost by the creation of a new freeway rather than by using a different mode of transportation for "regional" mobility. There is no serious consideration for the health issues that would be generated by the creation of a new freeway rather than by using a different mode of transportation for "regional" mobility. There is no serious consideration for the property damage inherent in the creation of a new freeway (freeway right-of-way issues as well as property damage caused by freeway traffic) that would not occur if using a different mode of transportation for "regional" mobility. All these failures discussed above point to one conclusion. The FEIS is an excuse for justifying the completion of a predetermined plan for a freeway. A freeway is not needed in the South Mountain corridor. Further, a freeway would be detrimental to the corridor in a number of ways. **Specific Issues** The FEIS provides no compelling case for a freeway to go through the South Mountain corridor. 1. ADOT must consider that the "region" does not just include Maricopa County and that the region is much larger now than it was 30 years ago when this freeway plan was conceived, so travel needs in the southern part of the region are well served by a highway far to the south of the South Mountain Corridor. 2. The part of the region surrounding South Mountain is much in need of alternative forms of transportation to get around the area – such as light rail and more and better bus service. If VMT is still increasing in the study area while decreasing elsewhere across the country [#360, P. B550], that is a good indication that ADOT is not doing its job of making adequate alternative forms of transportation available in the study area. 3. Intended or not, the South Mountain Freeway as currently proposed in the FEIS would be a major truck bypass, and the region does not need a new truck bypass, especially not one in the Phoenix metropolitan area.
289	
288	
289	The FEIS claims that the South Mountain Freeway would ease traffic congestion. Yet Table 3-8 on Page 3-34 shows that improvement in travel times on existing freeways would be no more than a couple of minutes! The claim of improving traffic congestion is misleading at best! Even if one believes that the small travel time improvements shown in Table 3-8 would really occur, they do not justify the expense of building a new freeway! The air quality calculations in the FEIS are woefully inadequate [Pp. 4-68 – 4-74]. ADOT has still not completed the calculations as specified by the EPA in their 3

Code	Issue	Response
288	**Alternatives**	The study has considered a variety of transportation modes: transportation system management/transportation demand management, mass transit (commuter rail, light rail, expanded bus service), arterial street improvements, land use controls, new freeways, and a No-Action Alternative. These alternatives alone or in combination would have limited effectiveness in reducing overall traffic congestion in the Study Area and, therefore, would not meet the purpose and need criteria; specifically, they would not adequately address projected capacity and mobility needs of the region. In accordance with the National Environmental Policy Act, a range of reasonable action alternatives to carry forward for further analysis was determined through application of multidisciplinary criteria in a logical, step-wise progression. Alternatives were not disposed of or dismissed without a thorough evaluation using the multidisciplinary criteria outlined in the systematic alternatives development and screening process presented in Chapter 3 of the Draft and Final Environmental Impact Statements. This process, which occurred early in the environmental impact statement process, was revisited and validated in the Final Environmental Impact Statement (see page 3-2). As discussed on page 5-18 of the Final Environmental Impact Statement, many alternatives were examined to avoid the use of the South Mountains; however, none of these alternatives are prudent and feasible. The Federal Highway Administration has not identified any adverse health impacts associated with the project. For a detailed discussion, refer to the information on air quality impacts on pages 4-75 through 4-85 of the Final Environmental Impact Statement, along with related summary information in the *Responses to Frequently Submitted Public Comments* beginning on page A371 of this Appendix A of the Record of Decision. Land acquisition and relocation assistance services for the project shall be available to all individuals without discrimination in accordance with Title VI of the Civil Rights Act of 1964 and the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, which provides uniform, fair, and equitable treatment of people whose property is affected or who are displaced as a result of the project, including those with special needs. Advisory assistance services and compensation practices are described in detail in the Arizona Department of Transportation's *Right-of-way Procedures Manual*, located at <azdot.gov/business/RightofWay_Properties/booklets-and-manuals>. For further discussion, see page 4-51 of the Final Environmental Impact Statement and Appendix 4-1. For questions on specific properties, contact the Arizona Department of Transportation Right-of-Way Group at (602) 712-7316.
289	**Purpose and Need**	The analysis of the purpose and need is based on today's conditions, not the conditions of 1985. In June 2013, the Maricopa Association of Governments approved new socioeconomic projections for Maricopa County. The purpose and need and analysis of alternatives were updated and reevaluated using these new socioeconomic projections and corresponding projections related to regional traffic. The conclusions reached in the Draft Environmental Impact Statement were validated in the Final Environmental Impact Statement (see Chapter 3, *Alternatives*). The road network for the Maricopa Association of Governments regional travel demand model includes all of Maricopa and Pinal counties as well as small portions of Yavapai and Gila counties. While a road may not be within the Study

(Response 289 continues on next page)

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design has been left to be done after project approval. There is no consideration whatsoever for the lives that would be lost by the creation of a new freeway rather than by using a different mode of transportation for "regional" mobility. There is no serious consideration for the health issues that would be generated by the creation of a new freeway rather than by using a different mode of transportation for "regional" mobility. There is no serious consideration for the property damage inherent in the creation of a new freeway (freeway right-of-way issues as well as property damage caused by freeway traffic) that would not occur if using a different mode of transportation for "regional" mobility.

All these failures discussed above point to one conclusion. The FEIS is an excuse for justifying the completion of a predetermined plan for a freeway.

A freeway is not needed in the South Mountain corridor. Further, a freeway would be detrimental to the corridor in a number of ways.

Specific Issues

The FEIS provides no compelling case for a freeway to go through the South Mountain corridor.

1. ADOT must consider that the "region" does not just include Maricopa County and that the region is much larger now than it was 30 years ago when this freeway plan was conceived, so travel needs in the southern part of the region are well served by a highway far to the south of the South Mountain Corridor.

2. The part of the region surrounding South Mountain is much in need of alternative forms of transportation to get around the area – such as light rail and more and better bus service. If VMT is still increasing in the study area while decreasing elsewhere across the country [#360, P. B550], that is a good indication that ADOT is not doing its job of making adequate alternative forms of transportation available in the study area.

3. Intended or not, the South Mountain Freeway as currently proposed in the FEIS would be a major truck bypass, and the region does not need a new truck bypass, especially not one in the Phoenix metropolitan area.

The FEIS claims that the South Mountain Freeway would ease traffic congestion. Yet Table 3-8 on Page 3-34 shows that improvement in travel times on existing freeways would be no more than a couple of minutes! The claim of improving traffic congestion is misleading at best! Even if one believes that the small travel time improvements shown in Table 3-8 would really occur, they do not justify the expense of building a new freeway!

290 The air quality calculations in the FEIS are woefully inadequate [Pp. 4-68 – 4-74]. ADOT has still not completed the calculations as specified by the EPA in their

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Code	Issue	Response
289 (cont.)		Area for the proposed action, because it is included in the Maricopa Association of Governments travel demand model road network, its influence is considered in the traffic analysis for the proposed action. The South Mountain Freeway will be a commuter corridor, helping to move local traffic. As with all other freeways in the region, trucks will use it for the through-transport of freight, for transport to and from distribution centers, and for transport to support local commerce. Nevertheless, the primary vehicles using the freeway will be automobiles. The comparison of traffic operational characteristics between the action alternative and the No-Action Alternative is presented in the Final Environmental Impact Statement, beginning on page 3-27. The analysis shows that the action alternatives are responsive to the project's purpose and need and will: · reduce overall traffic on the arterial street system (see Figures 3-12 and 3-13) · optimize travel on the region's freeway system (see Figure 3-12) · reduce the capacity deficiency to levels better than experienced today (see Figures 1-12 and 3-14) · reduce the duration of level of service E or F conditions in key areas of the region's freeway system (see Figure 3-15) · improve travel times on trips within the Study Area and across the region (see Figure 3-17 and Table 3-8) · provide improved regional mobility for areas projected to experience growth in the next 25 years (see Figures 1-7 and 3-18) When all of this is considered in the realm of travel time savings for motorists in the region, the user benefits approximate $200 million per year (see Table 4-27).
290	**Air Quality**	Since the release of the Draft Environmental Impact Statement, the Arizona Department of Transportation and the Federal Highway Administration have consulted extensively with the U.S. Environmental Protection Agency on the air quality analytical approach and methods used in the Final Environmental Impact Statement. This consultation has resulted in agreement on the analysis methodologies and the results of these analyses. The carbon monoxide and particulate matter (PM_{10}) analyses demonstrated that the freeway will not contribute to any new localized violations, increase the frequency or severity of any existing violation, or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones.

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comments on the DEIS. No consideration has been given to the effects of the South Mountain air shed on air quality. Claims in the FEIS that the South Mountain Freeway would not degrade air quality are outrageous!

291

PARC has found scientific proof that over 13,000 students in schools within ½ mile of the South Mountain Freeway would be at significant risk for increased respiratory ailments and retarded lung development. PARC has also found that seniors who live within ½ mile of the proposed freeway would be at significantly higher risk of heart attack or death. [#13-#15, Pp. B325-B339] Yet the FEIS does not seriously consider these issues.

The FEIS does not consider the true cost of the South Mountain Freeway. To start with, the FEIS has left so many design questions unanswered [#391, P. B570; #395, P. B571; #409, P. B579; #410-#415, Pp. B580-2; #421-#430, Pp. 583-5] that the monetary cost of the freeway is likely to be closer to $4 billion rather than the $2 billion ADOT has estimated. Further, the FEIS has no discussion of the annual injuries, deaths, and property destruction that could be expected from the freeway, nor the health implications for school children and seniors. The small discussion in the FEIS about potential cancer deaths from elevated levels of certain air pollutants is dismissive, indicating that those particular air pollutants don't count, and the number of increased deaths would be insignificant [#432-#434, Pp. B585-7]. The FEIS approach to human suffering is unacceptable and outrageous!

In building the South Mountain Freeway, wells that feed the lakes in Lakewood and the Foothills and Club West golf courses would be destroyed. The FEIS claims that ADOT will replace these water sources, but at what cost? [#413-#415, Pp. B580-1]

The FEIS does not mention the danger of trucks transporting hazardous materials (hazmats) over the South Mountain Freeway. While the chances that a hazmat spill would occur at any particular time may be small, the chance that a spill would happen SOMETIME is significant, and the public has a need to know about the potential effects of such a spill [#397-#408, Pp. B574-9]. Within the "world's largest cul de sac" of Ahwatukee, evacuation in a timely manner without using the freeway would be difficult if not impossible. And the effects of the South Mountain air shed are likely to trap air borne toxins in the village for a much longer period of time than would be expected in an open area where air blows freely. One of the hazmats expected to be transported on the freeway would be chlorine, a particularly deadly gas that seeps into buildings and cars. So immediate escape would be necessary, for chlorine turns human membranes into hydrochloric acid and makes it difficult, if not impossible, for one to see or breathe. The transport of hazmats through Ahwatukee is unacceptable, so they must be banned from the freeway.

The FEIS proposes blasting through 3 ridges of South Mountain in building the South Mountain Freeway. This land in South Mountain is a part of the South Mountain Park Preserve. As the name suggests, this land is to be preserved! It is also a part of the largest municipal park in the country – a crown jewel of Phoenix!

4

Code	Issue	Response
291	**Children's and Seniors' Health**	As noted throughout the Final Environmental Impact Statement, potential impacts on and subsequent mitigation for human health are disclosed and identified, as inherent in the environmental impact statement process. The Final Environmental Impact Statement incorporates an assessment of the potential impacts of the project on all populations, including children, in the Chapter 4 environmental consequences analyses. A discussion addressing children's health was added to page 4-83 of the Final Environmental Impact Statement. The Final Environmental Impact Statement evaluates Clean Air Act criteria air pollutant concentrations in Maricopa County and the Phoenix area (see pages 4-75 to 4-77). With regard to air quality impacts, the Final Environmental Impact Statement addresses children's and seniors' health impacts within the broader discussion regarding health impacts under the National Ambient Air Quality Standards. Clean Air Act Section 109(b)(1) requires the U.S. Environmental Protection Agency to promulgate primary National Ambient Air Quality Standards at levels that allow an adequate margin of safety and that are requisite to protect the public health. As noted by the U.S. Environmental Protection Agency in its 2013 rulemaking for particulate matter, Clean Air Act Section 109's legislative history demonstrates that the primary standards are "to be set at the maximum permissible ambient air level ... which will protect the health of any [sensitive] group of the population" (78 *Federal Register* 3086 and 3090) (quoting S. Rep. No. 91-1196, 91st Cong., 2 Sess. 10 [1970]) (alterations in original). Accordingly, the Final Environmental Impact Statement's National Ambient Air Quality Standards-based evaluation of criteria air pollutants includes a health-based review of sensitive populations, including children and seniors, given the National Ambient Air Quality Standards inherent consideration of those factors. Furthermore, the National Ambient Air Quality Standards-based assessment ensures adequate consideration of health-based issues as "[t]he requirement that primary standards provide an adequate margin of safety was intended to address uncertainties associated with inconclusive scientific and technical information ... and to protect against hazards that research has not yet identified" (78 *Federal Register* 3090).

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Code	Issue	Response
292	**Water Resources**	Page 4-108 of the Final Environmental Impact Statement provides details on the well acquisition, condition assessment, and replacement process used by the Arizona Department of Transportation. Costs at this point are unknown because an analysis will be performed later in the design process to determine whether it is possible to keep certain wells in their current location while moving the well controls and associated piping to outside of the right-of-way.
293	**Hazardous Materials**	According to 46 *Federal Register* 18026 (March 23, 1981), the environmental impact statement must discuss reasonably foreseeable actions. These are actions that are likely to occur or probable, rather than those that are merely possible. There are no requirements in 23 Code of Federal Regulations Part 771, Environmental Impact and Related Procedures, or in the Federal Highway Administration's Technical Advisory T 6640.8A, Guidance for Preparing and Processing Environmental and Section 4(f) Documents, to address releases of hazardous chemicals resulting from a transportation incident in National Environmental Policy Act documents for transportation projects such as the South Mountain Freeway. Reasonably foreseeable actions are those that are likely to occur or probable, rather than those that are merely possible. Planning for emergency situations will be initiated as the project moves into design.
294	**Section 4(f) and Section 6(f)**	The context and attributes of the South Mountains are described in the Final Environmental Impact Statement. Cultural and religious places of importance, such as the South Mountains, are acknowledged in the Final Environmental Impact Statement in several locations, notably on pages 4-141 and 5-26. As discussed on page 5-18 of the Final Environmental Impact Statement, many alternatives were examined to avoid the use of the South Mountains; however, none of these alternatives are prudent and feasible.

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[#420-#430, Pp. B582-5]Further, South Mountain is sacred land to several of the Native American tribes in Arizona [#437-#439, Pp. B588-9]. No freeway has a need or a right to desecrate this land!

Uncertainties in Traffic Modeling

The FEIS only addresses uncertainties when they provide an excuse for not addressing a concern. Far more attention should be addressed to the uncertainties inherent in the analyses and modeling ADOT is using to justify this action, yet these uncertainties are not addressed at all, even though they were pointed out in the PARC comments to the DEIS (#19-#30, Pp B363-B389). ADOT was non-responsive to these comments by providing some information on how calculations were done in the DEIS and FEIS, yet never discussing the uncertainties involved.

ADOT relies on a number of models to create the forecasts in the FEIS. For example, the TransCAD software is used to model travel demand. According to the sidebar on P 1-5 of the FEIS, inputs to this travel model come from socioeconomic data, population and economic forecasts, anticipated average number of vehicle trips within the region, distribution of transportation modes, capacity of the transportation infrastructure, and future transportation infrastructure. Each of the inputs for

- socioeconomic data,
- population and economic forecasts,
- anticipated average number of vehicle trips within the region, and
- future transportation infrastructure

is an estimate that is subject to uncertainties. Each of these estimates alone has a prediction interval within which the actual value is assumed to lie with a high degree of confidence. Such an interval contains error bounds on the value, yet ADOT assumes that the one given value is correct. This assumption is not only incorrect, but the use of several inputs which each have error bounds compounds the effect of the error inherent in each value used.

Furthermore, as pointed out by Kane in PARC's comments on the DEIS [#20, P. B364], models are extremely sensitive to input data, so even a small error can produce a significantly erroneous result. The compounding of errors in the input data can easily result in very large errors in the outputs, invalidating the modeling results.

MAG's analysis of models and how they are used looks very scientific – until one considers the parts of the science that are omitted. And it is remarkable that ADOT can use completely different census data in the FEIS than it used in the DEIS, yet come up with essentially the exact same results/conclusions.

MAG talks about validating their models and how they use them, but all validation is done with data that is about 2 years old [FEIS, Table 2, P. A587]. It is necessary to

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Code	Issue	Response
295	**Traffic**	The Maricopa Association of Governments is the local government agency responsible for traffic forecasting. The Maricopa Association of Government's travel demand model is a state-of-the-practice model that predicts traffic movement and is used by the Maricopa Association of Governments and Arizona Department of Transportation to determine the need for transportation projects. The model is calibrated to actual, observed traffic conditions and meets an advanced practice guideline by the Federal Highway Administration for similarly sized areas. The Federal Highway Administration and the U.S. Environmental Protection Agency approved the air quality conformity determination that includes the Maricopa Association of Governments regional travel demand model that produced the traffic projections used in the traffic analysis for the project (see page 3-27 of the Draft Environmental Impact Statement). The Final Environmental Impact Statement notes matters of uncertainty throughout the entire document. Examples include study findings in the sections *Air Quality*, *Noise*, *Visual Resources*, *Land Use*, *Displacements and Relocations*, and *Cultural Resources* in Chapter 4. In Chapter 3, *Alternatives*, reference is made to continued monitoring of design and cost to account for needed updates. On page 4-1, in the text box, "*Can the Impacts Change and, If So, How?*", text is presented on how such dynamics are tracked.

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validate models often and do adjustments based on deviations from expected results. However, MAG uses these models to project as far as 25 years into the future. Yet MAG does not discuss the performance of their models in long-range projections, nor do they indicate that they use long-range deviations to adjust their models or modeling methods. Has MAG learned anything since making projections related to the fiasco of the Broadway Curve, for example?

Consider the example of population modeling. The DEIS used 2005 census data. Given this 2005 value of 3,681,025 for the population of Maricopa County, the modeled projection for the population of Maricopa County in 2010 was 4,216,499. Yet the actual population in 2010 was 3,817,117 [#19, Pp. B363, B365]. This is an error of 10.46% in five years, and it is clear that ADOT and MAG are motivated to ensure that any error will be in favor of a higher population because doing so better supports their desire for the proposed action. If this 5-year population error were projected ahead 25 more years, using a simple calculation of 5 times the 10.46% error, the error in a 2035 projection could be as large as 52.3%. That means the FEIS projection for the population of Maricopa County of 5.8 million could actually be off (i.e., too high) by as much as 3 million! This error is similar to error ranges found in other long-range model projections used for traffic modeling.

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> "Austin-calibrated DRAM-EMPAL predictions of residence and work locations are used as inputs to a UTPP-type four-step travel demand model (TDM), and the resulting travel times are fed forward into the future period's land use models. Covariance in inputs (including model parameters and demographic variables) was accommodated through multivariate Monte Carlo sampling of 200 scenarios. Variances in land use and travel predictions were then analyzed, over time, and as a function of input values. Results indicate that output variations were most sensitive to the exponent of the link performance function, the split of trips between peak and off-peak and several trip generation & attraction rates. 20 years in the future, final uncertainty levels (as measured by coefficients of variation) due solely to input and parameter estimation errors are on the order of 38% for total regional peak-period VMT, 45% for peak-period flows, and 50% and 37% for residential and employment densities, respectively. This means that central point estimates of key model outputs are very likely (more than 30%) to fall 38% to 50% below or above the mean value." ["Propagation of Uncertainty in Transportation-Land Use Models: An Investigation of DRAM-EMPAL and UTPP Predictions in Austin, Texas," Sriram Krishnamurthy and Kara Maria Kockelman, *Transportation Research Record No. 1831*, December 2003]

Further, many of the MAG models use outputs from other models as inputs. Since the data input from other models contains a substantial range of error, the outputs from the derived models would have even larger error ranges – at some point, the

Code	Issue	Response
296	**Socioeconomic Projections**	The comment suggests that the projected population of 5.8 million for Maricopa County in 2035 could be off by as much as 3 million, or as low as 2.8 million. This conclusion is not rational, because as noted previously in the comment, the 2010 population was over 3.8 million. While new projections based on the 2010 Census showed a lower projected population and vehicle miles traveled in 2035 than the previous projections, the conclusions reached in the Draft Environmental Impact Statement were validated in the Final Environmental Impact Statement (see Chapter 1, *Purpose and Need*, and Chapter 3, *Alternatives*). The traffic analysis demonstrated that the project is needed today and will continue to be needed into the future (see Final Environmental Impact Statement beginning on page 1-13). The commenter is focused on the change in values from the Draft Environmental Impact Statement to the Final Environmental Impact Statement instead of the more relevant comparison between 2010 and the new 2035 values presented in the Final Environmental Impact Statement. This comparison still shows an increase of almost 2 million people and over 1 million jobs in the next 25 years. The project is needed to serve that growth.

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error ranges would be so large that the projections would be effectively useless. This appears to be the case for the long-range projections in the FEIS.

It would be instructive for MAG to produce its own modeling projections for Maricopa County population from 1985. The expected population for 2010 from that 1985 model could be compared with the actual population of 3,817,117. It is likely that the error between what was projected 25 years earlier and the actual population is substantial. Although models have improved in 25 years, the 25-year projections from models has improved very little.

> "According to the experiences gained with the accuracy of demand forecasting in the transportation sector, covering traffic volumes, spatial traffic distribution, and distribution between transportation modes, there is evidence that demand forecasting – like cost forecasting, and despite all scientific progress in modeling – is a major source of uncertainty and risk in the appraisal of transportation infrastructure projects." [How (In)accurate Are Demand Forecasts in Public Works Projects?: The Case of Transportation," Bent Flyvbjerg, Mette K. Skamris Holm, and Soren L. Buhl, *Journal of the American Planning Association*, Spring 2005]

297 The reasons for the poor accuracy and consequently the high risk associated with transportation projections are the uncertainties in the inputs to the models.

Additionally, for an informed citizen to explore the actual possible purpose and need of the proposed action, s/he would need to know the specific parameters used in the models (although models are usually proprietary, the use of the models is not), including descriptions of the parameters, where the data came from, and assumptions made. Based on descriptions in the FEIS, the models also do not consider the geography of South Mountain, as most inputs are taken from other parts of the Valley rather than Ahwatukee. Only after the use of these models can be scrutinized in much more detail is it possible to establish if there is a purpose and need for the proposed action.

298 What is certain is that the FEIS does not produce convincing modeled values to support its purpose and need for the proposed action. Effectively, there is no justified purpose and need for this action.

Uncertainties in Air Quality Modeling

299 In the first place, the air quality models used by ADOT take some of their inputs from the traffic models [FEIS, Pp. A598-600]. Since we have made clear above that the traffic models produce outputs in which errors are inherent, and it is also clear that long-range projections from these outputs may contain very large errors, any use of this data as inputs to the air quality models makes the air quality models also

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Code	Issue	Response
297	**Socioeconomic Projections**	The new socioeconomic projections approved by the Maricopa Association of Governments in June 2013 were developed in close coordination with the local jurisdictions of Maricopa County. The assumptions related to land use, occupancy levels, residential and commercial development plans, job centers, and other factors are updated regularly and form the basis for the model inputs.
298	**Purpose and Need**	The comparison of traffic operational characteristics between the action alternative and the No-Action Alternative is presented in the Final Environmental Impact Statement, beginning on page 3-27. The analysis shows that the action alternative would: · reduce overall traffic on the arterial street system (see Figures 3-12 and 3-13) · optimize travel on the region's freeway system (see Figure 3-12) · reduce the capacity deficiency to levels better than experienced today (see Figures 1-12 and 3-14) · reduce the duration of level of service E or F conditions in key areas of the region's freeway system (see Figure 3-15) · improve travel times on trips within the Study Area and across the region (see Figure 3-17 and Table 3-8) · provide improved regional mobility for areas projected to experience growth in the next 25 years (see Figures 1-7 and 3-18) When all of this is considered in the realm of travel time savings for motorists in the region, the user benefits approximate $200 million per year (see Table 4-27).
299	**Air Quality**	The Maricopa Association of Governments is the local government agency responsible for traffic forecasting. The Maricopa Association of Government's travel demand model is a state-of-the-practice model that predicts traffic movement and is used by the Maricopa Association of Governments and Arizona Department of Transportation to determine the need for transportation projects. The model is calibrated to actual, observed traffic conditions and meets an advanced practice guideline by the Federal Highway Administration for similarly sized areas. The Federal Highway Administration and the U.S. Environmental Protection Agency approved the air quality conformity determination that includes the Maricopa Association of Governments regional travel demand model that produced the traffic projections used in the traffic analysis for the project (see page 3-27 of the Draft Environmental Impact Statement). The Federal Highway Administration and Arizona Department of Transportation agrees that there are uncertainties associated with air quality modeling, and many of these are discussed in the context of health risk assessment in the Draft and Final Environmental Impact Statements. The uncertainties are reduced somewhat in the context of National Ambient Air Quality Standards modeling, because of the shorter time-frames involved (8 hours for carbon monoxide, and 24 hours for particulate matter [PM_{10}], as compared to 70 years for mobile source air toxic health risk assessments). Nevertheless, the U.S. Environmental Protection Agency's regulations and guidance require use of air quality models to predict carbon monoxide and particulate matter (PM_{10}) concentrations, and to demonstrate compliance with the National Ambient Air Quality Standards. The project's modeling complied with the applicable regulations and guidance.

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produce outputs with inherent errors in proportion with the errors produced by the traffic models. It comes down to the old adage, "garbage in, garbage out"!

Furthermore, the air quality models use a number of assumptions, each of which contains an error component. The accumulation of all the errors inherent in the traffic model outputs and the errors inherent in the assumptions of the air quality model provides a very large and fairly useless prediction interval for the air quality model outputs.

300 To further compound the questionability of the usefulness of the air quality results, ADOT has failed to monitor the air quality characteristics of a major part of the Study Area. The South Mountain air shed provides different air quality behaviors than other areas of the Phoenix metropolitan area. These behaviors need to be understood in order to make proper inferences concerning the air quality of the portion of the South Mountain Freeway that is affected by the South Mountain air shed, which is a very large portion of the SMF.

301 The FEIS also does not provide sufficient data to show the actual air quality calculations used to "prove" the air quality characteristics projected. Lack of sufficient transparency renders any FEIS results null and void for the purposes of an informed review.

Using Models to "Prove" Desired Results

302 Modeling can be a very effective way for people to be able to "see" what is happening in a particular activity as well as a way to project future expectations. However, as with many useful and effective scientific processes, modeling can be used for good purposes or it can be abused. In the FEIS, ADOT has given the reader no reason to believe the modeling was used for anything other than an attempt to justify predetermined conclusions. ADOT has failed to be transparent about the specific input and output values used in the modeling described in the FEIS as the "proof" of the need for the proposed action, the "proof" of an improvement in air quality in the Study Area resulting from the proposed action, etc. Traffic modeling uses many parameters (inputs), and the outputs are very sensitive to small changes in the parameters. Given the errors inherent in the parameter values used, as well as ADOT and MAG's obvious bias in wanting to "justify" the building of the proposed action, ADOT and MAG were able to choose parameter values that produced the desired results. It is likely that these values were "tweaked" until they produced exactly the outputs that ADOT and MAG were looking for. The failure on ADOT's part to be transparent about the modeling processes negates any value they may have had in the FEIS.

Conclusion

303 The analyses contained within the FEIS were performed by organizations with a shown bias or stake in building the South Mountain Freeway. These agencies are

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Code	Issue	Response
300	**Air Quality**	The modeling for the project complied with specific recommendations from the U.S. Environmental Protection Agency for sources of monitored background data and meteorological data. Data from various Maricopa County Air Quality Department monitoring sites were used in the air quality analyses. Siting, operation, and recording information from monitoring sites are the responsibility of the Maricopa County Air Quality Department. See <maricopa.gov/aq/>. The monitoring information used in the air quality analyses is discussed in greater detail in the air quality technical report prepared for the project, which is available on the project Web site at <azdot.gov/southmountainfreeway>. The results of the analyses are summarized in the Final Environmental Impact Statement.
301	**Air Quality**	As indicated in the Final Environmental Impact Statement, the project complies with the transportation conformity regulations at 40 Code of Federal Regulations Part 93 and with the conformity provisions of Section 176(c) of the Clean Air Act. The U.S. Environmental Protection Agency was consulted on the conformity methodology presented in the Final Environmental Impact Statement. Additional details of the air quality analysis can be found in the air quality technical report, which is available to the public (see <azdot.gov/southmountainfreeway>). The actual model files are also publicly available and have been provided to at least one reviewer upon request. Technical reports are designed to support the environmental impact statement, not to be reproduced in the environmental impact statement.
302	**Traffic and Air Quality Modeling**	Since the release of the Draft Environmental Impact Statement, the Arizona Department of Transportation and the Federal Highway Administration have consulted extensively with the U.S. Environmental Protection Agency on the air quality analytical approach and methods used in the Final Environmental Impact Statement. This consultation has resulted in agreement on the analysis methodologies and the results of these analyses. The modeling has been reviewed by national experts in air quality modeling and was found to be consistent with the national state of the practice.
303	**Traffic and Air Quality Modeling**	As noted previously, the models being criticized throughout this comment are the same models that the U.S. Environmental Protection Agency reviewed and subsequently has accepted in regional air quality conformity determinations. Also, the actual traffic model and air quality model files are publicly available and have been provided to at least one reviewer upon request. Based on the U.S. Environmental Protection Agency's previous comments on the Draft and Final Environmental Impact Statements, it is clear this is not an agency with a bias or stake in building the South Mountain Freeway.

(Response 303 continues on next page)

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evidently experienced in producing documents that appear, at least on the surface, to follow NEPA guidelines. Such documents can provide conclusions based on erroneous or insufficient data that is glossed over without proper analysis. At the very least, this FEIS does not provide sufficient or appropriate analyses that could support ADOT's conclusions.

ADOT had the opportunity to correct these deficiencies when they were pointed out in great detail as deficiencies of the DEIS. Because of ADOT's failure to prove a need for the proposed action or to provide sufficient proof of any benefits resulting from the South Mountain Freeway in the FEIS, the only proper conclusion can be the No Action Alternative.

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Code	Issue	Response
303 (cont.)		The comparison of traffic operational characteristics between the action alternative and the No-Action Alternative is presented in the Final Environmental Impact Statement, beginning on page 3-27. The analysis shows that the action alternative would: · reduce overall traffic on the arterial street system (see Figures 3-12 and 3-13) · optimize travel on the region's freeway system (see Figure 3-12) · reduce the capacity deficiency to levels better than experienced today (see Figures 1-12 and 3-14) · reduce the duration of level of service E or F conditions in key areas of the region's freeway system (see Figure 3-15) · improve travel times on trips within the Study Area and across the region (see Figure 3-17 and Table 3-8) · provide improved regional mobility for areas projected to experience growth in the next 25 years (see Figures 1-7 and 3-18) When all of this is considered in the realm of travel time savings for motorists in the region, the user benefits approximate $200 million per year (see Table 4-27).

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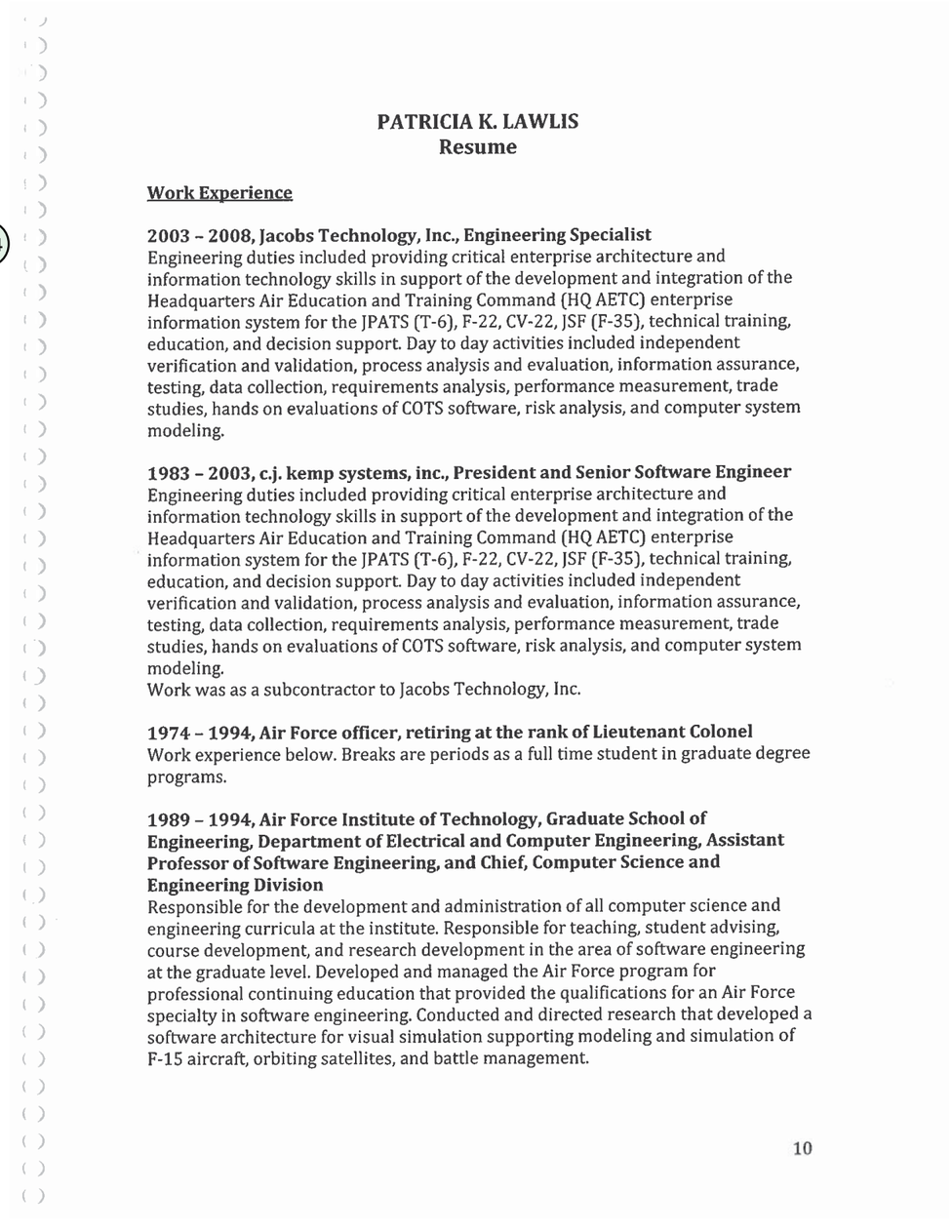
304	

PATRICIA K. LAWLIS
Resume

Work Experience

2003 – 2008, Jacobs Technology, Inc., Engineering Specialist
Engineering duties included providing critical enterprise architecture and information technology skills in support of the development and integration of the Headquarters Air Education and Training Command (HQ AETC) enterprise information system for the JPATS (T-6), F-22, CV-22, JSF (F-35), technical training, education, and decision support. Day to day activities included independent verification and validation, process analysis and evaluation, information assurance, testing, data collection, requirements analysis, performance measurement, trade studies, hands on evaluations of COTS software, risk analysis, and computer system modeling.

1983 – 2003, c.j. kemp systems, inc., President and Senior Software Engineer
Engineering duties included providing critical enterprise architecture and information technology skills in support of the development and integration of the Headquarters Air Education and Training Command (HQ AETC) enterprise information system for the JPATS (T-6), F-22, CV-22, JSF (F-35), technical training, education, and decision support. Day to day activities included independent verification and validation, process analysis and evaluation, information assurance, testing, data collection, requirements analysis, performance measurement, trade studies, hands on evaluations of COTS software, risk analysis, and computer system modeling.
Work was as a subcontractor to Jacobs Technology, Inc.

1974 – 1994, Air Force officer, retiring at the rank of Lieutenant Colonel
Work experience below. Breaks are periods as a full time student in graduate degree programs.

1989 – 1994, Air Force Institute of Technology, Graduate School of Engineering, Department of Electrical and Computer Engineering, Assistant Professor of Software Engineering, and Chief, Computer Science and Engineering Division
Responsible for the development and administration of all computer science and engineering curricula at the institute. Responsible for teaching, student advising, course development, and research development in the area of software engineering at the graduate level. Developed and managed the Air Force program for professional continuing education that provided the qualifications for an Air Force specialty in software engineering. Conducted and directed research that developed a software architecture for visual simulation supporting modeling and simulation of F-15 aircraft, orbiting satellites, and battle management.

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304		Résumé.

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1982 – 1986, Air Force Institute of Technology, Graduate School of Engineering, Department of Mathematics and Computer Science, Instructor in Computer Science
Responsible for teaching, student advising, course development, and research development in the area of computer science at the graduate level.

1977 – 1980, United States Air Forces in Europe (USAFE), Heinrich Hertz Kaserne, Programming Center Birkenfeld, Software Maintainer
Responsible for maintaining the mathematical portions of the software for a North Atlantic Treaty Organization (NATO) air defense radar system in central Europe. Found and corrected errors in the radar registration program for aligning system radar inputs, as well as in the latitude-longitude conversion program. Cut the time required for a sine/cosine calculation to an average of one-third of the original computer time, significantly speeding up critical programs that used on the order of thousands of sine/cosine calls in one calculation.

1974 – 1977, Aerospace Defense Command (ADCOM), NORAD Cheyenne Mountain Complex, Software Requirements Engineer and Database Administrator
Responsible for reviewing system requirements for the satellite tracking portion of the developing NORAD command and control computer system. Maintained the satellite database and developed the procedures for transferring the database of the old satellite tracking system to the new one in near real time.

Education

Ph.D., Software Engineering, Arizona State University – 1989
M.S., Computer Systems, Air Force Institute of Technology – 1982
B.S., Mathematics, East Carolina University – 1967

Awards

- Professor Ezra Kotcher Award for outstanding faculty achievement, Air Force Institute of Technology, 1984
- Mervin E. Gross Award for outstanding scholarship, Air Force Institute of Technology, 1982
- Meritorious Service Medal with 2 oak leaf clusters
- Joint Service Commendation Medal
- Air Force Commendation Medal

Professional Affiliations

- Computer Society of the Institute for Electrical and Electronics Engineers (IEEE)
- Tau Beta Pi

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Publications

- *Battle Control Systems (BCS) Information Assurance (IA) Knowledge Transfer for the Engineering and Technology Acquisition Support Services (ETASS) Contract*, Jacobs, 2008.
- *TMS SDS Integration Requirements Analysis*, Boeing Contract VW311, 2007.
- *Vision and Strategy Document for the SDS Training Management System (TMS)*, Boeing Contract 0315 IRAD, 2005.
- *Flying and Maintenance Training Management System (FMTMS)Capabilities/Requirements and Trade Study*, Boeing Contract 03A113, 2004.
- *Sustainment Data System (SDS) Training Management System (TMS) Services*, Boeing Contract 03A113, 2004.
- *Sustainment Data System (SDS) Training Management System (TMS) Capabilities/Requirements and Scenarios*, Boeing Contract 03A113, 2003.
- "A Formal Process for Evaluating COTS Products," *IEEE Computer*, May 2001.
- *Evaluating Training Management Software Products: A Case Study*, Interservice and Industry Training and Education Conference (I/ITSEC), 2000.
- *Product Evaluations Report for the Technical Training Management System (TTMS) Training and Graduate Evaluation*, Contract GSA GS-35F-4885G, 1999.
- *Trade Study Report for the Technical Training Management System (TTMS) Training and Graduate Evaluation*, Contract GSA GS-35F-4885G, 1999.
- *Education Management System Preliminary Implementation Roadmap*, Contract GSA-10K95-ECD-0001, 1998.
- *AETMS Capstone Requirements Document, and AETMS Mission Need Statement*, Contract GSA GS-35F-4885G, 1998.
- *Life-cycle Cost Estimate for the Education Management System*, Contract GSA-10K95-ECD-0001, 1998.
- *Operational Requirements Document for the Education Management System*, Contract GSA-10K95-ECD-0001, 1998.
- *Single Acquisition Management Plan for the Education Management System*, Contract GSA-10K95-ECD-0001, 1998.

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- *Guidelines for Choosing a Computer Language: Support for the Visionary Organization*, 2nd Edition, Defense Information Systems Agency (DISA), August 1997.
- *Enhancements to the JPATS TIMS Technical Requirements Document for Combat Crew Training Management Unique Requirements,* Contract F08635-91-C-0003, 1997.
- *User's Guide for the JPATS TIMS User Requirements Mapping Tool,* Contract F08635-91-C-0003, 1997.
- *Tactical Aircrew Comparison Report for Combat Crew, F-22, and JPATS Training Management Environments,* Contract F08635-91-C-0003, 1997.
- *AETC Model Comparison Report of Combat Crew, F-22, and JPATS Training Management Environments,* Contract F08635-91-C-0003, 1997.
- *Physical Model of AETC Combat Crew Training Management in Special Operations Forces Aircraft (H-1), H-53, H-60, MC-130),* Contract F08626-96-D-0003, 1997.
- *Physical Model of AETC Combat Crew Training Management in Airlift and Air-Refueling Aircraft (C-5, C-17, C-141, KC-135),* Contract F08626-96-D-0003, 1997.
- "Requirements Analysis for Flying Training Management - An Approach to Employing Object-Oriented Analysis Techniques," *Proceedings of I/ITSEC*, December 1996.
- "A Correlational Study of the CMM and Software Development Performance, *CrossTalk*, September 1995.
- "Computing Curricula vs. Industry Needs: A Mismatch," *Proceedings of the Ninth Annual ASEET Symposium*, June 1995.
- "Engineering Adaptive Kalman Filter Software to Mitigate Lag in Visual Simulation Applications," *Proceedings of the Seventh Annual Software Technology Conference (STC),* April 1995.
- "An Object-Oriented Software Architecture for Large-Scale Reuse," Proceedings of the Sixth Annual Software Technology Conference (STC), April 1994.

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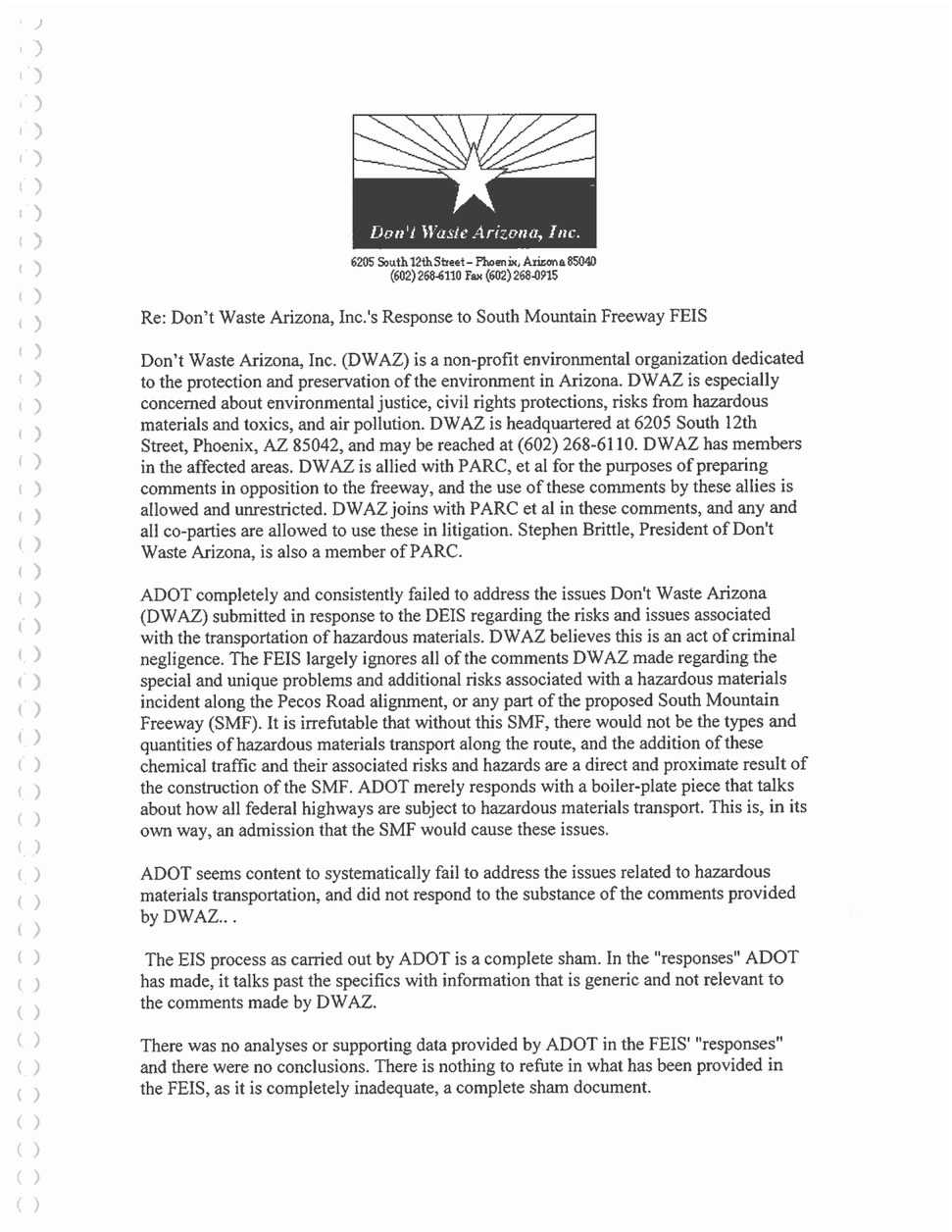
COMMENT 12

Don't Waste Arizona, Inc. Response to South Mountain Freeway FEIS
by
President Stephen M. Brittle

Code	Issue	Response
305		Title page.

Code	Comment Document



Don't Waste Arizona, Inc.

6205 South 12th Street – Phoenix, Arizona 85040
(602) 268-6110 Fax (602) 268-0915

Re: Don't Waste Arizona, Inc.'s Response to South Mountain Freeway FEIS

Don't Waste Arizona, Inc. (DWAZ) is a non-profit environmental organization dedicated to the protection and preservation of the environment in Arizona. DWAZ is especially concerned about environmental justice, civil rights protections, risks from hazardous materials and toxics, and air pollution. DWAZ is headquartered at 6205 South 12th Street, Phoenix, AZ 85042, and may be reached at (602) 268-6110. DWAZ has members in the affected areas. DWAZ is allied with PARC, et al for the purposes of preparing comments in opposition to the freeway, and the use of these comments by these allies is allowed and unrestricted. DWAZ joins with PARC et al in these comments, and any and all co-parties are allowed to use these in litigation. Stephen Brittle, President of Don't Waste Arizona, is also a member of PARC.

306

ADOT completely and consistently failed to address the issues Don't Waste Arizona (DWAZ) submitted in response to the DEIS regarding the risks and issues associated with the transportation of hazardous materials. DWAZ believes this is an act of criminal negligence. The FEIS largely ignores all of the comments DWAZ made regarding the special and unique problems and additional risks associated with a hazardous materials incident along the Pecos Road alignment, or any part of the proposed South Mountain Freeway (SMF). It is irrefutable that without this SMF, there would not be the types and quantities of hazardous materials transport along the route, and the addition of these chemical traffic and their associated risks and hazards are a direct and proximate result of the construction of the SMF. ADOT merely responds with a boiler-plate piece that talks about how all federal highways are subject to hazardous materials transport. This is, in its own way, an admission that the SMF would cause these issues.

ADOT seems content to systematically fail to address the issues related to hazardous materials transportation, and did not respond to the substance of the comments provided by DWAZ.. .

The EIS process as carried out by ADOT is a complete sham. In the "responses" ADOT has made, it talks past the specifics with information that is generic and not relevant to the comments made by DWAZ.

There was no analyses or supporting data provided by ADOT in the FEIS' "responses" and there were no conclusions. There is nothing to refute in what has been provided in the FEIS, as it is completely inadequate, a complete sham document.

Code	Issue	Response
306	**Hazardous Materials**	According to 46 *Federal Register* 18026 (March 23, 1981), the environmental impact statement must discuss reasonably foreseeable actions. These are actions that are likely to occur or probable, rather than those that are merely possible. There are no requirements in 23 Code of Federal Regulations Part 771, Environmental Impact and Related Procedures, or in the Federal Highway Administration's Technical Advisory T 6640.8A, Guidance for Preparing and Processing Environmental and Section 4(f) Documents, to address releases of hazardous chemicals resulting from a transportation incident in National Environmental Policy Act documents for transportation projects such as the South Mountain Freeway. Reasonably foreseeable actions are those that are likely to occur or probable, rather than those that are merely possible. Planning for emergency situations will be initiated as the project moves into design.

Code	Comment Document

Sincerely,

s// Stephen M. Brittle
Stephen M. Brittle
President

Code	Issue	Response

Code	Comment Document

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COMMENT 13

Rebuttal and Responses regarding DEIS for the South Mountain Freeway

by
Hugh S. Mason, Ph.D., Associate Professor,
Arizona State University

Code	Issue	Response
307		Title page.

Code	Comment Document

16833 S. 24th Place
Phoenix, AZ 85048
November 19, 2014

TO: South Mountain Freeway Project
Arizona Department of Transportation (ADOT)
1655 West Jackson Street, MD 126F
Phoenix, Arizona 85007
projects@azdot.gov

I write to rebut your responses to my comments regarding the draft environmental impact study (DEIS) for the South Mountain freeway (SMF), contained in the document "smfeis_vol-3_comment-response_05_citizen-h-to-q.pdf". You have not adequately addressed my concerns, as elaborated in the points below.

308

1. Air Quality (Response 1). Your "Responses to Frequently Submitted Public Comments" stated that the EPA had approved the 2012 Five Percent Plan and found the area in attainment of the 24-hour particulate matter (PM10) standard based on monitoring data for 2010–2012. While you state that the EPA would concur with an exceptional event, the pollution produced by blasting South Mountain does not qualify as an exceptional event, and your response does not assure me that Phoenix will meet those standards for 2014–2016. The construction will pose significant hazards that are not at all adequately discussed here in the FEIS.

309

2. Air Quality (Response 5). Your response describing airflow patterns based on limited monitoring did not address the effects on air quality. The assertion that winds were typically from the west during the warmer hours of the day is cause for concern, since traffic on the proposed route would generate substantial particulate air pollution to the west that would adversely impact the Ahwatukee area.

310

3. Health Effects (Response 6). Your "Responses to Frequently Submitted Public Comments" cites the Health Effects Institute (HEI) Special Report #16 in an unreasonably selective manner, for example, inconclusive data due to "occupational cohorts with high concentration exposures" and the erroneous assertion that animal studies cannot be used to establish the health effects of carcinogens. More accurately, HEI suggested that extrapolation from animal studies to humans is "premature." Nonetheless, animal models are widely used for experiments in which the use of human subjects would be unethical. The National Institutes of Health supports hundreds of animal studies every year, because they can be highly predictive of toxicity in humans. Moreover, your observation that highways are not the only source of air toxics is an evasive technique that refuses to address the problem.

Code	Issue	Response
308	**Air Quality**	The U.S. Environmental Protection Agency agreed with the Federal Highway Administration, Arizona Department of Transportation, and the other interagency consultation partners that construction-related emissions did not need to be analyzed as part of the particulate matter analysis. The section, *Temporary Construction Impacts*, on page 4-173 of the Final Environmental Impact Statement, discusses potential air quality impacts during construction as well as mitigation measures that will be followed during construction. These commitments are confirmed in the Record of Decision in Table 3, beginning on page 38. The air pollution produced during any potential blasting activities would be covered in these mitigation measures.
309	**Air Quality**	The Federal Highway Administration and Arizona Department of Transportation specifically consulted with the U.S. Environmental Protection Agency regarding the meteorological data to use to represent air flow in the project area, and followed the U.S. Environmental Protection Agency's recommendation. As indicated in the Final Environmental Impact Statement, the project complies with the transportation conformity regulations at 40 Code of Federal Regulations Part 93 and with the conformity provisions of Section 176(c) of the Clean Air Act.
310	**Health Effects**	The Federal Highway Administration and Arizona Department of Transportation acknowledge that there is disagreement about the conclusions of Health Effects Institute Special Report #16; however, the summary of this report is presented in the nature of background information, and does not have a bearing on the actual analysis of the project, or the other information provided in the Final Environmental Impact Statement regarding likely mobile source air toxic health impacts. The mobile source air toxics emissions analysis for the project indicates that emissions will decline by over 80 percent in the mobile source air toxics study area irrespective of whether the project is constructed or not, and that the project only makes a very small difference in this decline; the summary of prior health risk assessments for other highway projects indicate that these projects were estimated to have a very small incremental health risk. The information on other sources of exposure to mobile source air toxics pollutants was not provided to diminish the impact of mobile source emissions, but to help illustrate the complexity of meaningfully quantifying the health risk attributable to just one source of these pollutants, a source that most people are likely to be exposed to for only a small portion of their nominal 70-year lifetime at a fixed location adjacent to the roadway.

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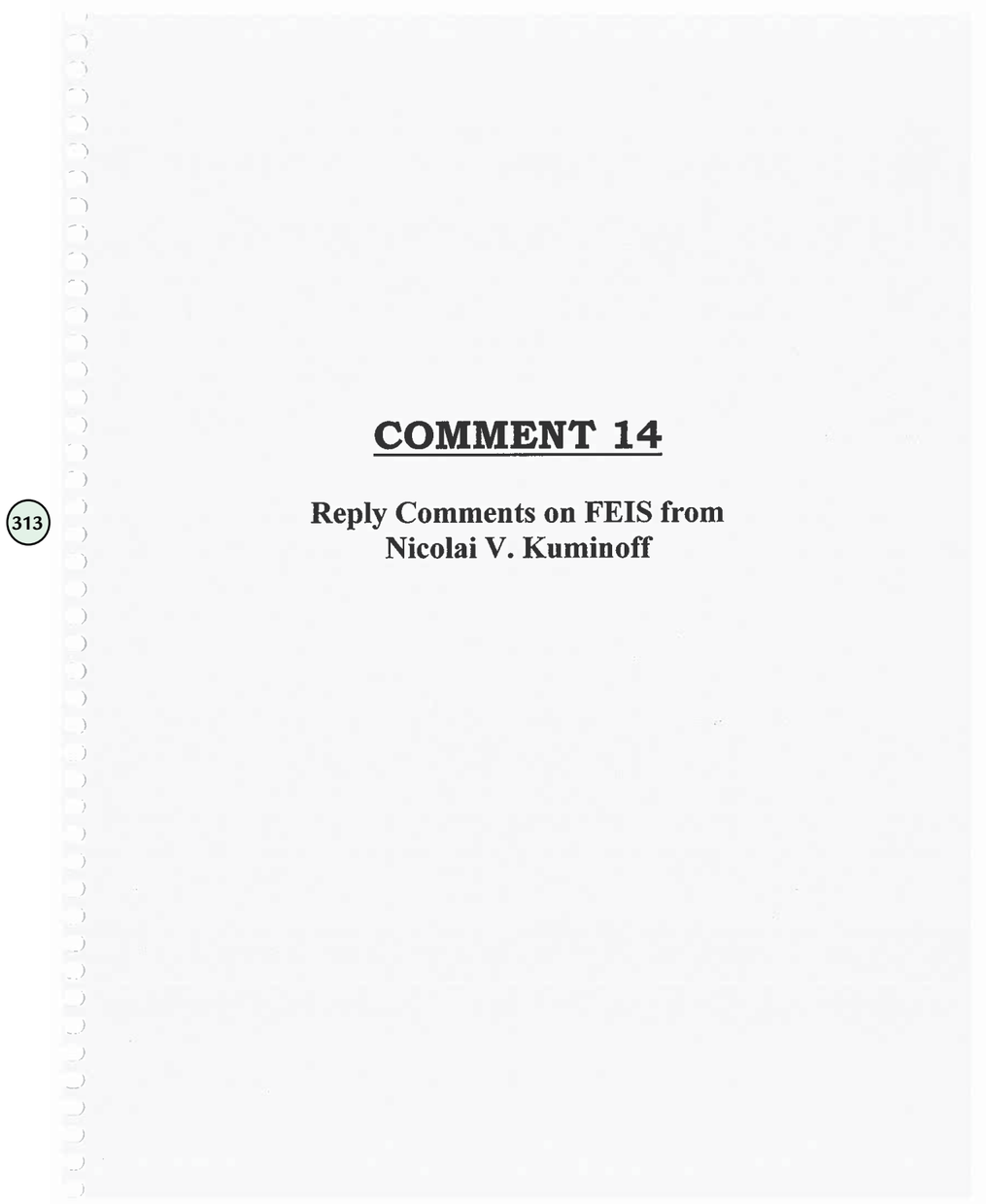
4. Air Quality (Response 12). Your response to my concern about greenhouse gases was trivial. MAG is a regional organization that should be assessing area contributions to regional contaminants like ozone and greenhouse gas emissions. As a practical matter, the impact (whether direct, indirect, and/or cumulative) that the proposed SMF would have on regional air quality should have been analyzed under the National Environmental Policy act (NEPA), and was not. Notwithstanding the foregoing, my earlier point was to also address the larger issue of the need to modify our modes of transportation such that we can minimize automobile traffic, thus limiting greenhouse gas emissions. U.S. Public Interest Research Group (PIRG), in their report issued September 18, 2014, on *Highway Boondoggles* (USPIRG. 2014. *Highway Boondoggles: Wasted Money and America's Transportation Future*) notes that "Americans drive no more now than we did in 2005, and no more on average than we did at the end of Bill Clinton's first term as president. The recent stagnation in driving comes on the heels of a six decade-long Driving Boom that saw steady, rapid increases in driving and congestion … along with the investment of more than $1 trillion of public money in highways." (USPIRG 2014, p. 1). They note that the number of cars and licensed drivers have declined since peaking in the 2000s, with the use of non-driving modes of transportation on the rise. The Arizona PIRG similarly states in their Summer 2014 publication, *Transportation Trends in Arizona 2014* that there has been a 10.5% decline in annual driving miles per capita in Arizona from 2005–2012. The number of registered vehicles in AZ dropped by 0.5% between 2007 and 2012. The ADOT growth projections are inconsistent with these more recent data (AZ PIRG 2014, p.3), and therefore are inaccurate.

I strongly reiterate my opposition and urge the ADOT to abandon the SMF plan and intensify studies of other transportation options that are more environmentally friendly.

Sincerely yours,
Hugh S. Mason, Ph.D.
Associate Professor, Arizona State University

Code	Issue	Response
311	**Climate Change**	Table 4-37 on page 4-86 of the Final Environmental Impact Statement presents the statewide and project greenhouse gas emissions potential, relative to global totals. The climate change/greenhouse gas discussion in the Final Environmental Impact Statement was an attempt to place the likely emissions burden from the project into context with the scope of the global problem. The Federal Highway Administration agrees that climate change is a serious problem, and has many activities underway to address this issue, as described in the Final Environmental Impact Statement and on the Federal Highway Administration's Web site. The energy analysis for the project (see page 4-172 of the Final Environmental Impact Statement) showed that the project would slightly reduce energy consumption, which also implies a slight reduction in greenhouse gas emissions compared to No-Action Alternative.
312	**Traffic Projections**	Two of the key model inputs used to forecast travel demand (see Final Environmental Impact Statement page 3-27) account for the trends identified in the comment and in the Arizona PIRG findings: 1) the anticipated average number of vehicle trips within the region (including those to and from the region's households) on a daily basis (this number is tracked regularly by the Maricopa Association of Governments), and 2) the distribution of transportation modes used by travelers in the Maricopa Association of Governments region (also tracked regularly by the Maricopa Association of Governments). While per capita travel is decreasing or stagnant, total travel is still increasing as the population increases.

Code	Comment Document
313	

Code	Issue	Response
313		Title page.

Code	Comment Document

November 23, 2014

South Mountain Study Team
Arizona Department of Transportation
1655 West Jackson Street, MD 126F
Phoenix, Arizona 85007

RE: Reply Comments on FEIS

Dear South Mountain Study Team,

314 Your responses to my comments on the DEIS were completely inadequate. The FEIS fails to address the concerns I raised. In some cases, you dismissed my comments by referring me to sections of the DEIS that addressed related issues, but did not address my specific concerns. In other cases, you provided boilerplate responses that either completely missed the point of my comment or failed to address my comment in any substantive way.

I am also concerned by the continued inconsistency in your treatment of livability benefits and costs of the Pecos Road alignment. Your responses to my comments on the DEIS assert that significant negative livability impacts can be ignored because they are difficult to model. In contrast, you have gone to great lengths to develop models that predict difficult-to-model benefits. Further, the air quality and transportation models that you use systematically omit key details that could undermine your conclusions, and you claim that any serious effort to address uncertainty in your analysis would be "needless detail".

The EIS process now appears to have been a sham. Your support of the Pecos Road alignment is not supported by credible scientific evidence. You failed to demonstrate that the social benefits of the Pecos Road Alignment outweigh the social costs. Your approach to conducting the EIS made a finding in favor of the Pecos Road alignment a foregone conclusion. I strongly urge you and FHWA to re-start the planning process under new leadership.

I have attached a point-by-point reply to pages B2175-B2183 of the FEIS with the hope of calling attention to the inadequacies in your responses to my comments.

Sincerely,

Nicolai V. Kuminoff

Nicolai V. Kuminoff
kuminoff@gmail.com

Code	Issue	Response
314		Comment noted. Responses to specific comments are provided in the following pages.

Code	Comment Document

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What follows are my original 12 comments on the DEIS and a summary [in bold text] of the inadequacies in your responses found on pages B2175-B2183 of the FEIS.

Comment #1: The DEIS implies that a majority of Maricopa County residents support building the proposed South Mountain Freeway without having any factual basis to support this implication. There are numerous examples of this, especially in the early chapters of the DEIS. One example is the "What do the results of Propositions 300 and 400 tell us" sidebar on page 1-9. The problem is that the proposed South Mountain Freeway was a fairly minor detail in the information provided to voters on the broader regional transportation plan. Voters have never had an opportunity to express their opinions on the South Mountain Freeway separately from other regional transportation projects that were bundled as part of these propositions and were in more immediate need of funding at the time the propositions were presented to voters. Furthermore, neither proposition provided voters with basic details on the South Mountain Freeway such as the expected construction cost and the number of lanes. Furthermore, at the time people voted on proposition 300 the town of Ahwatukee was largely undeveloped. Likewise, the regional transportation plan provided to voters as part of the Proposition 400 election of 2004 failed to anticipate the location, size, use, financial cost and social costs of building the freeway. It is also noteworthy that both votes occurred before the onset of the great recession. The bottom line is that there is no reason to expect that Maricopa county voters would support building the South Mountain Freeway, if they were given the opportunity to vote today. In addition, the question of whether or not voters liked the idea of a new freeway extension 30 years ago or 10 years ago is entirely irrelevant to the question of whether or not it makes sense to build the freeway today.

315

Inadequacies in AZ DOT's response: The response fails to address the substance of my comment. For example, it ignores my comments about the outdated nature of the claimed support for the SMF and the fact that the SMF was bundled as part of the broader transportation plan.

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Code	Issue	Response
315	**Public Involvement**	No public vote was held as part of the Draft Environmental Impact Statement review process. Members of the public were encouraged to participate and submit their comments on the Draft Environmental Impact Statement during the 90-day comment period. Based on the number of supportive comments received during the public comment period for the Draft Environmental Impact Statement, the Arizona Department of Transportation and Federal Highway Administration believe there is still broad regional support for the project. The South Mountain Freeway has been a critical part of the Maricopa Association of Governments' Regional Freeway and Highway System since it was first included in funding approved by Maricopa County voters in 1985. It was also part of the *Regional Transportation Plan* funding passed by Maricopa County voters in 2004 through Proposition 400.

Code	Comment Document
316	Comment #2: The effort to model the effect of the freeway on ambient concentrations of criteria air pollutants is inadequate and misleading. For example, the discussion of carbon monoxide (CO) in section 4-65 of the DEIS points out that impacts were modeled using information from Maricopa County's current network of air quality monitoring sites in the region. Yet the discussion fails to mention that Maricopa County does not have any air quality monitoring sites in the Ahwatukee foothills (http://alert.fcd.maricopa.gov/alert/Google/v3/air.html). This is a serious flaw in the modeling assessment because the prevailing wind patterns and foothills topography will likely cause most of the emissions of pollutants to be blown into pockets of localized air pollution above residential neighborhoods in Ahwatukee in between the freeway and South Mountain Park.
316	**Inadequacies in AZ DOT's response: The response fails to address my main point about there being no air quality monitoring sites in the Ahwatukee foothills.**
317	Comment #3: Failure to model the impact of the freeway on ground level ozone concentrations above residential neighborhoods in Ahwatukee is a serious problem as emissions generated by the freeway may very well exceed national standards for 8-hour ambient ozone concentrations. As noted earlier, the prevailing wind patterns and topography of the region are likely to cause most of the emissions to sit in air pockets above residential neighborhoods in Ahwatukee. Furthermore, these neighborhoods are highly populated by families with young children who are identified by the Environmental Protection Agency as being a "sensitive group" with respect to ozone (Federal Registrar, Vol. 64, No. 149, Wednesday, August 4, 1999, Rules and Regulations).
317	**Inadequacies in AZ DOT's response: AZ DOT chose not to perform a credible analysis of health impacts for the FEIS that would take into account interactions between wind patterns, topography, locations of specific parks and schools, and the historical lack of air quality monitors in Ahwatukee.**
318	Comment #4: The lack of air quality monitors in the Ahwatukee foothills area undermines the credibility of the entire air quality assessment provided in the DEIS. Air quality monitors are

3

Code	Issue	Response
316	**Air Quality**	Since the release of the Draft Environmental Impact Statement, the Arizona Department of Transportation and the Federal Highway Administration have consulted extensively with the U.S. Environmental Protection Agency on the air quality analytical approach and methods used in the Final Environmental Impact Statement, including the locations of monitors to be used in the analysis. This consultation has resulted in agreement on the analysis methodologies and the results of these analyses. While there are no air quality monitors in the Ahwatukee Foothills Village, the Federal Highway Administration followed the U.S. Environmental Protection Agency's recommendations for other monitors to use for purposes of background concentrations and meteorological data. As indicated in the Final Environmental Impact Statement, the project complies with the transportation conformity regulations at 40 Code of Federal Regulations Part 93 and with the conformity provisions of Section 176(c) of the Clean Air Act. The U.S. Environmental Protection Agency was consulted on the conformity methodology presented in the Final Environmental Impact Statement.
317	**Health Effects**	Ozone is a regional pollutant, and under the Clean Air Act conformity requirements, ozone precursor emissions are addressed at the regional level through emissions analysis of the Maricopa Association of Government's long range transportation plan. As long as projects are included in a conforming plan, as is the case for the South Mountain Freeway, then they are considered to have complied with the Clean Air Act requirements applicable to ozone. Analysis of the alternatives for National Environmental Policy Act purposes is not necessary, because any alternative would have to meet this same conformity test in order to proceed (the Arizona Department of Transportation and Federal Highway Administration could not approve any alternative that did not meet regional conformity requirements for demonstrating compliance with the ozone National Ambient Air Quality Standards). The question of whether one alternative is "better" than another from an ozone standpoint is moot, because all alternatives are required to be consistent with attainment of the ozone standard.
318	**Air Quality**	Since the release of the Draft Environmental Impact Statement, the Arizona Department of Transportation and the Federal Highway Administration have consulted extensively with the U.S. Environmental Protection Agency on the air quality analytical approach and methods used in the Final Environmental Impact Statement, including the locations of monitors to be used in the analysis. This consultation has resulted in agreement on the analysis methodologies and the results of these analyses. While there are no air quality monitors in the Ahwatukee Foothills Village, the Federal Highway Administration followed the U.S. Environmental Protection Agency's recommendations for other monitors to use for purposes of background concentrations and meteorological data. As indicated in the Final Environmental Impact Statement, the project complies with the transportation conformity regulations at 40 Code of Federal Regulations Part 93 and with the conformity provisions of Section 176(c) of the Clean Air Act. The U.S. Environmental Protection Agency was consulted on the conformity methodology presented in the Final Environmental Impact Statement.

Code	Comment Document

needed to inform the assessment of potential effects of the freeway on air quality. The current assessment does not make a serious attempt to model air quality impacts in Ahwatukee, which contains the neighborhoods that will experience the largest negative effects of increased air pollution generated by the freeway.

318 **Inadequacies in AZ DOT's response: My comment was ignored. AZ DOT basically says that the lack of air quality monitors and credible data on air quality in the Ahwatukee area that will be most negatively affected by the freeway is not their problem. This type of response undermines the credibility of AZ DOT's analysis.**

319 Comment #5: The DEIS's overall conclusion that building the freeway will not cause an increase in violations of federal ambient air quality standards is misleading. This conclusion simply exploits the current placement of air quality monitors. By providing an incentive for truckers and non-local drivers to avoid traveling through central Phoneix, the South Mountain freeway will divert air pollution away from the areas that have air quality monitors and into areas that do not have air quality monitors, such as the Ahwatukee foothills. Ambient air quality will surely worsen in Ahwatukee and may very well violate federal standards for the criteria pollutants. Of course this will not cause any violations if there are no air quality monitors to measure the violations. This highlights the need for a more serious assessment of air pollution impacts from the proposed freeway, and it also highlights the need to place air quality monitors at several locations in the Ahwatukee foothills.

319 **Inadequacies in AZ DOT's response: The response fails to provide any specific description of the projected spatial changes in ambient air pollution levels or how violations would occur if monitors were located in the Ahwatukee foothills area.**

320 Comment #6: Pages 4-69 and 4-70 provide a deeply flawed rationale for ignoring the impact of the freeway on human health outcomes. The DEIS claims that decision makers should not be

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Code	Issue	Response
319	**Air Quality**	Since the release of the Draft Environmental Impact Statement, the Arizona Department of Transportation and Federal Highway Administration have consulted extensively with the U.S. Environmental Protection Agency on the air quality analytical approach and methods described in the Final Environmental Impact Statement, including the locations of monitors to be used in the analysis. This consultation has resulted in agreement on the analysis methodologies and the results of these analyses. As shown in Table 4-33 on page 4-77 of the Final Environmental Impact Statement, the contribution of particulate matter (PM_{10}) emissions from the project to the overall total is less than 3 percent at the 40th Street traffic interchange. The project contribution would not change even if the background monitors were located in Ahwatukee Foothills Village. The air quality analysis for particulate matter (PM_{10}) assessed the worst-case conditions (locations immediately adjacent to the freeway) and did not result in any violations of the National Ambient Air Quality Standards. The receptor diagrams in the air quality technical report demonstrate that concentrations drop to zero or near zero within a few hundred meters of the project.
320	**Health Effects**	The U.S. Office of Management and Budget's Circular A-4 covers analysis of regulatory actions, while the U.S. Environmental Protection Agency's Guidelines for Preparing Economic Analyses covers policies and environmental regulations. While each is informative, neither represents requirements to fulfill the National Environmental Policy Act process. Treatment of uncertainty in the National Environmental Policy Act is governed by the Council of Environmental Quality regulation 40 Code of Federal Regulations 1502.22. The Final Environmental Impact Statement notes matters of uncertainty throughout the entire document. Examples include study findings in the sections *Air Quality*, *Noise*, *Visual Resources*, *Land Use*, *Displacements and Relocations*, and *Cultural Resources* in Chapter 4. In Chapter 3, *Alternatives*, reference is made to continued monitoring of design and cost to account for needed updates. On page 4-1, in the text box, "*Can the Impacts Change and, If So, How?*", text is presented on how such dynamics are tracked.

Code	Comment Document

provided with information on health outcomes of building the freeway because the magnitudes of those outcomes are judged by DOT to be highly uncertain. I will explain three problems with this logic:

A. Ignoring uncertainty violates federal standards for evaluating public projects, as outlined by the United States Office of Management and Budget's Circular A-4 (http://www.whitehouse.gov/omb/circulars_a004_a-4) and the United States Environmental Protection Agency's *Guidelines for Preparing Economic Analysis*. For example, OMB Circular A-4 has a special section devoted to the appropriate treatment of uncertainty in the evaluation of public projects. It clearly states that uncertainty outcomes should be quantified and this information should be provided for public review and to decision makers. For example, it instructs analysts involved in the preparation of impact statements that "*the important uncertainties connected with your regulatory decisions need to be analyzed and presented as part of the overall regulatory analysis*" and that "*by assessing the sources of uncertainty and the way in which benefit and cost estimates may be affected under plausible assumptions, you can shape your analysis to inform decision makers and the public about the effects and the uncertainties of alternative regulatory actions*" and that "*wherever possible, you should use appropriate statistical techniques to determine a probability distribution of the relevant outcome.*" It also states that "*when uncertainty has significant effects on the final conclusion about net benefits, your agency should consider additional research prior to rulemaking. The cost of being wrong may outweigh the benefits of a faster decision. This is true especially for cases with irreversible or large upfront investments.*"

320 **Inadequacies in AZ DOT's response: The response notes my comment and then ignores it. AZ DOT refers me to sections of the DEIS that do not address my comment.**

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Code	Issue	Response

Code	Comment Document

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B. The South Mountain Freeway is likely to have large negative health effects. The large impacts of air pollution on morbidity and mortality are well documented as is the fact that these impacts are largest for sensitive groups such as children and seniors. This is of special concern due to the large proportion of families with young children and communities of seniors in Ahwatukee. See the EPA's (2011) *Second Prospective Study 1990-2020 of the Clean Air Act* and the associated appendices for the epidemiological consensus on health impacts and calibrated dose-response functions. The range of potential health impacts should be quantified and monetized using standard measures of the "value of a statistical life" consistent with best practices in regulatory evaluation established in the OMB and EPA guidelines. Even the lower bound on number of lives lost is likely to be sufficiently high to raise serious concerns for policy makers.

321

<u>Inadequacies in AZ DOT's response</u>: AZ DOT provides a boilerplate response that fails to address the substance of my comment of monetizing effects using the value of a statistical life.

321

C. The effects of the freeway on health outcomes are no more uncertain than the effects of the freeway on commute times. Yet, there is no mention of uncertainty in commute times. Throughout the DEIS, the economic benefits of building the freeway are conveyed with a false sense of precision whereas the environmental costs are dismissed altogether because they are uncertain. This asymmetric treatment of uncertainty has the effect of biasing the DEIS in favor of building the freeway with the Pecos road alignment.

321

<u>Inadequacies in AZ DOT's response</u>: AZ DOT provides a boilerplate response that ignores the substance of my comment on the inconsistent treatment of uncertainty surrounding benefits and costs.

6

Code	Issue	Response
321	**Health Effects**	The U.S. Office of Management and Budget's Circular A-4 covers analysis of regulatory actions, while the U.S. Environmental Protection Agency's Guidelines for Preparing Economic Analyses covers policies and environmental regulations. The environmental impact statement process followed the National Environmental Policy Act and Federal Highway Administration's implementing regulations for conducting social and economic evaluations. The proposed action is not a regulatory action or policy action and is not governed by the noted guidelines. The Final Environmental Impact Statement provides a summary of health risk assessments for past highway projects, all of which show very low risk (see page 4-79), not "large negative health effects." Treatment of uncertainty in the National Environmental Policy Act is governed by the Council of Environmental Quality regulation 40 Code of Federal Regulations 1502.22. The Final Environmental Impact Statement notes matters of uncertainty throughout the entire document. Examples include study findings in the sections *Air Quality*, *Noise*, *Visual Resources*, *Land Use*, *Displacements and Relocations*, and *Cultural Resources* in Chapter 4. In Chapter 3, *Alternatives*, reference is made to continued monitoring of design and cost to account for needed updates. On page 4-1, in the text box, "*Can the Impacts Change and, If So, How?*", text is presented on how such dynamics are tracked.

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Comment #7: The DEIS fails to adequately address the uncertainty of benefits from building the freeway. For example, the actual reduction in commute time that would be realized if the freeway were to be build will depend on several sources of uncertainty, including but not limited to: (i) future patterns of residential development; (ii) future location choices made by firms; (iii) future residential and job location choices made by workers; (iv) future trends in telecommuting; (v) future trends in "flex-time" and the ability of workers to commute during off-peak hours; (vi) future trends in the national economy; (vii) future trends in in the international economy and trade that influence the rate of trucking through Phoenix; (viii) future trends in automobile design; (ix) the impact of building the freeway on the desirability of living in Ahwatukee; and (x) future trends in the price of gasoline, electricity, and other factors affecting commuting costs. These sources of uncertainty should be carefully analyzed and policy makers should be informed about the statistical distribution of possible outcomes for commute times. More broadly, sources of uncertainty should be addressed throughout the discussion of benefits of building the freeway.

322

Inadequacies in AZ DOT's response: AZ DOT dismisses a serious analysis of the uncertainty surrounding their claimed benefits of the SMF as "needless detail" and "speculative consideration". This attitude exemplifies why support for the Pecos Road alignment in the FEIS was a foregone conclusion. Of course the Pecos Road alignment will seem like a good idea if substantial livability costs are ignored and substantial uncertainty in the claimed livability benefits is ignored.

323

Comment #8: The DEIS systematically overstates the likely benefits of building the freeway to Phoenix commuters. The estimated benefits are based on statistics for projected future traffic patterns provided by the Maricopa Association of Governments. However, these statistics are primarily extrapolations of past trends. In other words, they are "made up". They are not derived from a consistent model of residential location choice or a realistic model of commuting choices. It is difficult to believe that many workers would make residential and job location choices that would induce them to use the new freeway. Projections for future traffic congestion also fail to incorporate future growth in the share of workers who work from home or are allowed the flexibility to commute during off-peak hours. Furthermore, estimates for the

7

Code	Issue	Response
322	**Traffic**	The Maricopa Association of Governments is constantly studying and monitoring trends in travel demand and incorporating this information into the regional travel demand (see page 3-27 of the Final Environmental Impact Statement). The models, methods, and assumptions used throughout the Final Environmental Impact Statement account for reasonably foreseeable future conditions and dismiss speculative considerations.
323	**Traffic**	The models, methods, and assumptions used throughout the Final Environmental Impact Statement account for reasonably foreseeable future conditions and rightfully dismiss speculative considerations. As an example, the Maricopa Association of Governments, as the federally designated regional transportation planning agency, is nationally recognized as a leader in air quality modeling and traffic modeling and forecasting. The models used account for the assumptions made in the comment.

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opportunity cost of time used to quantify the value of reduced commute times are not consistently linked to the actual commuters who use the freeway during peak hours, but are likely driven by high-income commuters living in places such as Scottsdale who will not use the new freeway if it is build. In addition, the models of traffic congestion in the DEIS are inadequate for estimating the impact of the freeway on commute times. The DEIS fails to provide even the most basic facts about commuting. For example, what fraction of today's metro area commuters would experience a shorter commute (in terms of physical distance) if the South Mountain Freeway were built? This information can easily be obtained from the U.S. Census Bureau's annual Public Use Microdata Sample of respondents to the *American Community Survey*, which provides information on workers' house locations, job locations, time leaving home to go to work, and travel times.

323 **Inadequacies in AZ DOT's response: AZ DOT fails to address any of my specific comments. Their boilerplate reply is completely lacking in substance. It basically says "trust us".**

324 Comment #9: Throughout the DEIS, the analysis of benefits of building the freeway is based on a false premise that the demand for transportation will be the same whether or not the freeway is built. This results in overstatement of the benefits of building the freeway. In reality, building the freeway is likely to change residential development patterns which, in turn, will increase the demand for using the freeway relative to the demand if the freeway had not been built. In other words, building the freeway will increase the demand for using the freeway due to increases in driving by current residents, increases in commercial traffic, and increased migration to areas near the freeway. These "feedback effects" will increase congestion on the freeway, diminishing its benefits, especially for existing residents of Phoenix. This effect is well known to transportation economists as "The Fundamental Law of Road Congestion". Yet recognition of this effect is completely missing from the transportation models throughout the DEIS. In perhaps the most comprehensive empirical study of the causal relationship between road projects and traffic congestion, Duranton and Turner (2011) concluded that adding a new road with the

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characteristics of the South Mountain Freeway is unlikely to relieve congestion. See: Duranton, Gilles, and Matthew A. Turner. "The Fundamental Law of Road Congestion: Evidence from US Cities." *American Economic Review*. 101 (October 2011): 2616-2652.

324 **Inadequacies in AZ DOT's response: AZ DOT has chosen to ignore overwhelming evidence from the best available peer reviewed scientific evidence on the fundamental law of road congestion.**

325 Comment #10: There is overwhelming evidence in economics journals and federal regulatory evaluations that freeways produce negative externalities that substantially diminish the quality of life for those living nearby. Some of these effects will likely be reflected in reductions (or slower growth) in property values for residential neighborhoods experiencing diminished quality of life. It is standard practice to use hedonic property value methods and contingent valuation methods to quantify these costs as part of regulatory evaluations. However, no such effort is undertaken in the draft EIS. The following impacts should be quantified and included in the EIS using best practices in methods for economic valuation of environmental impacts of public projects as outlined in EPA's Guidelines for Preparing Economic Analysis: (1) effect of air pollution on property values; (2) effect of noise pollution on property values; (3) cost of water pollution produced from freeway runoff; (4) value of lost recreation benefits to joggers and bicyclists who currently use Pecos road for recreation; (5) value of diminished recreation benefits for people using South Mountain Park due to visual disamenities, noise, dust, odors, and non-visible air pollution created by the freeway; and (6) the impact of building the freeway on crime in Ahwatukee and, in turn, the effect of increased crime on property values. This last point deserves some explanation. At present, weekly statistics from the police blotter indicate that there is virtually no violent crime or property crime in western Ahwatukee. The vast majority of Ahwatukee crimes occur in the eastern part of the town close to the I-10. The lack of crime is western Ahwatukee is likely due to the fact that, as the end of a big cul-de-sac, criminals have no escape route. Building the freeway will provide such an escape route and increase the attractiveness of the area to criminals as a result. Those who argue in favor of building the

Code	Issue	Response
325	**Community Impacts**	The California Department of Transportation study referred to in the original comment was the *Standard Environmental Reference Handbook, Volume 4, Appendix D, Transportation Effects on Property Value*, which concludes that while a majority of studies found that properties abutting the freeway do not appreciate as rapidly as other properties a little farther away from the freeway, there is a net gain in value in the general vicinity of the freeway attributable to increased accessibility to the regional freeway system. In other words, houses in both the abutting and the nearby zones appreciated more than comparable properties a few miles away from the freeway. The references provided were in response to concerns expressed and reveal few clear conclusions related to the relationship between the transportation infrastructure and residential property values. The environmental impact statement process followed the National Environmental Policy Act and Federal Highway Administration's implementing regulations for conducting social and economic evaluations. The proposed action is not a regulatory action or policy action and is not governed by the noted guidelines.

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freeway often claim that Ahwatukee residents should have known that these effects might eventually occur as a result of the freeway when they first purchased property in the area and that, as a result, the negative externalities are already capitalized into property values. This claim is false. The conventional wisdom of real estate agents and homebuyers in Ahwatukee is that the freeway would never be built and that the original 1985 plan to build the freeway was simply a relic of "pre-Ahwatukee" regional planning. As a result, the freeway will act as a shock to the local housing market and depress property values.

325

Inadequacies in AZ DOT's response: There are several problems here. First is the claim that negative effects of the SMF can be ignored because they are difficult to measure. In contrast AZ DOT has gone to great effort to support models designed to produce evidence in favor of benefits that are at least as difficult to measure. Second is the fact that the California Department of Transportation study is not cited. Third is the fact that AZ DOT appears ignorant of peer reviewed scientific evidence on best practices in benefit transfer methods. The premise of the AZ DOT response—that findings from some property value study in California can simply be transferred to the Ahwatukee area—is deeply flawed due to likely differences in topography, tree cover, humidity, and many other factors that generally cause the property value impacts of similar disamenities to vary over large spatial areas. For examples and citations to the peer-reviewed scientific literature, see EPA's guidelines for performing benefit-cost analysis, or the following journal article: Boyle, Kevin J., Nicolai V. Kuminoff, Christopher F. Parmeter, and Jaren C. Pope. "The benefit-transfer challenges." *Annual Review of Resource Economics* 2, no. 1 (2010): 161-182.

326

Comment #11: In the event of heavy traffic, road work, or accidents, drivers on the South Mountain Freeway are likely to use Chandler Blvd. as a bypass. GPS devices will mechanically divert drivers off the freeway and onto Chandler. This is especially true for the Chandler Blvd segment from S. 17th Ave to Desert Foothills Parkway because this segment has 4 lanes, a speed limit of 45mph, and no stop signs or traffic lights. This will create a serious public health hazard because the aforementioned segment of Chandler goes right through the residential

Code	Issue	Response
326	**Traffic**	The City of Phoenix regularly evaluates the need for traffic control and safety improvements. The noted section of Chandler Boulevard includes a striped bicycle lane and a meandering sidewalk. These types of facilities are used safely on arterial streets in other parts of the region that have very high traffic volumes.

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neighborhood of "Club West". Joggers, bicyclists, families and children use Chandler Blvd during the morning and evening commute hours for recreation and to walk/bicycle to/from school and parks. Young children on foot or on bicycle and joggers with headphones are often seen crossing the street. The lack of stop signs and crosswalks is not currently a problem because traffic is light. However, with some freeway commuters using the Chandler Blvd corridor as a bypass, there is likely to be a surge in traffic accidents and traffic-related pedestrian deaths in this family-oriented residential neighborhood. These effects are entirely ignored in the DEIS.

326 **Inadequacies in AZ DOT's response: The 2006 analysis that AZ DOT refers to could not have anticipated the huge impact that GPS devices and smartphone apps such as "Waze" now have on the ways in which drivers respond to delays. More broadly, the response ignores the substance of my comment.**

Comment #12: The DEIS violates the spirit of Presidential Executive Order #13045 by failing to identify and assess the environmental health risks and safety risks that may disproportionately affect children as a result of the freeway. An example of the environmental health risk is the increase in ambient ozone concentrations that will affect children living in Ahwatukee, particularly those who use the numerous public schools and public parks located between South Mountain Park and the proposed Pecos Road alignment of the freeway. The EPA identifies children as a "sensitive group" for ambient ozone. An example of the safety risk is the increase in traffic on arterial streets that wind through residential neighborhoods in Ahwatukee, particular during periods of heavy traffic, road work, or freeway accidents when drivers will naturally use

326 Chandler Blvd as a bypass. The traffic poses a safety risk because children frequently walk / bike / run / play on the streets that will experience increased traffic, such as Chandler Blvd from S. 17th Ave through Desert Foothills Parkway. This will increase the risk of accidental deaths of children.

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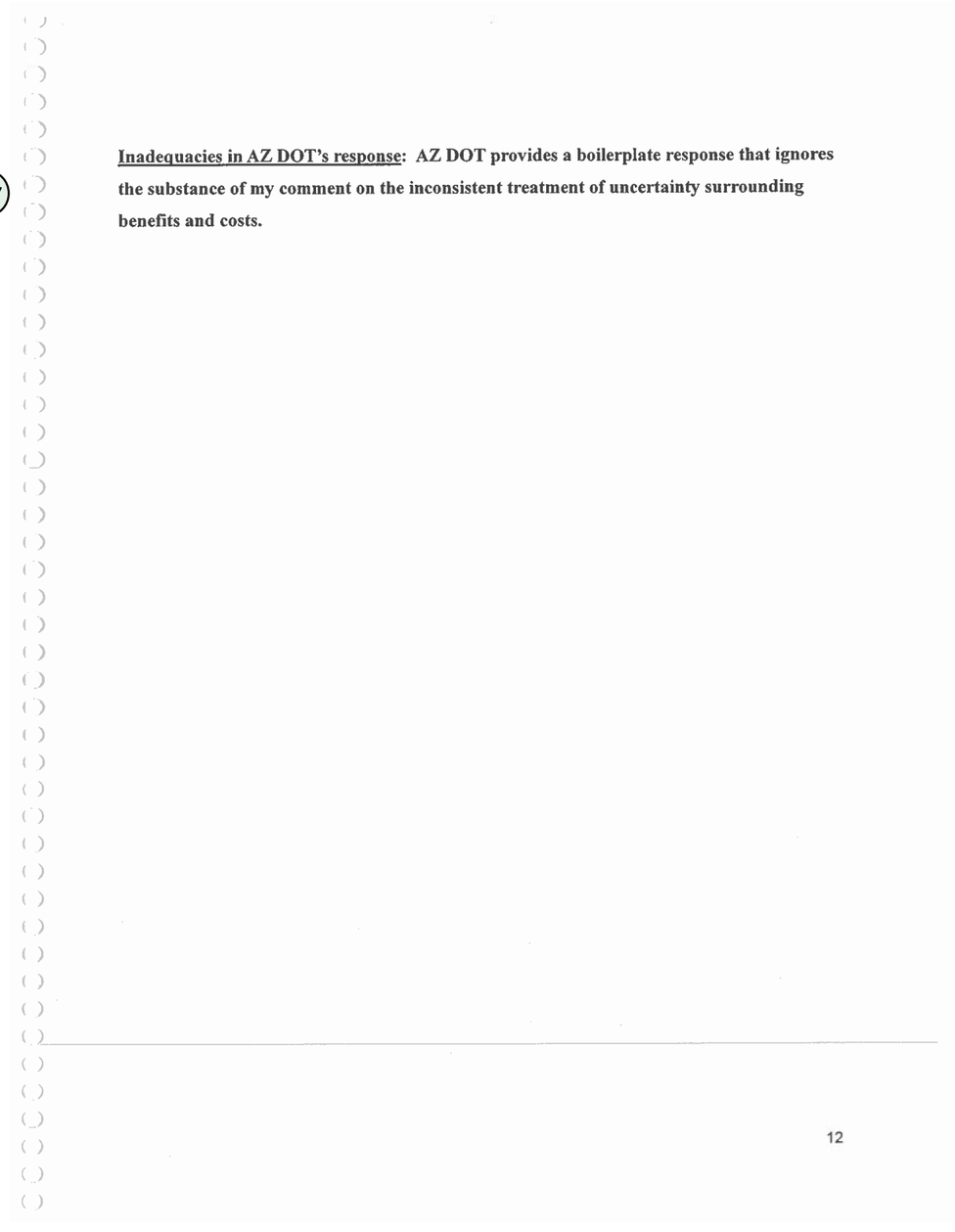
327	 Inadequacies in AZ DOT's response: AZ DOT provides a boilerplate response that ignores the substance of my comment on the inconsistent treatment of uncertainty surrounding benefits and costs. 12

Code	Issue	Response
327	**Children's Health**	While the U.S. Environmental Protection Agency has provided ample evidence that air pollution has the potential for greater adverse impacts on children compared with the population at large, this does not imply that the project will have disproportionate impacts on children. The project itself will affect all near-road populations equally; it does not include elements that would lead to higher air pollutant concentrations near children compared with other receptors. For example, a review of the project maps at <smfonlinehearing.com/maps/> indicates that while some schools are near the project corridor, the proposed freeway is not located closer to schools than it is to other nearby receptors. The U.S. Environmental Protection Agency's comment focuses entirely on children's health impacts related to air pollution. The project study area is designated as attainment for the sulfur dioxide, nitrogen dioxide, lead, and particulate matter ($PM_{2.5}$) National Ambient Air Quality Standards. The carbon monoxide and particulate matter (PM_{10}) hot-spot analyses (developed in consultation with the U.S. Environmental Protection Agency) demonstrate that no violations of those National Ambient Air Quality Standards will occur, and the project is included in the regional emissions analysis of a conforming plan and transportation improvement program, meeting the conformity requirements related to the ozone National Ambient Air Quality Standards. The U.S. Environmental Protection Agency and Federal Highway Administration agree that the project has met all applicable Clean Air Act and regulatory requirements related to compliance with the National Ambient Air Quality Standards. Clean Air Act Section 109(b)(1) requires the U.S. Environmental Protection Agency to promulgate primary National Ambient Air Quality Standards at levels that allow an adequate margin of safety and that are requisite to protect the public health. As noted by the U.S. Environmental Protection Agency in its 2013 rulemaking for particulate matter, Clean Air Act Section 109's legislative history demonstrates that the primary standards are "to be set at the maximum permissible ambient air level ... which will protect the health of any [sensitive] group of the population" (78 *Federal Register* 3086 and 3090) (quoting S. Rep. No. 91-1196, 91st Cong., 2 Sess. 10 [1970]) (alterations in original). Accordingly, the Final Environmental Impact Statement's National Ambient Air Quality Standards-based evaluation of criteria air pollutants includes a health-based review of sensitive populations, including children and seniors, given the National Ambient Air Quality Standards' inherent consideration of those factors. Furthermore, the National Ambient Air Quality Standards-based assessment ensures adequate consideration of health-based issues as "[t]he requirement that primary standards provide an adequate margin of safety was intended to address uncertainties associated with inconclusive scientific and technical information ... and to protect against hazards that research has not yet identified" (78 *Federal Register* 3090). By definition, if a project demonstrates that all National Ambient Air Quality Standards are met, as this project has done, then there cannot be any adverse National Ambient Air Quality Standards-related effects on the health of children or any other segment of the population. For mobile source air toxics, the net emissions impacts of the project affect children in the same manner that they affect the remainder of the population. Emissions will likely be higher along the project corridor and lower elsewhere in the Study Area. Regardless of the alternative selected, emissions are expected to decline by over 80 percent in the project study area over the life of the project. In addition, the summary of health risk assessments for past highway projects presented in the Final Environmental Impact Statement suggests that the mobile

(Response 327 continues on next page)

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327 (cont.)		source air toxics health risks for this project are negligible, especially for the very short exposure time frames (as a fraction of a 70-year lifetime) occurring at schools and day care centers. The Federal Highway Administration also reviewed a recent sampling of the U.S. Environmental Protection Agency's own National Environmental Policy Act documents to gain a better understanding of the U.S. Environmental Protection Agency's preferred approach for addressing children's health under the National Environmental Policy Act. The South Mountain Freeway Final Environmental Impact Statement includes a full page of discussion of impacts on children's health. An example document from the U.S. Environmental Protection Agency with a more extensive discussion of children's health than what is provided in the South Mountain Freeway Final Environmental Impact Statement was not found. After a review of the approach the U.S. Environmental Protection Agency uses to address Executive Order 13045 in its own National Environmental Policy Act documents, the Federal Highway Administration considers the Final Environmental Impact Statement discussion sufficient.

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COMMENT 15

Comments on FEIS from Scott Herman

Code	Issue	Response
328		Title page.

Code	Comment Document

Howard Shanker

From: Scott Herrmann <sherrmann@goprocura.com>
Sent: Friday, November 14, 2014 3:27 PM
To: projects@azdot.gov
Cc: Pat Lawlis; Howard Shanker
Subject: South Mountain Freeway FEIS

Importance: High

Hello AZDOT – Wake up and stop the madness, the south mountain freeway helps NO ONE and will only harm many elements of the South Mountain Municipal Park.

I am not sure you know what you are building and how it will ruin one of Arizona great communities here in Phoenix. Ahwatukee, the Foothills and the Club West communities and many others will all suffer from this Loop 202 South Mountain Freeway.

329 Let's begin with Noise, it will grow exponentially versus what we have today, a quiet community virtually void of traffic noise.

330 Pollution, trucks and cars running circles around a mountain top, cause the air to stagnate and eventually cover the top of the mountain with permanent pollution.

What part of Mountain Preserve *do you not understand*? A preserve is a PROTECTED environment that is not supposed to be used for a freeway. Why not move the freeway west along the highway 19 path and your connection west is built? Or just leave well enough alone, your facts are wrong and traffic, pollution and haz mat models are based upon wrong information too.

We do not want to have access to the west side of Phoenix, via a freeway which will only cause additional crime in our great communities. We have an almost secure cul-de-sac effect today that will be ruined with this freeway as you will open up a crime corridor to the west side.

Many animals who will get crushed, plus extremely fragile and diverse plant life that will never recover from your freeway. Sacred grounds of tribal nations will also be effected

Did you know Section 4(f) of the Transportation Act **mandates "the rejection of any project that requires the use of preserves and park land"** unless: there is no feasible or prudent alternative… or such a project includes all possible planning to *minimize harm to a park and preserve.* ***You have done neither.***

Just because private entities think that this path is a good idea it's not. Your *paving paradise for the profits of Swift Transportation and Union Pacific Railroad*. I hope you all choke on the pollution this will cause.

I, as a member of PARC Protecting Arizona's Resources and Children, realize you will vote and pass your own record of decision and leave us all with a ruined community> I want to point out, you will be legally challenged by PARC and Others. I have copied some PARC members and Mayor Greg Stanton and representative Sal DiCiccio so they realize what is happening to our community, before the first bulldozer moves the precious earth of South Mountain. Although they won't say they oppose the freeway, I still wish they would as their supporters in this area are keeping tabs on their lack of a opinion. Maybe now they will generate one because it must be soon.

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Code	Issue	Response
329	**Noise**	The noise analysis conducted for and documented in the Draft and Final Environmental Impact Statements complied with the Federal Highway Administration's regulations for conducting noise analyses in 23 Code of Federal Regulations 0772. The noise analysis was updated for the Final Environmental Impact Statement using the most recent Federal Highway Administration and Arizona Department of Transportation policy and traffic projections provided by the Maricopa Association of Governments. Discussion of this updated analysis begins on page 4-88 of the Final Environmental Impact Statement. No substantial differences between the analyses presented in the Draft and the Final Environmental Impact Statements resulted. The noise report may also be found on the project Web site at <azdot.gov/southmountainfreeway>. Without noise mitigation, noise levels from the freeway are predicted to range from 61 A-weighted decibels to 78 A-weighted decibels at the nearest homes, depending on the distance from the freeway. Noise mitigation was estimated to reduce those noise levels to a range of 55 A-weighted decibels to 64 A-weighted decibels for most of the areas (see Final Environmental Impact Statement page 4-93). Because of topography, local street traffic, or other engineering constraints in a few areas, estimated noise levels will not be reduced as much and will be as high as 64 A-weighted decibels to 70 A-weighted decibels (see Final Environmental Impact Statement page 4-93).
330	**Air Quality**	Since the release of the Draft Environmental Impact Statement, the Arizona Department of Transportation and the Federal Highway Administration have consulted extensively with the U.S. Environmental Protection Agency on the air quality analytical approach and methods used in the Final Environmental Impact Statement. This consultation has resulted in agreement on the analysis methodologies and the results of these analyses. The carbon monoxide and particulate matter (PM_{10}) analyses demonstrated that the freeway will not contribute to any new localized violations, increase the frequency or severity of any existing violation, or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones. For mobile source air toxics, the updated analysis showed that for the Study Area, constructing the freeway will have a marginal effect on annual emissions in 2025 and 2035 (less than a 1 percent difference in total annual emissions between the Preferred Alternative and No-Action Alternative). With the Preferred Alternative in 2035, modeled mobile source air toxics emissions would decrease by 57 percent to more than 90 percent, depending on the pollutant, despite a 47 percent increase in vehicle miles traveled in the Study Area compared with 2012 conditions (see discussion beginning on page 4-78 of the Final Environmental Impact Statement). Congestion relief resulting from the freeway will provide localized air quality emissions reductions on area freeways, arterial streets, and at interchanges, benefiting users of area highways and those living near or using congested roads.

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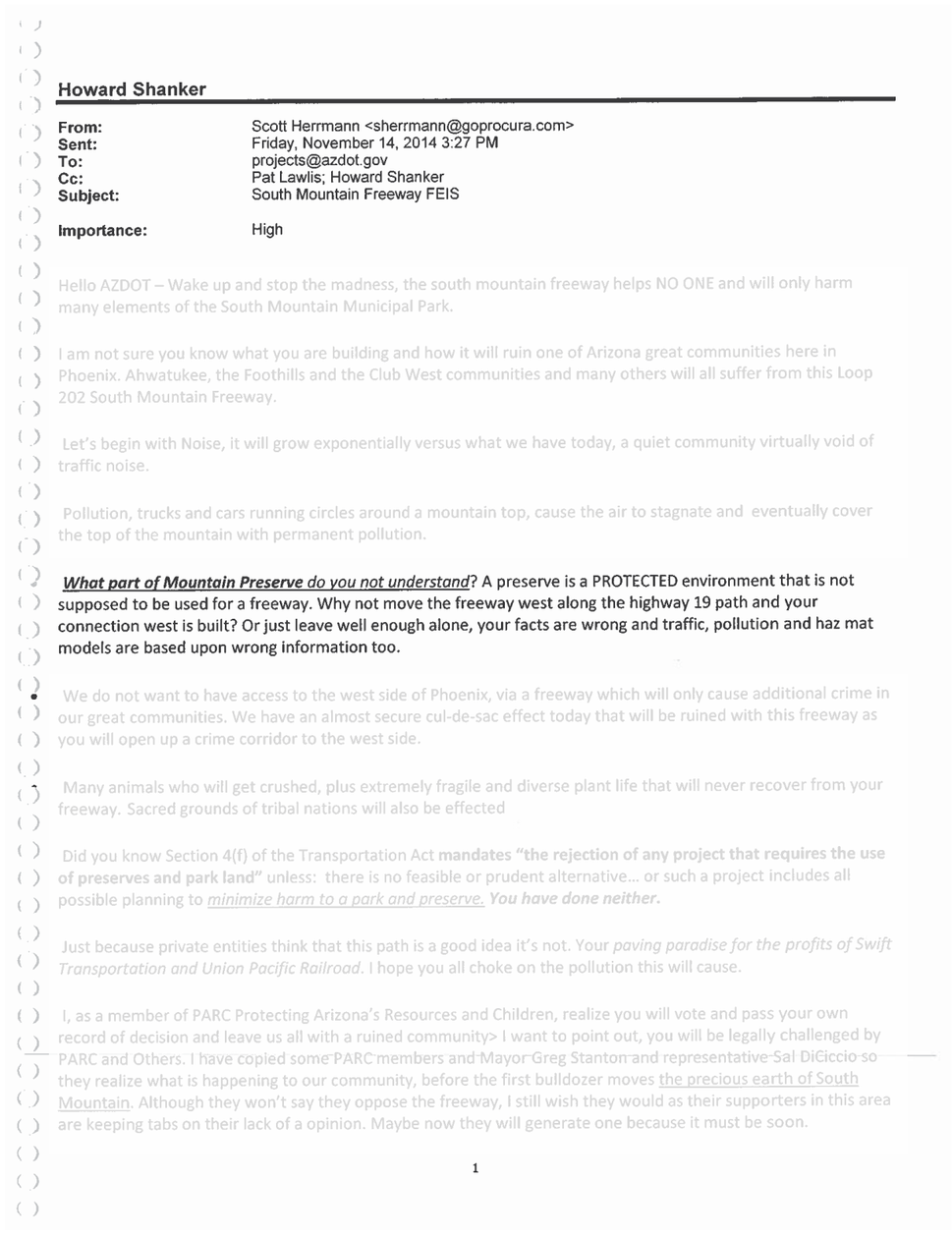

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Importance: High

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Let's begin with Noise, it will grow exponentially versus what we have today, a quiet community virtually void of traffic noise.

Pollution, trucks and cars running circles around a mountain top, cause the air to stagnate and eventually cover the top of the mountain with permanent pollution.

331

What part of Mountain Preserve *do you not understand*? A preserve is a PROTECTED environment that is not supposed to be used for a freeway. Why not move the freeway west along the highway 19 path and your connection west is built? Or just leave well enough alone, your facts are wrong and traffic, pollution and haz mat models are based upon wrong information too.

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Many animals who will get crushed, plus extremely fragile and diverse plant life that will never recover from your freeway. Sacred grounds of tribal nations will also be effected

Did you know Section 4(f) of the Transportation Act **mandates "the rejection of any project that requires the use of preserves and park land"** unless: there is no feasible or prudent alternative… or such a project includes all possible planning to *minimize harm to a park and preserve.* ***You have done neither.***

Just because private entities think that this path is a good idea it's not. Your *paving paradise for the profits of Swift Transportation and Union Pacific Railroad*. I hope you all choke on the pollution this will cause.

I, as a member of PARC Protecting Arizona's Resources and Children, realize you will vote and pass your own record of decision and leave us all with a ruined community> I want to point out, you will be legally challenged by PARC and Others. I have copied some PARC members and Mayor Greg Stanton and representative Sal DiCiccio so they realize what is happening to our community, before the first bulldozer moves the precious earth of South Mountain. Although they won't say they oppose the freeway, I still wish they would as their supporters in this area are keeping tabs on their lack of a opinion. Maybe now they will generate one because it must be soon.

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Code	Issue	Response
331	**Section 4(f) and Section 6(f)**	The context and attributes of the South Mountains are described in the Final Environmental Impact Statement. The acreage of parkland to be converted to a transportation use is reported on page 5-14 in the section, *Direct Use*. It is reported that 31.3 acres—or just less than 0.2 percent of the parkland—will be converted to a transportation use (this is a reduction in the amount of use planned for in 1988). The text goes on to point out other concerns associated with the direct use reported, and text on page 5-14, in the sidebar, "*The South Mountains in Phoenix's Sonoran Preserve System*," describes the importance of Phoenix South Mountain Park/Preserve in the region. Beginning on page 5-23 in the section, *Measures to Minimize Harm*, measures are presented to be undertaken to address the use impacts, including land replacement, on properties adjacent to the park. City of Phoenix planning efforts since the mid-1980s illustrate an awareness of the potential for the freeway to affect Phoenix South Mountain Park/Preserve. In 1989, the South Mountain Park Master Plan was adopted by the Phoenix City Council. The master plan shows the freeway alignment as adopted by the State Transportation Board in 1988. In 1990, the Phoenix Mountain Preserve Act was ratified by the Arizona Legislature. The Act did not apply to roadways through a designated mountain preserve if the roadway was in the State Highway System prior to August 15, 1990. The proposed freeway was in the State Highway System prior to 1990. Records prior to the Act suggest a primary reason for the exception was to allow the proposed freeway to go through Phoenix South Mountain Park/Preserve (see page 5-14 of the Final Environmental Impact Statement). The project team examined alternatives to avoid the park, but did not identify any feasible and prudent alternatives to avoid impacts. The Arizona Department of Transportation continues to work with park stakeholders to minimize impacts and address concerns. Measures to minimize harm to the park were developed (see Final Environmental Impact Statement, starting on page 5-23). These commitments are confirmed in Table 3, beginning on page 38, of the Record of Decision. The U.S. Department of the Interior reviewed the Final Environmental Impact Statement and commented, "The Department agrees that the South Mountain Park and Preserve (SMPP) is a Land and Water Conservation Fund (LWCF) assisted site that will be directly impacted by the subject project These documents assess the direct use of park land for freeway purposes to be 31.3 acres. We agree with the conclusions stated. We note that the "*Measures to Minimize Harm*" on the Section 4(f) Statement pages 5-23, 5-24, and 5-25 have annotated a commitment to provide replacement land for the converted park land. The Department concurs with the assessment of the impacts to the LWCF-assisted resource and acknowledges the mitigation commitment."
	Alternatives	The Interstate 8/State Route 85 Alternative is in place today and will be in place in the future as an alternative route for motorists to use to bypass the entire Phoenix metropolitan area. The alternative serves that purpose, but provides no benefits to support regional travel within the Phoenix metropolitan area. For this reason, it was eliminated from further study.
	Alternatives, No-Action Alternative	As stated on page 3-40 of the Final Environmental Impact Statement, the No-Action Alternative would not satisfy the purpose and need of the proposed freeway because it would result in further difficulty in gaining access to adjacent land uses, increased difficulty in gaining access to Interstate and regional freeway systems from the local arterial street network, increased levels of congestion-related impacts, continued degradation in performance of regional freeway-

(Response 331 continues on next page)

Code	Comment Document

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Code	Issue	Response
331 (cont.)		dependent transit services, increased trip times, and higher user costs. Further, the No-Action Alternative would be inconsistent with Maricopa Association of Governments' and local jurisdictions' long-range planning and policies. The No-Action Alternative was included in the Draft and Final Environmental Impact Statements for detailed study to compare impacts of the action alternatives with the consequences of doing nothing (as impacts can result from choosing to do nothing). The impacts associated with the No-Action Alternative are discussed in each section of Chapter 4, *Affected Environment, Environmental Consequences, and Mitigation*, in the Final Environmental Impact Statement. These impacts are also summarized in Table S-3 on page S-10 of the Summary chapter of the Final Environmental Impact Statement. The comparison of traffic operational characteristics between the action alternative and the No-Action Alternative is presented in the Final Environmental Impact Statement, beginning on page 3-27. The analysis shows that the action alternative would: · reduce overall traffic on the arterial street system (see Figures 3-12 and 3-13) · optimize travel on the region's freeway system (see Figure 3-12) · reduce the capacity deficiency to levels better than experienced today (see Figures 1-12 and 3-14) · reduce the duration of level of service E or F conditions in key areas of the region's freeway system (see Figure 3-15) · improve travel times on trips within the Study Area and across the region (see Figure 3-17 and Table 3-8) · provide improved regional mobility for areas projected to experience growth in the next 25 years (see Figures 1-7 and 3-18) When all of this is considered in the realm of travel time savings for motorists in the region, the user benefits total approximately $200 million per year (see Table 4-27).
332	**Crime**	While the City of Phoenix Police Department reported in 2005 that it did not have any statistics specific to crime adjacent to freeways, it did note that based on its experience there does not appear to be a correlation between crime rates and freeways.

Code	Comment Document

Howard Shanker

From: Scott Herrmann <sherrmann@goprocura.com>
Sent: Friday, November 14, 2014 3:27 PM
To: projects@azdot.gov
Cc: Pat Lawlis; Howard Shanker
Subject: South Mountain Freeway FEIS

Importance: High

Hello AZDOT – Wake up and stop the madness, the south mountain freeway helps NO ONE and will only harm many elements of the South Mountain Municipal Park.

I am not sure you know what you are building and how it will ruin one of Arizona great communities here in Phoenix. Ahwatukee, the Foothills and the Club West communities and many others will all suffer from this Loop 202 South Mountain Freeway.

Let's begin with Noise, it will grow exponentially versus what we have today, a quiet community virtually void of traffic noise.

Pollution, trucks and cars running circles around a mountain top, cause the air to stagnate and eventually cover the top of the mountain with permanent pollution.

What part of Mountain Preserve *do you not understand*? A preserve is a PROTECTED environment that is not supposed to be used for a freeway. Why not move the freeway west along the highway 19 path and your connection west is built? Or just leave well enough alone, your facts are wrong and traffic, pollution and haz mat models are based upon wrong information too.

We do not want to have access to the west side of Phoenix, via a freeway which will only cause additional crime in our great communities. We have an almost secure cul-de-sac effect today that will be ruined with this freeway as you will open up a crime corridor to the west side.

333 334 Many animals who will get crushed, plus extremely fragile and diverse plant life that will never recover from your freeway. Sacred grounds of tribal nations will also be effected

331 Did you know Section 4(f) of the Transportation Act **mandates "the rejection of any project that requires the use of preserves and park land"** unless: there is no feasible or prudent alternative… or such a project includes all possible planning to *minimize harm to a park and preserve.* ***You have done neither.***

Just because private entities think that this path is a good idea it's not. Your *paving paradise for the profits of Swift Transportation and Union Pacific Railroad*. I hope you all choke on the pollution this will cause.

I, as a member of PARC Protecting Arizona's Resources and Children, realize you will vote and pass your own record of decision and leave us all with a ruined community> I want to point out, you will be legally challenged by PARC and Others. I have copied some PARC members and Mayor Greg Stanton and representative Sal DiCiccio so they realize what is happening to our community, before the first bulldozer moves the precious earth of South Mountain. Although they won't say they oppose the freeway, I still wish they would as their supporters in this area are keeping tabs on their lack of a opinion. Maybe now they will generate one because it must be soon.

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Code	Issue	Response
333	**Biology, Plants, and Wildlife**	Within the context of overall vegetation, wildlife, and wildlife habitat, the freeway will result in a decrease in the amount of cover, nesting areas, and food resources for wildlife species caused by construction of the project. See the section, *General Impacts on Vegetation, Wildlife, and Wildlife Habitat*, beginning on page 4-136 of the Final Environmental Impact Statement, for additional details on potential effects on vegetation, wildlife, and wildlife habitat. The Arizona Department of Transportation and Federal Highway Administration completed a Biological Evaluation containing an analysis of the project effects on listed and candidate species under the Endangered Species Act. The Biological Evaluation was completed in May 2014 following identification of the Preferred Alternative in the Draft Environmental Impact Statement. The Biological Evaluation was sent to the U.S. Fish and Wildlife Service, the Arizona Game and Fish Department, and the Gila River Indian Community Department of Environmental Quality. The U.S. Fish and Wildlife Service was asked for technical assistance with minimizing impacts on candidate species prior to completion of the Final Environmental Impact Statement. In a letter dated July 18, 2014, the Gila River Indian Community provided comments on the Biological Evaluation for the freeway and expressed that the Gila River Indian Community holds all animals in the highest regard and recognizes animals as culturally important. The letter included a list of plant and animal species that are culturally important to the Gila River Indian Community. The Biological Evaluation for the freeway was revised to incorporate an evaluation of the identified species (see page 4-127 of the Final Environmental Impact Statement). The Arizona Department of Transportation and Federal Highway Administration have committed to continue coordination with the Arizona Game and Fish Department, the Gila River Indian Community Department of Environmental Quality, and U.S. Fish and Wildlife Service regarding wildlife concerns as a result of the freeway's implementation. The analysis of biological resources may be found beginning on page 4-125 of the Final Environmental Impact Statement. The Federal Highway Administration made "no effect" findings for all listed and candidate species except for the Tucson shovel-nosed snake and Sonoran desert tortoise, which could potentially be affected by the project. The Tucson shovel-nosed snake was subsequently removed from the candidate species list in a decision by the U.S. Fish and Wildlife Service on September 23, 2014. Mitigation measures to conduct preconstruction surveys for the Sonoran desert tortoise, where appropriate and after consultation with the Arizona Game and Fish Department, are included in the Record of Decision in Table 3, beginning on page 38.
334	**Cultural Resources**	Since the beginning of the environmental impact statement process, the Federal Highway Administration and Arizona Department of Transportation have been carrying out cultural resource studies and engaging in an ongoing, open dialogue with the Gila River Indian Community Tribal Historic Preservation Office and other Tribes to understand the Native American's way of life and to identify and evaluate places of religious, spiritual, and cultural importance to the Gila River Indian Community and other Tribes that may be adversely affected by the freeway. Such places may be referred to as traditional cultural properties. As a result of these discussions and of studies conducted by the Gila River Indian Community's Cultural Resource Management Program, the Gila River Indian Community and other Tribes have identified traditional cultural properties that are eligible for listing in the National Register of Historic Places and that could be affected by

(Response 334 continues on next page)

Code	Comment Document

I hope that you realize your building something no community member wants. Do the right thing and stop the madness and the South Mountain freeway Loop 202.

Thank you for your time.

Scott Herrmann
Director Mobile Solutions
procura ContinuLink
Direct: 480.706.7030
sherrmann@goprocura.com
www.continulink.com | www.goprocura.com

Code	Issue	Response
334 (cont.)		construction of the freeway. The religious, spiritual, and cultural importance of the South Mountains is acknowledged in the Draft and Final Environmental Impact Statements in several locations, notably on page 5-26. The project will accommodate and preserve (to the fullest extent possible from the available alternatives) access to the South Mountains for religious practices. For more discussion of traditional cultural properties, see the section, *Cultural Resources*, beginning on page 4-140 of the Final Environmental Impact Statement and pages 5-26 through 5-28. Section 106 of the National Historic Preservation Act requires a government-to-government relationship between the federal government and Native American Tribes as described beginning on page 4-140 of the Final Environmental Impact Statement. Section 106 requires that federal agencies take into account the effects of their undertakings on historic properties. This process requires consultation with State Historic Preservation Officers and tribal authorities. Consultation has occurred with Gila River Indian Community government officials, the Tribal Historic Preservation Officer, the Cultural Resource Management Program, many different tribal authorities, and the State Historic Preservation Office. The consultation regarding all historic properties in the area of potential effects has resulted in concurrence from the Gila River Indian Community Tribal Historic Preservation Office, other tribal authorities, and the State Historic Preservation Office on National Register of Historic Places eligibility recommendations (including traditional cultural properties), project effects, and proposed mitigation and measures to minimize harm. This consultation has been ongoing and will continue until commitments made in the Record of Decision are completed.

Code	Comment Document

Howard Shanker

From: Scott Herrmann <sherrmann@goprocura.com>
Sent: Thursday, October 16, 2014 11:50 AM
To: projects@azdot.gov
Cc: Pat Lawlis; mayor.stanton@phoenix.gov; council.district.6@phoenix.gov; herrmann8r@msn.com; Howard Shanker
Subject: a PARC member Comment on Final Environmental Impact Statement for the Loop 202 South Mountain Freeway

335

I am not sure you know what you are building and how it will ruin one of Arizona great communities here in Phoenix. Ahwatukee, the Foothills and the Club West communities and many others will all suffer from this Loop 202 South Mountain Freeway.

- Let's begin with Noise, it will grow exponentially versus what we have today, a quiet community virtually void of traffic noise.
- Pollution, trucks and cars running circles around a mountain top, cause the air to stagnate and eventually cover the top of the mountain with permanent pollution.
- *What part of Mountain Preserve do you not understand*? A preserve is PROTECTED environment that is not supposed to be used for a freeway. Why not move the freeway west along the highway 19 path and your connection west is built? Or just leave well enough alone, your facts are wrong and traffic, pollution and haz mat models are based upon wrong information too.
- We do not want to have access to the west side of Phoenix, via a freeway which will only cause additional crime in our great communities. We have an almost secure cul-de-sac effect today that will be ruined with this freeway as you will open up a crime corridor to the west side.
- Many animals who will get crushed, plus extremely fragile and diverse plant life that will never recover from your freeway.
- Sacred grounds of tribal nations will also be effected

Did you know Section 4(f) of the Transportation Act **mandates "the rejection of any project that requires the use of preserves and park land"** unless: there is no feasible or prudent alternative… or such a project includes all possible planning to *minimize harm to a park and preserve.* ***You have done neither.***

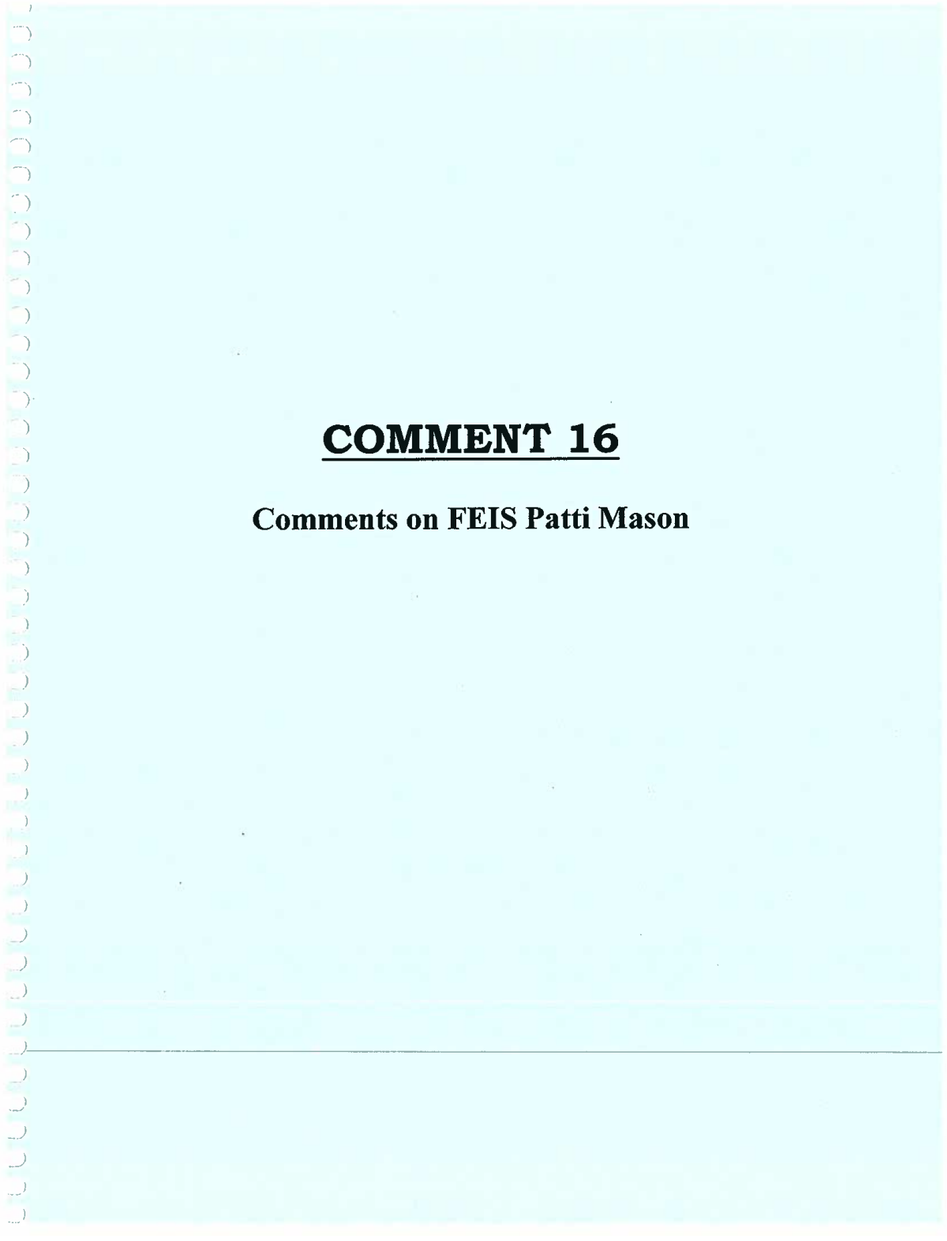
Just because private entities think that this path is a good idea it's not. Your *paving paradise for the profits of Swift Transportation and Union Pacific Railroad*. I hope you all choke on the pollution this will cause.

I, as a member of PARC Protecting Arizona's Resources and Children, realize you will vote and pass your own record of decision and leave us all with a ruined community> I want to point out, you will be legally challenged by PARC and Others. I have copied some PARC members and Mayor Greg Stanton and representative Sal DiCiccio so they realize what is happening to our community, before the first bulldozer moves the precious earth of South Mountain. Although they won't say they oppose the freeway, I still wish they would as their supporters in this area are keeping tabs on their lack of a opinion. Maybe now they will generate one because it must be soon.

I hope that you realize your building something no community member wants.
Thank you for your time.

Scott Herrmann
Director Mobile Solutions
20+ years living in Ahwatukee
Direct: 480.706.7030
sherrmann@goprocura.com

Code	Issue	Response
335		Repeat of previous comment. See responses to previous document beginning on page A300.

Code	Comment Document
336	

COMMENT 16

Comments on FEIS Patti Mason

Code	Issue	Response
336		Title page.

Code	Comment Document

Howard Shanker

From: Patti Mason <pkm6@cox.net>
Sent: Sunday, November 16, 2014 10:08 PM
To: projects@azdot.gov
Cc: PARCtheSMF@aol.com
Subject: Re: Comments on FEIS for proposed South Mountain Freeway

TO: South Mountain Freeway Project

Arizona Department of Transportation (ADOT)

1655 West Jackson Street, MD 126F

Phoenix, Arizona 85007

projects@azdot.gov

I am a citizen of Phoenix, a resident of Ahwatukee, a voter, and a member of Protecting Arizona Resources and Children (PARC), and I am writing to state my continuing opposition to the proposed expansion of Loop 202/South Mountain Freeway (SMF).

On July 20, 2013, I wrote to the South Mountain Study Team to respond to the publication of the DEIS (Draft Environmental Impact Statement) issued regarding Loop 202/South Mountain Freeway (SMF) (FEIS: B2392-B2394), included below, and now that the ADOT has issued their Final EIS, I am writing to address the fact that your responses have not fully addressed my concerns.

I am aware that the Federal Highway Administration (FHWA) National Environmental Policy Act (NEPA) guidance requires that, in part:

"An appropriate response should be provided to each substantive comment….The response should adequately address the issue or concern raised by the commenter or, where substantive comments do not warrant further response, explain why they do not, and provide sufficient information to support that position." FHWA Technical Advisory T 6640.80.

I do not think you have addressed all my comments substantively, but rather have lumped most of them into a frequently asked questions response that did not specifically address many of my concerns.

337 My first concern, that the imposition of a decades-old plan on the growing and thriving community of Ahwatukee was addressed with a rather sweeping review of your failures to find alternatives (FEIS, Chapter 3, and B734-B736; Code 1, Alternatives, No-Action). An example of a categorical dismissal, without any substantive reasoning can be found on p. 3-9 of the FEIS; "This route [SR85/I-8 alternative] would continue to be available for interstate and inter-regional travel, but it does not meet the proposed action purpose and need as part of a regional transportation network, and therefore, it was eliminated from further consideration." Exactly how does it fail to meet purpose and need? Exploring alternatives does not mean rejecting each each one because they don't fit the original proposed route. The alternatives section rules out all alternatives for the eastern section, fixating on 338

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Code	Issue	Response
337	**Alternatives**	The purpose and need identified in Chapter 1 of the Final Environmental Impact Statement is based on socioeconomic factors and regional transportation demand and existing and projected transportation system capacity deficiencies. The Interstate 8/State Route 85 Alternative is in place today and will be in place in the future as an alternative route for motorists to use to bypass the entire Phoenix metropolitan area. The alternative serves that purpose, but does not address the need related to transportation demand and existing and projected transportation system capacity deficiencies in the Phoenix metropolitan area. For this reason, it was eliminated from further study.
338	**Alternatives**	In accordance with the National Environmental Policy Act, a range of reasonable action alternatives to carry forward for further analysis was determined through application of multidisciplinary criteria in a logical, step-wise progression. Alternatives were not disposed of or dismissed without a thorough evaluation using the multidisciplinary criteria outlined in the systematic alternatives development and screening process presented in Chapter 3 of the Draft and Final Environmental Impact Statements. This process, which occurred early in the environmental impact statement process, was revisited and validated in the Final Environmental Impact Statement (see page 3-2). The alternatives development and screening process considered the ability of an alternative to minimize impacts on the human and natural environments (see page 3-3 of the Final Environmental Impact Statement). Throughout the process described beginning on page 3-3, environmental impacts are used to eliminate alternatives. In the evaluation of action alternatives (see text beginning on page 3-62 of the Final Environmental Impact Statement), environmental and societal impacts play a substantial role in the identification of the W59 and E1 Alternatives as the Preferred Alternative. In comparison with the other action alternatives studied in detail, the Preferred Alternative is the least harmful alternative.

Code	Comment Document

Pecos Road. The final conclusion on p. 3-69 that the "ADOT sought to balance its responsibilities to address regional mobility needs while being fiscally responsible and sensitive [my emphasis] to local communities is insulting to the residents of Ahwatukee Foothills.

339 I still do not understand why the traffic needs of the area are not addressed from the standpoint of 2014, rather than 1985. As I noted in my earlier letter, Pecos Road is no longer a southern extreme of the region, but one of three major avenues through Ahwatukee, with schools, homes, and churches bordering it. ADOT's conclusion that there is no other alternative simply demonstrates a refusal to think beyond this old plan, a resistance to creative rethinking of the perceived problem.

340 My previous letter stated, that: "The transportation needs of Phoenix, given the rising pollution levels in this city with increased EPA warnings and rising costs of fuel, would be better served by the implementation of a north-south light rail." I would further note that the U.S. Public Interest Research Group (PIRG), in their report issued September 18, 2014, on Highway Boondoogles (USPIRG. 2014. Highway Boondoogles: Wasted Money and America's Transportation Future. U.S. PIRG Education Fund and Frontier Group) notes that, "Americans drive no more now than we did in 2005, and no more on average than we did at the end of Bill Clinton's first term as president. The recent stagnation in driving comes on the heels of a six decade-long Driving Boom that saw steady, rapid increases in driving and congestion … along with the investment of more than $1 trillion of public money in highways." (USPIRG 2014, p. 1). They note that the number of cars and licensed drivers have declined since peaking in the 2000s, with the use of non-driving modes of transportation on the rise, with transportation behaviors changing fastest among members of the Millennial generation. The Arizona PIRG similarly states in their Summer 2014 publication, Transportation Trends in Arizona 2014 that there has been a 10.5% decline in annual driving miles per capita in Arizona from 2005–2012. The number of registered vehicles in AZ dropped by 0.5% between 2007 and 2012. The ADOT growth projections seem to be rather inconsistent with this more recent data (AZ PIRG 2014, p.3).

The US PIRG's comment about state response could very well be a description of the South Mountain Freeway project:

> States continue to spend tens of billions of dollars on new or expanded highways that are often not justified in terms of their benefits to the transportation system, or pose serious harm to surrounding communities. In some cases, officials are proposing to tack expensive highway expansions onto necessary repair and reconstruction projects, while other projects represent entirely new construction. Many of these projects began years or decades ago and have continued moving forward with no newer evaluation of whether their existence is justified. (USPIRG 2014, p. 4).

The ADOT assertion that this freeway must be built because it is "a major component" (FEIS, 3-37) of the Regional Freeway and Highway System is not an argument of why it must be built, but just further demonstration that the entire regional transportation system needs to be reconsidered, rather than trying to impose planning done in the 1980s on the community as it exists today. The "historical identification" (FEIS, 3-37) doesn't make it more relevant; this only points to the fact that it is outdated.

The assertions of future demand do not consider changes in driving behavior occurring even as this freeway is being debated or adequately address how these traffic estimates would be changed by provision of more environmentally sound modes of transportation. The cursory rejection of the light rail alternative described on p. B735 based on "substantial community impact" does not begin to compare to the impacts identified in the South Mountain Freeway project. The "gains" in travel time in

Code	Issue	Response
339	**Purpose and Need**	The analysis of the purpose and need is based on today's conditions, not the conditions of 1985. In June 2013, the Maricopa Association of Governments approved new socioeconomic projections for Maricopa County. The purpose and need and analysis of alternatives were updated and reevaluated using these new socioeconomic projections and corresponding projections related to regional traffic. The conclusions reached in the Draft Environmental Impact Statement were validated in the Final Environmental Impact Statement (see Chapter 3, *Alternatives*). The road network for the Maricopa Association of Governments regional travel demand model includes all of Maricopa and Pinal counties as well as small portions of Yavapai and Gila counties. While a road may not be within the Study Area for the proposed action, because it is included in the Maricopa Association of Governments travel demand model road network, its influence is considered in the traffic analysis for the proposed action. The South Mountain Freeway will be a commuter corridor, helping to move local traffic. As with all other freeways in the region, trucks will use it for the through-transport of freight, for transport to and from distribution centers, and for transport to support local commerce. Nevertheless, the primary vehicles using the freeway will be automobiles.
340	**Traffic Projections**	The study has considered a variety of transportation modes: transportation system management/transportation demand management, mass transit (commuter rail, light rail, expanded bus service), arterial street improvements, land use controls, new freeways, and a No-Action Alternative. These alternatives alone or in combination would have limited effectiveness in reducing overall traffic congestion in the Study Area and, therefore, would not meet the purpose and need criteria; specifically, they would not adequately address projected capacity and mobility needs of the region. Mass transit modes such as light rail and an expanded bus system were reexamined in the Final Environmental Impact Statement and were eliminated from further study because even better-than-planned performance of transit would not adequately address the projected 2035 travel demand (see Final Environmental Impact Statement page 3-4). For example, the average daily ridership for the light rail system connecting downtown Phoenix and the Arizona State University campus was approximately 44,000 in 2014. This is only approximately 25 percent of the total daily vehicles projected to use the freeway in 2035. Two high-capacity transit corridors are being considered near the western and eastern extents of the Study Area, but such extensions would not adequately address the projected 2035 travel demand. A freeway/light rail combination would integrate a freeway and light rail system into a single transportation corridor (see Final Environmental Impact Statement page 3-6). Such a freeway/light rail system is planned at two locations: along Interstate 10 (Papago Freeway) and along State Route 51 (Piestewa Freeway). These two segments would connect to the light rail system currently in operation. With these two freeway/light rail segments already in planning stages, members of the public identified a similar opportunity along the freeway. Most freeway/light rail combinations, however, radiate from a central travel demand generator such as a business district or airport. No such systems are known to follow a circumferential route, as the freeway would. Furthermore, the additional right-of-way needed for light rail (generally, a 50-foot-wide corridor) would have substantial community impacts such as displaced residences and businesses and parkland impacts. Therefore, the light rail alternative and light rail and freeway combination would

(Response 340 continues on next page)

Code	Comment Document
	Pecos Road. The final conclusion on p. 3-69 that the "ADOT sought to balance its responsibilities to address regional mobility needs while being fiscally responsible and sensitive [my emphasis] to local communities is insulting to the residents of Ahwatukee Foothills. I still do not understand why the traffic needs of the area are not addressed from the standpoint of 2014, rather than 1985. As I noted in my earlier letter, Pecos Road is no longer a southern extreme of the region, but one of three major avenues through Ahwatukee, with schools, homes, and churches bordering it. ADOT's conclusion that there is no other alternative simply demonstrates a refusal to think beyond this old plan, a resistance to creative rethinking of the perceived problem. My previous letter stated, that: "The transportation needs of Phoenix, given the rising pollution levels in this city with increased EPA warnings and rising costs of fuel, would be better served by the implementation of a north-south light rail." I would further note that the U.S. Public Interest Research Group (PIRG), in their report issued September 18, 2014, on Highway Boondoogles (USPIRG. 2014. Highway Boondoogles: Wasted Money and America's Transportation Future. U.S. PIRG Education Fund and Frontier Group) notes that, "Americans drive no more now than we did in 2005, and no more on average than we did at the end of Bill Clinton's first term as president. The recent stagnation in driving comes on the heels of a six decade-long Driving Boom that saw steady, rapid increases in driving and congestion … along with the investment of more than $1 trillion of public money in highways." (USPIRG 2014, p. 1). They note that the number of cars and licensed drivers have declined since peaking in the 2000s, with the use of non-driving modes of transportation on the rise, with transportation behaviors changing fastest among members of the Millennial generation. The Arizona PIRG similarly states in their Summer 2014 publication, Transportation Trends in Arizona 2014 that there has been a 10.5% decline in annual driving miles per capita in Arizona from 2005–2012. The number of registered vehicles in AZ dropped by 0.5% between 2007 and 2012. The ADOT growth projections seem to be rather inconsistent with this more recent data (AZ PIRG 2014, p.3). The US PIRG's comment about state response could very well be a description of the South Mountain Freeway project: > States continue to spend tens of billions of dollars on new or expanded highways that are often not justified in terms of their benefits to the transportation system, or pose serious harm to surrounding communities. In some cases, officials are proposing to tack expensive highway expansions onto necessary repair and reconstruction projects, while other projects represent entirely new construction. Many of these projects began years or decades ago and have continued moving forward with no newer evaluation of whether their existence is justified. (USPIRG 2014, p. 4). 341 The ADOT assertion that this freeway must be built because it is "a major component" (FEIS, 3-37) of the Regional Freeway and Highway System is not an argument of why it must be built, but just further demonstration that the entire regional transportation system needs to be reconsidered, rather than trying to impose planning done in the 1980s on the community as it exists today. The "historical identification" (FEIS, 3-37) doesn't make it more relevant; this only points to the fact that it is outdated. 340 The assertions of future demand do not consider changes in driving behavior occurring even as this freeway is being debated or adequately address how these traffic estimates would be changed by provision of more environmentally sound modes of transportation. The cursory rejection of the light rail alternative described on p. B735 based on "substantial community impact" does not begin to compare to the impacts identified in the South Mountain Freeway project. The "gains" in travel time in 2

Code	Issue	Response
340 (cont.)		not be prudent and were eliminated from further study. The freeway mode was determined to be an appropriate response to the project's purpose and need. The freeway is part of the *Regional Transportation Plan* for the Maricopa Association of Governments region. The R*egional Transportation Pla*n, as described on pages 1-5 and 1-10 of the Final Environmental Impact Statement, addresses freeways, streets, transit, airports, bicycle and pedestrian facilities, freight, demand management, system management, and safety. The freeway is only one part of the overall multimodal transportation system planned to meet the travel demand needs of the Maricopa Association of Governments region. As noted on page 3-4 of the Final Environmental Impact Statement, however, even better-than-planned performance of transit and other modes would not adequately address the projected 2035 travel demand. Two of the key model inputs used to forecast travel demand (see Final Environmental Impact Statement page 3-27) account for the trends identified in the comment and in the Arizona PIRG findings: 1) the anticipated average number of vehicle trips within the region (including those to and from the region's households) on a daily basis (this number is tracked regularly by the Maricopa Association of Governments), and 2) the distribution of transportation modes used by travelers in the Maricopa Association of Governments region (also tracked regularly by the Maricopa Association of Governments). While per capita travel is decreasing or stagnant, the total travel is still increasing as the population increases.
341	**Purpose and Need**	The Maricopa Association of Governments approved new population, employment, and housing projections in June 2013, and the project team obtained new traffic projections based on the approved socioeconomic projections. The new data are presented in the Final Environmental Impact Statement beginning on page 1-11. The purpose and need and analysis of alternatives were updated and reevaluated using these new socioeconomic projections and corresponding projections related to regional traffic. While new projections based on the 2010 Census showed a lower projected population and vehicle miles traveled in 2035 than the previous projections, the conclusions reached in the Draft Environmental Impact Statement were validated in the Final Environmental Impact Statement (see Chapter 1, *Purpose and Need*, and Chapter 3, *Alternatives*). The traffic analysis demonstrated that the project is needed today and will continue to be needed into the future (see Final Environmental Impact Statement beginning on page 1-13). The Maricopa Association of Governments regularly updates its regional transportation planning studies that evaluate the travel demand across all modes of travel. The most recent study, the *2035 Regional Transportation Plan*, supports the need for the freeway along with other multimodal (freeway, light rail, bus, etc.) improvements to meet the region's future travel needs.

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Table 3-8 (FEIS 3-34) are so negligible, as to be doubtful as to their accuracy or significance. The statement (beneath Fig. 3-17 on p. 3-34) that "Taken individually, savings [time] may not appear to be substantial, but when considered in the context of the hundreds of thousands of drivers, each day, over the course of numerous years…" might be alternatively finished as: "the cumulative exposures to pollution and noise will very negatively affect the health of the residents whose community is being destroyed for these small individual savings." And, considering others' declining estimates of vehicular use noted above (PIRG), with increased use of alternative modes of transportation, and changes in driving behaviors of younger Millennials, these small differences may actually be completely without significance to the drivers, only the residents left to suffer the presence of the freeway.

342 The conclusions in Table 3-9 (FEIS, p. 3-34) make the assumptions that without the proposed freeway, that is no provisions for street widening, intersection improvements, alternative engineering solutions for the Broadway Curve, or in general, no efforts to readdress the needs of Phoenix in 2035. And what seems to the key conclusion, it would not "complete" the planned improvements in the Regional Transportation Plan. That is, the plan would need to be updated to reflect the failure in 1985 to anticipate the growth of Ahwatukee. So, once again, the conclusion rests on the attempt to impose 1985's mistake on us in 2015-2035.

I also expressed concerns about the current air pollution problems in Phoenix (Code 2, Air Quality), and how this proposed freeway would only exacerbate our problems. In my original letter, I quoted a 2010 assessment that:

> Arizona currently is not meeting the national standard for particulate matter, PM-10 (one-seventh the width of a human hair). Major concerns for human health from exposure to PM-10 include: effects on breathing and respiratory systems, damage to lung tissue, cancer, and premature death. The elderly, children, and people with chronic lung disease, influenza, or asthma, are especially sensitive.
>
> (Phoenix Business Journal, May 25, 2010).

343 Your response stated that the EPA had approved the 2012 Five Percent Plan (FEIS, B733, B2392) and found the area in attainment of the 24-hour particulate matter (PM10) standard based on monitoring data for 2010–2012. And while you note that the EPA would concur with an exceptional event such as a haboob, I do not believe that you could cite the pollution generated from drilling South Mountain to be an "exceptional" event, and your response does not assure me that Phoenix will meet those standards for 2014–2016, and into the future. I am not reassured by your statement that a contractor will submit a written blasting plan prior to the blasting. Your response, #5 (Air Quality) suggests the concern would be whether blasting would cause property damage. Does that include such property as the lungs of the area residents? This is just the beginning of the increased

344 health risks due to air pollution from the too near proximity of a freeway to houses, schools, and churches, but the construction period itself will pose significant hazards that are not at all adequately discussed here in the FEIS.

In terms of the effects of air pollution hazards generated, your response cherry picks the Health Effects Institute (HEI) Special Report #16 (FEIS, p.4-84; B737, Code 5 Air Quality Health Effects) to point out difficulties in reaching conclusions because of "occupational cohorts with high-concentration exposures" and the outrageous claim that animal studies cannot be relied upon to establish conclusions about carcinogens. Actually, HEI found extrapolation to humans to be "premature." Animal models, however, are used in science in all manner of experiments, in which the use of human subjects would be unethical. I note that the HEI receives half of its funding from the worldwide

Code	Issue	Response
342	**Purpose and Need**	The Maricopa Association of Governments approved new population, employment, and housing projections in June 2013, and the project team obtained new traffic projections based on the approved socioeconomic projections. The new data are presented in the Final Environmental Impact Statement beginning on page 1-11. The purpose and need and analysis of alternatives were updated and reevaluated using these new socioeconomic projections and corresponding projections related to regional traffic. While new projections based on the 2010 Census showed a lower projected population and vehicle miles traveled in 2035 than the previous projections, the conclusions reached in the Draft Environmental Impact Statement were validated in the Final Environmental Impact Statement (see Chapter 1, *Purpose and Need*, and Chapter 3, *Alternatives*). The traffic analysis demonstrated that the project is needed today and will continue to be needed into the future (see Final Environmental Impact Statement beginning on page 1-13). The Maricopa Association of Governments regularly updates its regional transportation planning studies that evaluate the travel demand across all modes of travel. The most recent study, the *2035 Regional Transportation Plan*, supports the need for the freeway along with other multimodal (freeway, light rail, bus, etc.) improvements to meet the region's future travel needs.
343	**Air Quality**	The U.S. Environmental Protection Agency agreed with the Federal Highway Administration, Arizona Department of Transportation, and the other interagency consultation partners that construction-related emissions did not need to be analyzed as part of the particulate matter analysis. The section, *Temporary Construction Impacts*, on page 4-173 of the Final Environmental Impact Statement, discusses potential air quality impacts during construction as well as mitigation measures that will be followed during construction, including pollution produced during blasting activities. These measures are confirmed in the Record of Decision in Table 3, beginning on page 38.
344	**Health Effects**	The Federal Highway Administration and Arizona Department of Transportation acknowledge that there is disagreement about the conclusions of Health Effects Institute Special Report #16; however, the summary of this report is presented in the nature of background information, and does not have a bearing on the actual analysis of the project, or the other information provided in the Final Environmental Impact Statement regarding likely mobile source air toxic health impacts. The mobile source air toxics emissions analysis for the project indicates that emissions will decline by over 80 percent in the mobile source air toxics study area irrespective of whether the project is constructed or not, and that the project only makes a very small difference in this decline; the summary of prior health risk assessments for other highway projects indicate that these projects were estimated to have a very small incremental health risk. The information on other sources of exposure to mobile source air toxics pollutants was not provided to diminish the impact of mobile source emissions, but to help illustrate the complexity of meaningfully quantifying the health risk attributable to just one source of these pollutants, a source that most people are likely to be exposed to for only a small portion of their nominal 70-year lifetime at a fixed location adjacent to the roadway.

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	motor vehicle industry as well as the additional funding from the FHWA and EPA, noted by your report. The idea you posit that highways are not the only source of air toxics, is hardly comforting, or a reason to vastly increment their levels in our environment.
344	In fact, the entire discussion of health effects seems to be a rather large obfuscation. It reminds me of those who still deny the link between tobacco and lung cancer. Continuing studies raise serious concerns about the effects of near proximal exposures to air toxics, and attempting to minimize these by pointing to other sources of toxics than vehicular exhaust, for instance, is just being evasive. The ongoing studies are serious enough that should not be so cavalierly set aside as not being definitive enough for the ADOT.
	The County of Los Angeles in a 2013 report, entitled "Air Quality Recommendations for Local Jurisdictions also notes that studies indicate that residing near sources of traffic pollution can exacerbate asthmas, increase cardiovascular morbidity, and serious respiratory problems. California's Air Resources Board has recommended that freeways be sited at least 500 feet from residences and schools, and notes that the HEI suggests that unhealthy exposures occur up to 300-500 m. (http://publichealth.lacounty.gov/eh/docs/AQinFreeways.pdf). Does the ADOT plan for land acquisition and compensation for the SMF go even this far to protect we unfortunate whose homes do not lie in the path of the freeway but just beyond that path? At least three schools are within 500 meters of the proposed freeway route on Pecos Road.
	Further, environmental health science researchers at UCLA found that air pollutants from I-10 extended as far as 1.5 miles in early morning hours, ten times greater than previously measured daytime measurements at higher traffic volumes, in a study conducted by the UCLA researchers, the University of Southern California and the California Air Resources Board. (Hu, S., S. Fruin, K. Kozawa, S. Mara, S. E. Paulson, and A. M. Winer. 2009. "A wide area of air pollutant impact downwind of a freeway during pre-sunrise hours." Atmospheric Environment 43(16):2541–2549.) There is so much evidence of negative health effects that the FEIS simply does not address, ignoring current research or attempting to dismiss it as inconclusive.
345	Additionally, the topic of hazardous cargo is given short shrift in the FEIS responses, citing a 1986 study of the two most frequently shipped hazardous materials. Is this the latest data you have available? (FEIS p. 4-166, B736, Code 15 no response offered B2393). There is not an adequate discussion of the particular risks to the community of Ahwatukee, given the concentration of housing in what has been referred to as the "nation's largest cul-de-sac." Emergency evacuation routes, in the event of an accident involving hazardous cargo, are not adequately addressed here. Yes, there are emergency response teams, municipal police and fire departments tasked with saving the lives of the residents endangered thusly, but the special configuration of the community, the proximity of the
346	freeway to the houses and schools, the likelihood of increased truck traffic, including less regulated Mexican trucking all pose special dangers. While the FEIS avers that creating a truck bypass was not a goal of the freeway, the very fact that through truck traffic would not be restricted in this residential area shows a blatant disregard for the health and safety of the citizens, that the ADOT blithely expects 'true' through truck-traffic to continue to use I-8/SR 85 – and not be required to use a bypass – again speaks to the lack of concern for the residents whose homes would now front this proposed freeway. Can the ADOT cite any evidence from the City of Phoenix or Maricopa County to support the fact that the emergency responders can ensure the safety of residents in any number of possibly
345	emergencies that might arise from an accident involving a truck—whether it be 10 percent of the traffic or more—carrying any of the many kinds of hazardous cargoes allowed to be transported? Have there been emergency simulation tests for response times, for mass evacuations?
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345	**Hazardous Materials**	According to 46 *Federal Register* 18026 (March 23, 1981), the environmental impact statement must discuss reasonably foreseeable actions. These are actions that are likely to occur or probable, rather than those that are merely possible. There are no requirements in 23 Code of Federal Regulations Part 771, Environmental Impact and Related Procedures, or in the Federal Highway Administration's Technical Advisory T 6640.8A, Guidance for Preparing and Processing Environmental and Section 4(f) Documents, to address releases of hazardous chemicals resulting from a transportation incident in National Environmental Policy Act documents for transportation projects such as the South Mountain Freeway. Reasonably foreseeable actions are those that are likely to occur or probable, rather than those that are merely possible. Planning for emergency situations will be initiated as the project moves into design. Issues related to a severe accident exist for many portions of the Phoenix metropolitan area. A fast and effective response is critical in the emergency response plans prepared by emergency service providers and is discussed on page 4-166 of the Final Environmental Impact Statement. Arizona highways, as with most highways across the United States, are open to all kinds of traffic, so long as the cargo being carried is in accordance with U.S. Department of Transportation regulations for the specific type of cargo. The Arizona Department of Transportation has a few locations in the state with hazardous cargo restrictions, but these restrictions are based on emergency response issues or roadway design limitations specific to that location. For example, the Interstate 10 Deck Park Tunnel has certain hazardous cargo transport restrictions because of the limited ability for emergency responders to address a hazardous materials incident in the tunnel. The South Mountain Freeway is expected to operate under the same rules as other similar facilities in the state; transport of hazardous cargo would be expected to be allowed (see text box on page 4-166 of the Final Environmental Impact Statement).
346	**Trucks**	Trucks crossing from Mexico to Arizona are restricted to the commercial zones within 25 miles of the border. The Federal Motor Carrier Safety Administration is administering a United States-Mexico cross-border, long-haul trucking pilot program. The program tests and demonstrates the ability of Mexico-based motor carriers to operate safely in the United States beyond the municipalities and commercial zones along the United States-Mexico border (see <fmcsa.dot.gov/intl-programs/trucking/trucking-program.aspx>). Petróleos Mexicanos (better known as Pemex), the Mexican state-owned petroleum company that serves all of Mexico, provides 15 parts per million in its sulfur diesel fuel in the border region, which is consistent with the U.S. Environmental Protection Agency requirements for American diesel fuel (see <transportpolicy.net/index.php?title=Mexico:_Fuels:_Diesel_and_Gasoline>). Arizona highways, as are most highways across the United States, are open to all kinds of traffic, so long as the cargo being carried is in accordance with U.S. Department of Transportation regulations for the specific type of cargo. The South Mountain Freeway will operate under the same rules as other similar facilities in the state; truck traffic will be permissible (see text box on Final Environmental Impact Statement page 4-166). The CANAMEX and Phoenix truck bypass (Interstate 8/State Route 85) routes are not mandatory for truck traffic; they are recommended. The Arizona Department of Transportation does not enforce these routes. It is not anticipated that these routes would be enforced as mandatory in the future.

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	Your response that prospective home buyers should have been informed of the proposed freeway after it had been conceived (FEIS, p. 4-13; B2394, Code 21 neighborhoods/communities) hardly addresses the fact that I was actually misled by a representative of the ADOT itself when I was purchased my home in 2002. I phoned the ADOT after being informed that this freeway "conception" from the 1980s had stalled. Unfortunately, I was rather naïve about Arizona highway politics, and I didn't realize that I needed to record the call, identify the authority (I recall being transferred by the person who answered to the phone to some "authority" within the office) with whom I spoke. I was told in 2002 by this ADOT representative that the proposed freeway project from 1985 would have to be re-envisioned if funding became available again, given the growth of the community, and that he anticipated it would be relocated further south on land belonging to the GRIC. Only later, did I learn that at the time of my phone call, GRIC had not even allowed their land to be surveyed or studied for this purpose. The FEIS, on p. 4-17, states that, "While a freeway has been planned in this location for many years [but only now being evaluated for environmental impact], it is recognized that the intensive transportation use would generally be incompatible with residential uses." How then are the residents with homes left to front this freeway supposed to live with this incompatibility? Further, on p. 4-28, there is a very questionable assertion that the E1 Alternative "would not substantially alter the character of nearly built-out Ahwatukee Foothills Village … because the freeway would be on the village 'outskirts.' Those 'outskirts' are presently populated, so that those 121 houses would be destroyed, and the houses just north of Pecos Road would then become the new boundary, with the freeway fronting their property. How does this not change the character and maintain the serenity of the neighborhood?
347	
	I understand, too, the opposition now of the GRIC (p. B2393, Code 9, Alternatives), reflecting both their own concerns about their community's health and well-being, but also concerns about the destruction of ancestral and sacred lands of the O'odham, specifically, South Mountain. It is not only our Native neighbors, but many of Phoenix's residents, who do not desire to see South Mountain drilled for this freeway project. I cannot disagree more with the ADOT statement that there is no "prudent" alternative to avoid use of the mountains. If the ADOT has determined that this freeway must be built, without regard to changing driving behaviors, then why would placing an alternative south of the GRIC not satisfy the purpose of the freeway, in its circumferential route? The FEIS rejects the light rail alternative, because it claims is cannot meet this desired circumferential route, but why is the circle so circumscribed? If Phoenix is growing, and the transportation plan allegedly accounting for project growth, why shouldn't the circle route be enlarged? Certainly, traffic patterns and studies of community growth point to increased development to the south of Phoenix, with increased demand on I-10 for north-south commutes into the city. What was not long vast open space between here and Tucson, is not dotted with businesses, communities, and residential development. When first conceived, Pecos Road was the "edge of town." It is no more, so why not admit that the southern limits to the region are moving, and re-envision the planning to reflect that?
348	
	The preservation of South Mountain should supercede the imposition of this outdated plan to protect this environmental resource. The rape of this natural landmark for the construction of yet another freeway cannot be easily mitigated. There is no such thing as a small rape.
349	
	My initial letter also expressed concern that the design of a depressed freeway instead of an at-grade rolling profile was being dismissed on the basis of cost – that is that the desirability of mitigating noise and visual blight to the neighborhood was simply dismissed in a cost-saving effort to push the plan through, acknowledging that an additional $400 million would be needed for right-of-way-acquisition. Certainly saving a few more residences is not the goal of the ADOT (except to obtain the cost savings of leaving them to front the freeway). The FEIS does little to respond to my concerns for a better design (FEIS, p. 3-18), but instead just repeats the DEIS. The fact that the value of the property has risen in the years since the this freeway was first conceived, increasing ADOT's cost of acquisition, is
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346 (cont.)		Because Mexican trucks are currently restricted to the border region, they are not operating in the Study Area and were not included in the air quality analyses, but the analyses included projected truck traffic. The carbon monoxide and particulate matter (PM_{10}) analyses demonstrated that the freeway will not contribute to any new localized violations, increase the frequency or severity of any existing violation, or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones (see discussions beginning on pages 4-75 and 4-76 of the Final Environmental Impact Statement, respectively). Mobile source air toxics can also have adverse health impacts, but the U.S. Environmental Protection Agency has not established National Ambient Air Quality Standards for these pollutants. As a result, the Federal Highway Administration analyzes these pollutants using emissions analyses. The mobile source air toxics emissions analysis for the Study Area found little difference in total annual emissions of mobile source air toxics emissions between the Preferred and No-Action Alternatives (less than a 1 percent difference) in 2025 and 2035. With the Preferred Alternative in 2035, modeled mobile source air toxics emissions will decrease by 57 percent to more than 90 percent, depending on the pollutant, despite a 47 percent increase in vehicle miles traveled in the Study Area compared with 2012 conditions (see discussion beginning on page 4-78 of the Final Environmental Impact Statement).
347	**Community Impacts**	Mitigation measures to minimize the impact of the freeway on the remaining residents are presented throughout Chapter 4 of the Final Environmental Impact Statement. These commitments are confirmed in Table 3, beginning on page 38, of the Record of Decision. The impacts on community character and cohesion are presented in Table 4-9 beginning on page 4-27 of the Final Environmental Impact Statement.
348	**Alternatives**	Alternatives located south of the Gila River Indian Community, such as the Interstate 8/State Route 85 Alternative, were considered in the study. These alternatives would not meet the proposed action purpose and need as part of a regional transportation network and, therefore, was eliminated from further consideration (see page 3-9 of the Final Environmental Impact Statement). These far south alignments that would pass through Pinal County and western Maricopa County are similar to freeway alignments proposed for State Route 303L south of Interstate 10 and the Hassayampa Freeway (as described in the Maricopa Association of Governments *Interstate 10/Hassayampa Valley Roadway Framework Study* and the *I-8/I-10 Hidden Valley Transportation Framework Study*). These alternatives serve a different purpose than the proposed freeway.
349	**Section 4(f) and Section 6(f)**	The context and attributes of the South Mountains are described in the Final Environmental Impact Statement. The acreage of parkland to be converted to a transportation use is reported on page 5-14 in the section, *Direct Use*. It is reported that 31.3 acres—or just less than 0.2 percent of the parkland—will be converted to a transportation use (this is a reduction in the amount of use planned for in 1988). The text goes on to point out other concerns associated with the direct use reported, and text on page 5-14, in the sidebar, "*The South Mountains in Phoenix's Sonoran Preserve System*," describes the importance of Phoenix South Mountain Park/Preserve in the region. Beginning on page 5-23 in the section, *Measures to Minimize Harm*, measures are presented to be undertaken to address the use impacts, including land replacement, on properties adjacent to the park. These commitments are confirmed in Table 3, beginning on page 38, of the Record of Decision.

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I understand, too, the opposition now of the GRIC (p. B2393, Code 9, Alternatives), reflecting both their own concerns about their community's health and well-being, but also concerns about the destruction of ancestral and sacred lands of the O'odham, specifically, South Mountain. It is not only our Native neighbors, but many of Phoenix's residents, who do not desire to see South Mountain drilled for this freeway project. I cannot disagree more with the ADOT statement that there is no "prudent" alternative to avoid use of the mountains. If the ADOT has determined that this freeway must be built, without regard to changing driving behaviors, then why would placing an alternative south of the GRIC not satisfy the purpose of the freeway, in its circumferential route? The FEIS rejects the light rail alternative, because it claims is cannot meet this desired circumferential route, but why is the circle so circumscribed? If Phoenix is growing, and the transportation plan allegedly accounting for project growth, why shouldn't the circle route be enlarged? Certainly, traffic patterns and studies of community growth point to increased development to the south of Phoenix, with increased demand on I-10 for north-south commutes into the city. What was not long vast open space between here and Tucson, is not dotted with businesses, communities, and residential development. When first conceived, Pecos Road was the "edge of town." It is no more, so why not admit that the southern limits to the region are moving, and re-envision the planning to reflect that?

The preservation of South Mountain should supercede the imposition of this outdated plan to protect this environmental resource. The rape of this natural landmark for the construction of yet another freeway cannot be easily mitigated. There is no such thing as a small rape.

350 My initial letter also expressed concern that the design of a depressed freeway instead of an at-grade rolling profile was being dismissed on the basis of cost – that is that the desirability of mitigating noise and visual blight to the neighborhood was simply dismissed in a cost-saving effort to push the plan through, acknowledging that an additional $400 million would be needed for right-of-way-acquisition. Certainly saving a few more residences is not the goal of the ADOT (except to obtain the cost savings of leaving them to front the freeway). The FEIS does little to respond to my concerns for a better design (FEIS, p. 3-18), but instead just repeats the DEIS. The fact that the value of the property has risen in the years since the this freeway was first conceived, increasing ADOT's cost of acquisition, is

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349 (cont.)		City of Phoenix planning efforts since the mid-1980s illustrate an awareness of the potential for the proposed freeway to affect Phoenix South Mountain Park/ Preserve. In 1989, the South Mountain Park Master Plan was adopted by the Phoenix City Council. The master plan shows the freeway alignment as adopted by the State Transportation Board in 1988. In 1990, the Phoenix Mountain Preserve Act was ratified by the Arizona Legislature. The Act did not apply to roadways through a designated mountain preserve if the roadway was in the State Highway System prior to August 15, 1990. The proposed freeway was in the State Highway System prior to 1990. Records prior to the Act suggest a primary reason for the exception was to allow the proposed freeway to go through Phoenix South Mountain Park/Preserve (see page 5-14 of the Final Environmental Impact Statement). The project team examined alternatives to avoid the park, but did not identify any feasible and prudent alternatives to avoid impacts. The Arizona Department of Transportation continues to work with park stakeholders to minimize impacts and address concerns. Measures to minimize harm to the park were developed (see Final Environmental Impact Statement, starting on page 5-23). The U.S. Department of the Interior reviewed the Final Environmental Impact Statement and commented, "The Department agrees that the South Mountain Park and Preserve (SMPP) is a Land and Water Conservation Fund (LWCF) assisted site that will be directly impacted by the subject project These documents assess the direct use of park land for freeway purposes to be 31.3 acres. We agree with the conclusions stated. We note that the "Measures to Minimize Harm" on the Section 4(f) Statement pages 5-23, 5-24, and 5-25 have annotated a commitment to provide replacement land for the converted park land. The Department concurs with the assessment of the impacts to the LWCF-assisted resource and acknowledges the mitigation commitment."
350	**Design**	As noted beginning on page 3-15 of the Final Environmental Impact Statement, depressing the Pecos Road sections would entail installation of pump stations to drain the main line freeway. A depressed freeway would also need a drainage channel to capture the off-site flows to prevent their entering the freeway. Pump stations were not used because of the high cost of construction and maintenance needed for their operation. The recommended freeway configuration has the E1 Alternative aboveground and the existing culverts extending to pass the drainage under the freeway. Pecos Road currently has numerous existing culvert crossings. Depressing the freeway in this area would eliminate the existing culvert crossings and potentially have adverse flooding impacts on adjacent properties. Extending the existing culverts or upsizing the culverts would maintain or improve drainage flows. This would ensure that there would be no adverse flooding impacts on adjacent properties. To reduce impacts by depressing the freeway in the Eastern Section, the Arizona Department of Transportation would: · need to spend an additional $400 million for right-of-way acquisition and construction · displace an additional 300 residences · maintain additional pump stations and detention basins for the life of the freeway · still have noise-related impacts requiring mitigation (i.e., noise barriers and their associated costs and visual impacts) Because the belowground option would result in substantially greater costs and residential displacements, this option was eliminated from further study.

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not an excuse to plan it on the cheap at the expense of the neighborhoods, to punish the residents for the poor planning of the ADOT. The FEIS, again, minimizes the importance of a depressed freeway but saying, "It cannot be assumed, however, that a depressed freeway would reduce all noise and visual impacts." No, we do not think the depressed freeway will magically eliminate all the negative impacts of a freeway next to our homes, but we would like to reduce the impact as much as possible. The rolling profile was "carried forward" to save money apparently, without regard to the residents who are being impacted.

351 The FEIS's response was also inadequate to my point that the proposed rolling profile would limit the access necessarily, and one proposed elimination would be at 32nd Street, which would only serve to increase traffic on Liberty Lane, already congested in school opening and closing hours, to enable transportation to schools. A traffic study completed by the City of Phoenix in 2006 was cited by the FEIS (B2395)—an eight-year-old study (!) in this neighborhood is hardly reliable data to judge the impact on the local street system. I would invite anyone from that study group or ADOT to drive down Liberty Lane between 24th and 32nd Streets at the beginning and ending of school days (with three schools on this short section of street) and truly judge the impact of closing access to 32nd Street.

352 The FEIS response on noise pollution also largely referred back to the DEIS (FEIS, B739). Chronic exposure to noise is associated with hypertension and heart disease, as well as hearing impairment. We live in a noisy world, but the peace of our homes will most definitely be disturbed by having this freeway front it, and the FEIS response here does little to reassure that real efforts will be made to protect exposures to excessive noise. Rather, the FEIS notes (p. 4-99) that 20 new barriers will be needed along the E1 Alternative to reduce noise levels to ADOT NAP standards, and that "four of the receivers … would not be reduced in full accordance even with a 20-foot high noise barrier. How can this be justified? Given the underestimation of truck traffic, one might expect there would be a consequent underestimation of the noise generated, as well.

353 The FEIS suggests the loss in tax revenue would be 'nearly inconsequential' (B2394, Code 19, Economics, socioeconomics) to the state. That does not address the loss of value that homeowners residing next to the freeway will experience. We bought our home for our family in good faith, chose a neighborhood with a low crime rate, and good schools, but that will change, despite the very limited and glossed over assumptions put forth in the FEIS. Our loss will be far more consequential.

Sincerely,

Patricia Mason

16833 S. 24th Place

Phoenix, AZ 85048

On Jul 20, 2013, at 5:51 PM, Patti Mason wrote:

July 20, 2013

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351	**Design**	The determination to not include an interchange at 32nd Street was not dictated by the use of the rolling profile or the depressed profile. The interchange would have required the displacement of over 100 homes and would have been located near an existing high school. The City of Phoenix recommended that, based on these impacts, the interchange be removed from the study. The recommendation was made regardless of the freeway profile. There is no reason to assume that traffic conditions would have changed substantially since 2006 because no additional developments have been approved in the area.
352	**Noise**	The noise analysis conducted for and documented in the Draft and Final Environmental Impact Statements complied with the Federal Highway Administration's regulations for conducting noise analyses in 23 Code of Federal Regulations § 772. The noise analysis was updated for the Final Environmental Impact Statement using the most recent Federal Highway Administration and Arizona Department of Transportation policy and traffic projections provided by the Maricopa Association of Governments. Discussion of this updated analysis begins on page 4-88 of the Final Environmental Impact Statement. No substantial differences between the analyses presented in the Draft and the Final Environmental Impact Statements resulted. The noise report may be found on the study Web site at <azdot.gov/southmountainfreeway>. Without noise mitigation, noise levels from the freeway are predicted to range from 61 A-weighted decibels to 78 A-weighted decibels at the nearest homes, depending on the distance from the freeway. Noise mitigation was estimated to reduce those noise levels to a range of 55 A-weighted decibels to 64 A-weighted decibels for most of the areas (see Final Environmental Impact Statement page 4-93). Because of topography, local street traffic, or other engineering constraints in a few areas, estimated noise levels will not be reduced as much and will be as high as 64 A-weighted decibels to 70 A-weighted decibels (see Final Environmental Impact Statement page 4-93). Although not recognized by the Federal Highway Administration as mitigation, rubberized asphalt will be used as the top level of paving; it is discussed beginning on Final Environmental Impact Statement page 4-99.
353	**Community Impacts**	As noted on page 4-13 of the Final Environmental Impact Statement, the City of Phoenix first documented a future major transportation facility to serve the southwestern part of Phoenix in a 1980 planning report, *Annexation Implications in the Area South of South Mountain Park*. The City of Phoenix recommended constructing a six-lane freeway interchange on Pecos Road and a six-lane street from Interstate 10 (Maricopa Freeway) west on Pecos Road and continuing northwest to 51st Avenue (City of Phoenix 1980). In 1985, the Maricopa Association of Governments modified the proposal by proposing a future six-lane freeway on a similar alignment (instead of the six-lane street). The Maricopa Association of Governments proposal was included in the 1985 *Long-Range Transportation Plan*, and the evolved South Mountain Freeway has been included in adopted long-range plans ever since. With the Study Area subject to continued land development projects, the proposed action will require acquisition of developed properties and relocation of property owners for right-of-way where there was once mostly vacant land. Public comments received from potentially affected property owners as part of the environmental impact statement process suggest the City of Phoenix, land

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Code	Issue	Response
353 (cont.)		developers, and Arizona Department of Transportation did not disclose the future freeway project. Review of previously published Arizona Department of Transportation, City of Phoenix, Maricopa Association of Governments, and developer documents confirms freeway project and alignment disclosure has occurred since 1980, when the Study Area was still primarily vacant land. Since original adoption of the South Mountain Freeway alignment (an alignment similar to the W59 and E1 Alternatives) in 1984, the Arizona Department of Transportation has purchased some right-of-way in the Western and Eastern Sections (the original alignment and locations of property owned by the Arizona Department of Transportation in 2000 are shown in maps on pages 4-12 and 4-13 of the Final Environmental Impact Statement). In the same time period, the City of Phoenix has approved six planned community districts adjacent to the proposed eastern alignment. These developments are Lakewood, Foothills, Pecos Road, Goldman Ranch, Foothills Reserve, and South Mountain 620. Approvals for these require developers to inform potential buyers of conflicts with planned transportation projects such as the proposed action. These mechanisms include: **City of Phoenix responsibility** - Stipulations referring to the freeway alignment were included in the zoning cases for each of the developments, except for the Lakewood Planned Community District. The Circulation Master Plan for the Lakewood Planned Community District identifies the clean take line (the line where subdivisions are severed for the freeway and the remaining properties continue to function as intended) for the future freeway. The City of Phoenix makes available a published media guide disclosing the freeway awareness stipulations or plan reference for each planned community district. **Developer responsibility** - Arizona real estate law requires developers to disclose adverse conditions such as construction of a future freeway in a public document [5 Arizona Administrative Code 650, R4-28-A1203]. Additionally, Arizona State Law states that subsequent purchasers have the right to "receive a copy of the public report" and "any contract, agreement or lease which fails to make disclosures . . . shall not be enforceable against the purchaser" (5 Arizona Revised Statutes 32-2185.06). Developers typically disclose adverse conditions in the covenants, conditions, and restrictions document, which is provided to potential buyers who in turn are required to acknowledge they have received and read the covenants, conditions, and restrictions by signing documents provided during the closing period of the sale. **Arizona Department of Transportation responsibility** - The Arizona Department of Transportation uses the "Red Letter" process to coordinate planned transportation projects with proposed developments within local jurisdictions. Local jurisdictions are requested to notify the Arizona Department of Transportation of potential development plans within ¼ mile of established or proposed project corridors. The Arizona Department of Transportation assigns a Red Letter Coordinator to review the proposed development projects and to provide a written response explaining the transportation project's potential effects on the proposed developments.

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Arizona Department of Transportation (ADOT)

1655 West Jackson Street, MD 126F

Phoenix, Arizona 85007

projects@azdot.gov

354 As a citizen of Phoenix, a resident of Ahwatukee, a voter, and a member of Protecting Arizona Resources and Children (PARC), I am writing to state my opposition to the proposed expansion of Loop 202/South Mountain Freeway (SMF), and urge the ADOT to NOT BUILD on Pecos Road.

In the intervening years since the project was first approved in 1985, the community of Ahwatukee was allowed to grow and expand to become a thriving neighborhood in Phoenix, with excellent schools that attracts new residents, and a good place to raise families.

When the original funding and support for this project dissipated, the project should have been scrapped, and a new plan should have considered the growth of Maricopa County since 1985, with developments to the south such as Queen Creek. Pecos Road is no longer the southern extreme of the region, but rather one of three major avenues through Ahwatukee with schools, homes, and churches bordering it.

The transportation needs of Phoenix, given the rising pollution levels in this city with increased EPA warnings and rising costs of fuel, would be better served by the implementation of a north-south light rail. The EPA has previously said that federal transportation funds could be withheld if Arizona cannot meet acceptable air quality standards, determining that pollution spikes cannot be attributed to simply dust storms: "Arizona currently is not meeting the national standard for particulate matter, PM-10 (one-seventh the width of a human hair). Major concerns for human health from exposure to PM-10 include: effects on breathing and respiratory systems, damage to lung tissue, cancer, and premature death. The elderly, children, and people with chronic lung disease, influenza, or asthma, are especially sensitive." (*Phoenix Business Journal*, May 25, 2010). Add the blasting of South Mountain, the bedrock blasting on the E-1 "alternative" identified by the ADOT, in the construction of the freeway itself, and the subsequent vehicular pollution, and you have a recipe for increased health risks, health costs, decreased federal funding, and overall decrease in quality of life itself.

Moreover, "a 2008 study of Maricopa County by the Arizona Department of Environmental Quality and Arizona State University found a correlation between elevated amounts of particle pollution and asthma-related absences at nearby schools." (*Ahwatukee Foothill News*, February 18, 2010.) At least three schools are within 500 meters of the proposed freeway route on Pecos Road. Not only does the proximity of the proposed freeway to homes and schools create a health risk for schoolchildren and residents, but the nature of the topography in the community itself could affect how the air pollution generated from the freeway stagnates between South Mountain and the Estrellas.

The passage of Proposition 400 in 2004 for a Regional Transportation Plan was not a mandate to continue this ill-fated project. At the time of the vote, the advertising and messaging to the voters was largely about the light rail system. Voters approved the funding for new transit systems, improvements to existing roads, and construction of new freeways. But the Loop 202 extension was presented as under study with various alternative routes, and with alleged discussions with the Gila River Indian Community (GRIC).

This citizen was informed, upon phoning the ADOT, when contemplating moving to Ahwatukee in 2002 that the proposed freeway project from 1985 would have to be re-envisioned if funding became available, given the growth of the community, and it was anticipated it would be relocated further south on land belonging to the GRIC. Only later, did I learn that at that time GRIC would not even allow their land to be surveyed or studied for this purpose. In retrospect, this seems to have been ADOT wishful thinking spoken as fact. As we are all aware, various negotiations did begin and stop with GRIC, and they have voted for a no-build option, an option not offered to the citizens of Phoenix in their advisory groups. Their opposition, like ours, reflect concerns not only about pollution but also destruction of ancestral and sacred land.

Code	Issue	Response
354		Comment submitted on the Draft Environmental Impact Statement reviewed (see response on page B2392 of Volume III of the Final Environmental Impact Statement).

Code	Comment Document

While then Phoenix Mayor Gordon was on record (at the ADOT website) as lauding the infrastructure ensured by Prop 400's passage, he is also on record as saying that he did not support the Pecos Road alignment. (*Ahwatukee Foothill News*, March 9, 2007). There has never been a mandate for the construction of Loop 202 on Pecos Road, and yet, it continually is presented as the only possible route.

Other alternatives such as the SR 85/I-8 truck bypass are dismissed in the Draft Environmental Impact Statement (DEIS) as not meeting "the proposed action purpose and need as a regional transportation network." This is a wanting explanation of its elimination from consideration; empty words to fill the pages. While the DEIS discounts the idea that the proposed South Mountain Freeway will be a truck bypass, or alternative to the Canamex route, there are no proposed restrictions to prevent trucks from Mexico, with high-sulfur diesel from choosing this route past schools and homes. There is also no serious discussion in the DEIS about hazardous waste accidents resulting from an accident on the proposed freeway. The layout of Ahwatukee itself – "the world's largest cul-de-sac" – means that any evacuation necessary would be difficult to execute. Will trucks carrying hazardous cargo be rerouted? There is certainly no discussion or plan for this contingency.

This freeway will be destructive to the Ahwatukee community, to the sacred South Mountain (of the O'odham tribes) and the generally beloved South Mountain in the largest urban park nationally. It will be a financial disaster as well as an environmental one. MAG's insistence on building this boondoogle will result in the allocation of regional funds to purchase expensive homes in Ahwatukee for destruction and in costs to blast the mountain, with other projects going unfunded. The DEIS notes, in response to feedback for more light rail, that "no funds are available or anticipated to support a combined system through the Study Area." Despite the public's approval of a regional transit plan, the "plan" cannot consider light rail because it has allocated all of its funding toward implementing the outdated freeway. Not only alternative alignments, but alternative uses of transportation monies to meet the region's infrastructure needs have all been eliminated here in order to present this project as something that is inevitable. It is not.

The impact will not only be this community—in terms of increased noise and air pollution, risks of greater environmental disasters with unregulated truck traffic, and loss of tax revenues with home, church, and business destruction, lowered property values of remaining homes, and increased crime—but have effects on the entire region.

Those who voted for a regional transportation plan may have believed that other areas of the region would also be well served, as opposed to one area being ill-served. Solutions to the traffic congestion, for instance, in the Broadway Curve area, would be better found in engineering projects wisely addressed by civic planners than in a truck bypass in Ahwatukee. Not only would the community of Ahwatukee be blighted by the extension of 202, the entire region would suffer the consequences of this ill-spent allocation of the transportation funds. Taxpayer funding will be wasted, as ADOT and MAG continue to push for 25-year old plans to be implemented, with no forward-looking planning.

Suggestion for a depressed freeway instead of an at-grade rolling profile to possibly reduce some of the noise and visual impacts were quickly dismissed, primarily due to cost factors. In other words, there is not sufficient funds to protect the neighborhood through improved engineering plans, to do the job right. The suggestion that there would be more residential displacements is not contrasted against whether the residents whose homes are saved to front an at-grade rolling freeway would perhaps have rather been spared this atrocity. And, the final piece of "logic" offered by the DEIS that even with a depressed freeway, there would still be visual and noise impacts that would require mitigation is not an argument for the rolling profile, but for a no build option!

The proposed rolling profile would limit the access necessarily, and one proposed elimination would be at 32nd Street. This would serve to increase traffic on Liberty Lane, already congested in school opening and closing hours, to enable transportation to these schools. The schools and houses "saved" by the cost-cutting measures for freeway construction would suffer greatly.

Conclusions drawn concerning "2035 traffic conditions" in the DEIS are based on faulty reasoning as well. To suggest that nonfreeway alternatives would "capture only a small percentage of the capacity deficiency" does not consider that the alternative could be the wiser use of scarce resources to fund light rail and other forms of transportation that do not rely upon the one person-one car formula now that congests our regions and ensures more and more air pollution advisories. Rather this argument can only envision a future that is exactly like the present, and the Loop 202 would just be another congested area to further depress the living quality for Phoenix. Surely, the creators and perpetrators of the 1985 plan will have moved on by 2035, and we can only hope that the civic planners in 2035 are not left with a terrible mess to try to rectify.

8

Code	Issue	Response

Code	Comment Document

The No Action alternative is included in this DEIS, unlike in the Citizen's Advisory Group discussions, only because NEPA requires the comparison of alternatives. Again, the logic employed for assessing the impacts of No Action assume that No Action means only not building the freeway, and not the use of the funds for the freeway to be used for alternative means of transportation to meet future needs. The argument that other transportation planning might need to be reassessed if this plan is not implemented is a circular argument, in which one is being told that no action is "inconsistent" because MAG and ADOT intend to build this freeway. The No Action option, a misnomer that should be written as "No Build" does "not satisfy" MAG's and ADOT's needs to implement this out-of-date plan. We do not need this lengthy document to understand this much.

Similarly, in the discussion of the impact of the proposed freeway on the cultural and historical resources, while it is admitted that all build options will cause negative impacts, and the "No Action" alternative leaves these undisturbed, the DEIS is quick to point out that "continuing urban development from projected growth in the Study Area" could result in losses as well. That's like telling the jury in a murder trial that if a murder victim had not been killed by the defendant, he might have been hit by a car anyway trying to get away.

Although the DEIS has as ADOT's mission "to provide a safe, efficient, cost-effective transportation system that links Arizona to the global economy [Mexican truck traffic?], promotes economic prosperity, and *demonstrates a respect for Arizona's environment and quality of life*" [my italics added], this project to extend the Loop 202, the South Mountain Freeway, fails miserably on all counts. The demonstration of respect would be laughable, indeed, if it were not such a serious threat to the residents of this area.

Sincerely,

Patricia Mason

16833 S. 24th Place

Phoenix, AZ 85048

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COMMENT 17

Comments on the South Mountain Freeway (Loop 202) Final Environmental Impact Statement and Section 4 (f) Evaluation ("FEIS")

By

James E. Jochim

Code	Issue	Response
355		Title page.

Code	Comment Document

November 25, 2014

Arizona Dep't of Transportation
Environmental Planning Group
1655 W. Jackson Street
Phoenix, Arizona 85007
Att: Brock Barnhart

Re: Comments on the South Mountain Freeway (Loop 202) Final Environmental Impact Statement and Section 4 (f) Evaluation ("FEIS")

Dear Mr. Barnhart:

356 Attached is a vivid example of the foregone conclusion reached by ADOT on the selection of the Pecos Road as the E1 Alternative for the Proposed Loop 202 South Mountain Freeway. This "Master Plan Subdivision Composite" Map dated April 1995 shows the ADOT "Cleantake Line" north of Pecos Road and running for the entire length of The Foothills at South Mountain Park. This line shows that ADOT acted in a predecisional mode in 1995 to select Pecos Road before any environmental studies were even activated. The southern boarder of The Foothills is approximately 2 ½ miles long and The Foothills contains 4,329 Residences and 44 Business units.

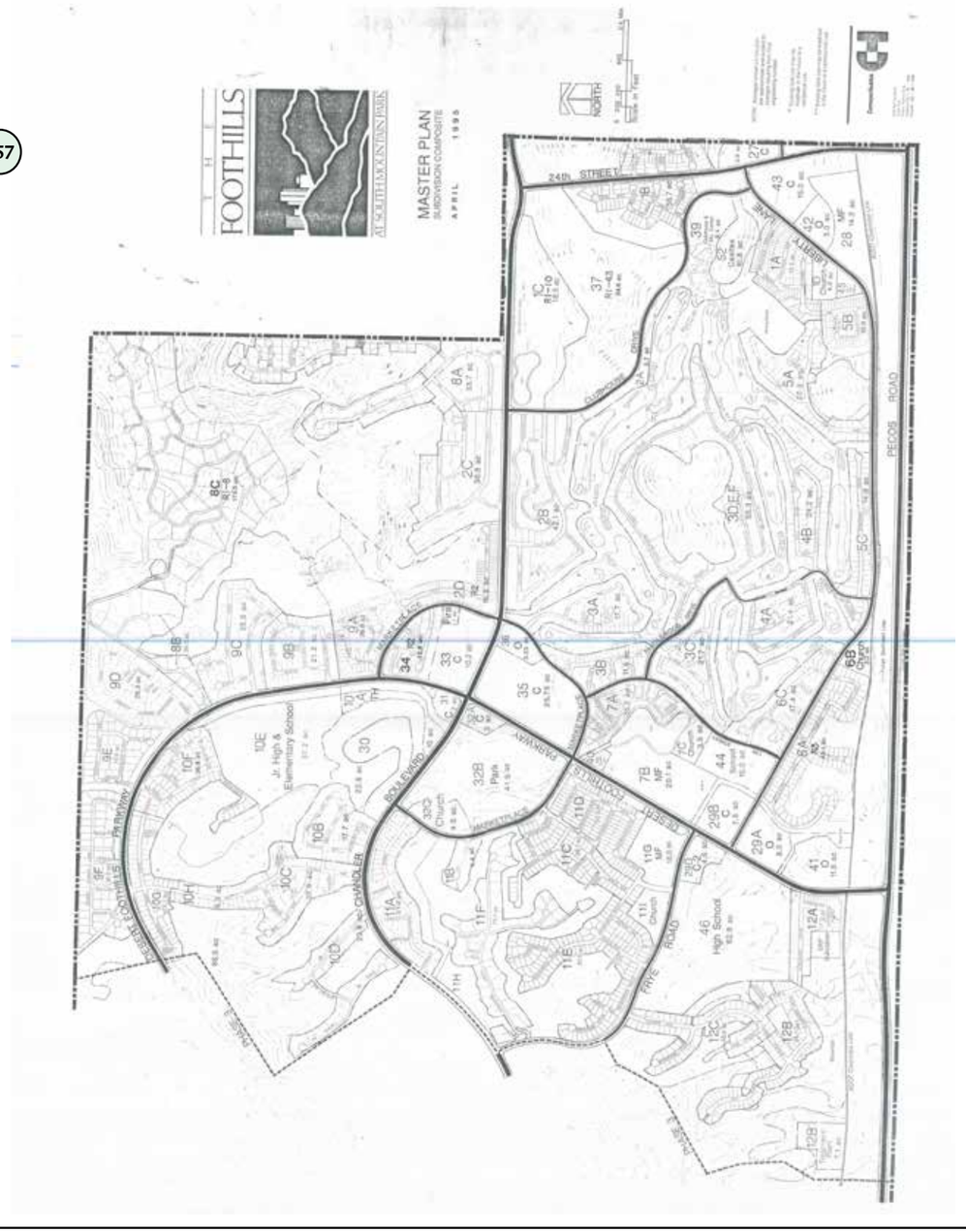
On a personal note I bought my home in The Foothills in May of 1995 and I am the Statutory Agent & Treasurer of Protecting Arizona's Resources and Children, Inc. (PARC).

Sincerely,

James E. Jochim
1231 E. Desert Flower Lane
Phoenix, AZ 85048
Telephone (480) 460-2535

Attachment: One copy of The Foothills at South Mountain Park Master Plan Subdivision Composite dated April 1995.

Code	Issue	Response
356	Design	The map reflects the right-of-way footprint developed as part of the 1988 State-level environmental assessment and design concept report prepared for what was then called the Southwest Loop Highway (see references on page 1-8 of the Final Environmental Impact Statement). At the outset of the environmental impact statement's alternatives development and screening process, the 1988 alignment was considered along with other modes and alignments (see text beginning on page 3-3 of the Final Environmental Impact Statement).

Code	Comment Document
357	

Code	Issue	Response
357		Map reviewed.

Code	Comment Document

From: Projects
To: ADOT
Cc: Spargo, Benjamin; Robert Samour; Carmelo Acevedo; Gruver, Terry
Subject: FW: Comments of the Phoenix Mountain Preservation Council Inc., to South Mountain Freeway
Date: Tuesday, November 25, 2014 12:36:33 PM
Attachments: PMPC 2011_11_25 Comments SR 202L.pdf

Adding some additional names to this forward as this looks to be a special interest group.

Brock J Barnhart
Assistant Communication Director
1655 W Jackson St. MD 126F
Phoenix, AZ 85007
602-712-4690
azdot.gov
ADOT Communications

From: Susan Montgomery [mailto:smontgomery@milawaz.com]
Sent: Tuesday, November 25, 2014 11:27 AM
To: Projects
Cc: Robin; Patrick McMullen
Subject: Comments of the Phoenix Mountain Preservation Council Inc., to South Mountain Freeway

Dear ADOT Project Team:

1

Please find attached the comment letter of the Phoenix Mountain Preservation Council, Inc. (PMPC) for your consideration with regard of to the Final Environmental Impact Statement and Section 4(f) analysis regarding the SR 202L project being proposed by ADOT and FHWA. A hard copy will follow in the mail.

Should you have any questions regarding these comments or have any technical concerns with opening the attachment, please contact me immediately. Regards,

Susan B. Montgomery, Esq.
MONTGOMERY & INTERPRETER, PLC
?4835 E. Cactus Rd., Suite 210?
Scottsdale, AZ 85254
Ph (480) 513-6825
Fax (480) 513-6948

Code	Issue	Response
1		Comment noted. Responses to specific comments are provided on the following pages.

Code	Comment Document

liability for any loss or damage arising from the use of this e-mail or attachments, or for any delay or errors or omissions in the contents which result from e-mail transmission.

Code	Issue	Response

Code	Comment Document

November 25, 2014

Via email at projects@azdot.gov
and Certified U.S. Mail, Return Receipt Requested
7010 1060 0002 2186 3861

South Mountain Freeway Project Team
Arizona Department of Transportation
1655 West Jackson Street, MD 126F
Phoenix, AZ 85007

Re: South Mountain Freeway, ADOT Project Number: 202L MA 054 H5764 01L Federal-aid Project Number: NH-202-D(ADY)

Dear South Mountain Freeway Project Team:

This letter is written on behalf of the Phoenix Mountain Preservation Council, Inc. (PMPC) with regard to the Final Environmental Impact Statement (FEIS) and Section 4(f) Evaluation prepared by the Federal Highway Administration (FHWA) and the Arizona Department of Transportation (ADOT) under the National Environmental Policy Act, 42 U.S.C. § 4321, *et seq.* (NEPA), Section "4(f)" of the U.S. Department of Transportation Act, 49 U.S.C. § 303, and applicable law.

2 PMPC opposes any alignment of the Loop 202 South Mountain Freeway ("SR 202L" or "the project") that would trespass onto the South Mountain Park/Preserve ("SMPP" or "the Park") or result in the destruction of ridgelines or lands within Park. Our mountain preserves ensure a lifestyle that 80% of Arizona voters consistently support. The mountain preserves are unique and are for people and wildlife, not for vehicle trespass. PMPC is also concerned that the alignment of SR 202L will adversely impact our public parks and schools and the important recreational and other opportunities that these public places provide.

The PMPC is an organization put into place by Arizona visionaries. For the last 40 years, PMPC members have worked tirelessly to preserve and protect our precious Mountain Preserve system and to monitor and address the rapid population that surrounds these important public resources, through advocacy, education, political action and collaboration with citizens, the City of Phoenix and other like-minded organizations and agencies.

Code	Issue	Response
2	**Section 4(f) and Section 6(f), Phoenix South Mountain Park/ Preserve**	The context and attributes of the South Mountains are described in the Final Environmental Impact Statement, beginning on page 5-14. The acreage of parkland to be converted to a transportation use is reported on page 5-14 in the section, *Direct Use*. It is reported that 31.3 acres—or just less than 0.2 percent of the parkland—will be converted to a transportation use (this is a reduction in the amount of use planned for in 1988). The text goes on to point out other concerns associated with the direct use reported, and text on page 5-14, in the sidebar, "*The South Mountains in Phoenix's Sonoran Preserve System*," describes the importance of Phoenix South Mountain Park/Preserve in the region. Beginning on page 5-23 in the section, *Measures to Minimize Harm*, measures are presented to be undertaken to address the use impacts, including land replacement, on properties adjacent to the park. City of Phoenix planning efforts since the mid-1980s illustrate an awareness of the potential for the proposed freeway to affect Phoenix South Mountain Park/ Preserve. In 1989, the South Mountain Park Master Plan was adopted by the Phoenix City Council. The master plan shows the freeway alignment as adopted by the State Transportation Board in 1988. In 1990, the Phoenix Mountain Preserve Act was ratified by the Arizona Legislature. The Act did not apply to roadways through a designated mountain preserve if the roadway was in the State Highway System prior to August 15, 1990. The proposed freeway was in the State Highway System prior to 1990. Records prior to the Act suggest a primary reason for the exception was to allow the proposed freeway to go through Phoenix South Mountain Park/Preserve (see page 5-14 of the Final Environmental Impact Statement). The project team examined alternatives to avoid the park, but did not identify any feasible and prudent alternatives to avoid impacts. The Arizona Department of Transportation continues to work with park stakeholders to minimize impacts and address concerns. Measures to minimize harm to the park were developed (see Final Environmental Impact Statement, starting on page 5-23). The Department of the Interior reviewed the Final Environmental Impact Statement and commented, "The Department agrees that the South Mountain Park and Preserve (SMPP) is a Land and Water Conservation Fund (LWCF) assisted site that will be directly impacted by the subject project. These documents assess the direct use of park land for freeway purposes to be 31.3 acres. We agree with the conclusions stated. We note that the "*Measures to Minimize Harm*" on the Section 4(f) Statement pages 5-23, 5-24, and 5-25 have annotated a commitment to provide replacement land for the converted park land. The Department concurs with the assessment of the impacts to the LWCF-assisted resource and acknowledges the mitigation commitment." The complete letter can be found in page A5 of this Appendix A.

Code	Comment Document

PMPC members and people not only from Arizona, but from around the world, heavily use the Phoenix Preserves to recreate for physical and mental health in a unique Sonoran Desert environment that is quickly disappearing as the result of development and growth. The serene and close proximity to a large urban area makes South Mountain Park/Preserve a convenient place for everyone to reflect, hike, bike, horseback ride, and study flora and fauna within minutes of our homes. Destruction of any part of this natural resource will disrupt and destroy the plant and wildlife as well the visual, tranquil recreation experience.

The PMPC Board is made up of an Executive Board consisting of a president, vice-president, treasurer, secretary and recording secretary and supported by 15 board members. Monthly meetings are held January through September and are open to the public. Committees are regularly formed to address specific projects and meet as needed. Annual dues are collected to support a quarterly newsletter, webpage and North Mountain Visitor Center rental. Membership is open to anyone.

3

As discussed in greater detail below and in our prior comments on this project, ADOT and the FHWA (collectively, "the Departments") have failed to fulfill their statutory obligations under NEPA, Sec. 4(f) and other applicable provisions of law. For this reason, PMPC urges the Departments to take a step back and revisit the FEIS and the Section 4(f) process in order to meaningfully address the serious failings in these documents that do not adequately identify, analyze, minimize or mitigate for the impacts of this project.

PMPC reserves the right to submit additional comments to any supplemental materials or new information or analysis prepared by the Departments in relation to this this project. In addition, PMPC expressly incorporates the comments of Protecting Arizona's Resources and Children (PARC), as well as those comments submitted on behalf of our individual members, including but not limited to those filed by Robin Salthouse, Sally Lindsay, Jan Hancock, Wendy Hodgson, Patrick McMullen, and Susanne Rothwell.

I. The South Mountain Park/Preserve Is a Unique and Valuable Public Resource

"The natural beauty of our horizon, our close-in mountain slopes and natural areas – this is the very substance of the natural environment that has been so instrumental in the population and economic growth of this region. The grand scale and rugged character of these mountains have set our lifestyle, broadened our perspective, given us space to breathe, and freshened our outlook. These mountains are the plus that still outweighs the growing minuses in our environmental account." In Luckingham, preserve advocate (1989).

Code	Issue	Response
3		Comment noted. Responses to specific comments are provided on the following pages.

Code	Comment Document

4

South Mountain Park/Preserve is one of the largest municipally operated parks in the country. It has been called the "centerpiece" of the Phoenix Sonoran Preserve System. FEIS at 5-14. The Park's roots date back to 1924, when local citizens, who recognized the unique value and importance of the area, first started the process to obtain 13,000 acres of the Park from the United States. Later, under the Civilian Conservation Corps programs, trails were improved and recreational and other structures were built in the Park. The National Park Service drafted a park plan in 1935 that included a myriad of uses for the Park, including hiking, riding, picnic areas, and scenic overlooks.[1] Both the Phoenix Historic Preservation Office and the State Historic Preservation Office (SHPO) agree that SMPP is eligible for listing on the National Historic Register of Historic Places under Section 106 of the National Historic Preservation Act, 16 U.S.C. § 470, *et seq.* (NHPA).

With more than 16,000 acres of rugged, biologically diverse and beautiful desert habitat preserved in the urban environment, SMPP is known by both locals and travelers from around the world as a recreation gem and tourist destination. With more than 51 miles of primary trails for horseback riding, hiking and mountain biking, SMPP was wisely set aside for human enjoyment and the protection of wildlife and natural habitats.

Today, SMPP remains a place of profound solace and peace in our often noisy and hectic lives, while its steep ranges, rocks, soil, plants and animals – as they exist in the natural world – continue to play a role in the spiritual and cultural identity of tribal members of the Gila River Indian Community and other Indian tribes in the region.

From the Park's main entrance, you can drive up the Summit Road 5.5 miles to Dobbins Lookout and spectacular valley wide views or you can continue to the Gila Lookout for a view of the Gila River Valley. The main entrance also offers access to hiking, picnicking, interpretive centers and many other recreational uses. From its rugged south side, visitors have access to multiple historic and newly created trails that offer everything from a short hike or mountain bike ride, to a long day on horseback, all of which provide an opportunity to enjoy beautiful scenery and great horizon views in virtually every direction.

SMPP also protects important cultural, archaeological and historic resources and is a place where people of all ages can learn about the Sonoran desert and the rich cultural history of the area. Indeed, the SMPP embodies virtually all of the goals found within the *Sonoran Preserve Master Plan* which was prepared in 1998 by the City of Phoenix Parks, Recreation and Library Department and which received enthusiastic support from City of Phoenix and many urban village planning committees throughout the region. The *Master Plan* at 14, explains that the goals of Phoenix's mountain preserves, are to:

[1] https://www.phoenix.gov/parks/trails/locations/south-mountain/civilian-conservation-corps

3

Code	Issue	Response
4	**Section 4(f) and Section 6(f)**	The context and attributes of the South Mountains are described in the Final Environmental Impact Statement, beginning on page 5-14. Mitigation and measures to minimize harm to the South Mountains are presented in the Record of Decision in Table 3, beginning on page 38.

Code	Comment Document

- Connect significant public open spaces, utility corridors, canals, freeways, and recreation areas already owned or proposed by city, county, state, or federal agencies
- Preserve wildlife corridors and significant desert ecosystems along drainageways by preserving the natural desert wash characteristics such as low velocity, sedimentation, and dispersed flows
- Provide passive recreational opportunities for wildlife viewing, nature study, picnicking, outdoor interpretation, and education
- Provide alternative transportation corridors for walking, commuter and recreational bicycling, and horseback riding
- Preserve significant views, cultural resources, and visual landmarks such as large tree bosques, rock outcroppings, historic features, and archaeological sites
- Establish management, maintenance, acquisition, and funding guidelines that respond directly to these increased open space standards and encourage public/private partnerships
- Encourage, to the greatest extent possible, the inclusion of land and specific sites that allow access for people of all abilities to appreciate and enjoy the Sonoran Desert

5 ADOT's plans for the SR 202L would undermine and/or significantly harm almost every one of the goals outlined in the *Sonoran Preserve Master Plan*. While the Departments downplays the significant impacts that the SR 202L project would have on SMPP and other parks and recreation areas within the region in their NEPA and 4(F) documents, those who use and enjoy these resources are acutely aware that the project would result in the destruction of parts of three mountain ridges (two within the SMPP), *see* FEIS at 5-14 & 5-19, Figure 5-11, bisect historic recreation trails, undermine the historic integrity of the SMPP, and disturb its tranquility and quiet enjoyment, harm wildlife and biological resources and wildlife and plant corridors, adversely impact significant views and aesthetic values of the Park and degrade desert ecosystems, including washes and drainageways, among many other adverse impacts.

II. The FEIS Fails to Comply with the Requirements of NEPA and Applicable Law

6 The Departments fail to take the "hard" look required by NEPA on a variety of fronts, which are discussed in greater detail below. As ADOT and the NHWA are well aware, NEPA imposes important procedural requirements designed "(1) to ensure the agency will have detailed information on significant environmental impacts when it makes its decisions; and (2) to guarantee that this information will be available to a

Code	Issue	Response
5	**Section 4(f) and Section 6(f)**	Chapter 5 of the Draft and Final Environmental Impact Statements presents the Section 4(f) Evaluation for the South Mountains in terms of the resource's protection as a Section 4(f) resource in terms of a regional park, historic property and traditional cultural property. The evaluation included examination of feasible and prudent avoidance alternatives which concluded no such alternatives were available to the direct use of the resource. As noted in response code 2, the Department of the Interior reviewed the Final Environmental Impact Statement and agreed with the conclusions presented. The complete letter can be found in page A5 of this Appendix A.
6	**Section 4(f) and Section 6(f), Public Involvement**	The National Environmental Policy Act procedures must insure that environmental information is available to public officials and citizens before decisions are made and before actions are taken. The information must be of high quality. Accurate scientific analysis, expert agency comments, and public scrutiny are essential to implementing the National Environmental Policy Act. Most important, National Environmental Policy Act documents must concentrate on the issues that are truly significant. The South Mountain Freeway Final Environmental Impact Statement is a high quality, scientific analysis and included the involvement of agency experts and the public throughout the process. Chapter 5 of the Draft and Final Environmental Impact Statements presents the Section 4(f) Evaluation for the South Mountains in terms of the resource's protection as a Section 4(f) resource in terms of a regional park, historic property and traditional cultural property. The evaluation included examination of feasible and prudent avoidance alternatives which concluded no such alternatives were available to the direct use of the resource. As noted in response code 2, the Department of the Interior reviewed the Final Environmental Impact Statement and agreed with the conclusions presented. The complete letter can be found in page A5 of this Appendix A. The Arizona Department of Transportation and Federal Highway Administration completed a Biological Evaluation containing analysis of the project effects on listed and candidate species under the Endangered Species Act. The Biological Evaluation was completed in May 2014 following identification of the Preferred Alternative in the Draft Environmental Impact Statement.

Code	Comment Document

7

larger audience." *Inland Empire Pub. Lands Council v. U.S. Forest Serv.*, 88 F.3d 754, 758 (9th Cir. 1996). The NEPA procedures used by agencies "must insure that environmental information is available to public officials and citizens before decisions are made and before actions are taken." 40 C.F.R. § 1500.1(b). Thus, the "NEPA process is intended to help public officials make decisions that are based on understanding of environmental consequences, and take actions that protect, restore, and enhance the environment." 40 C.F.R. § 1500.1(c).

The FEIS, however, fails to live up to these important requirements of NEPA. Instead, the Departments have failed to (a) disclose and take a hard look at the project's impact on recreational uses and values and the role of the Park in the cultural identity of Phoenix, which are all an important resource under NEPA; (b) meaningfully examine and fully consider the effects of the project on other important aspects of the affected environment, such as biological resources, air,[2] water, visual resources and historical and cultural resources; (c) identify and analyze cumulative impacts of the project, including past, present and reasonably foreseeable future actions; (d) disclose or discuss mitigation plans in sufficient detail to ensure that the environmental consequences of the action have been fairly evaluated by the Departments and the public at large; and (e) address other important requirements of NEPA.

A. The FEIS Fails to Disclose and Take a "Hard Look" at the Impact of the SR 202L Project on Recreational Uses and Values

Under NEPA, environmental factors must be considered on an equal basis with other, more traditional, concerns. *See Foundation for North American Wild Sheep v. United States Department of Agriculture*, 681 F.2d 1172, 1177 (9th Cir. 1982). With this approach to decision making, agencies must take the necessary "hard look" at environmental consequences before approving any major federal action. *See Kleppe v. Sierra Club*, 427 U.S. 390, 410, n.21, 96 S. Ct. 2718, 49 L. Ed. 2d 576 (1976). This includes impacts to recreational uses and values. *See, e.g., LaFlamme v. FERC*, 852 F.2d 389 (9th Cir. 1988).

8

The E1 Alternative for SR 202L would cut through the southwestern end of the SMPP, blasting through ridges, bisecting trails and injecting substantial direct, indirect and cumulative impacts to the recreational purposes, uses, and values of the Park. This, in turn, will have significant economic impacts due to loss of tourism and Park visitorship. However, the FEIS completely fails to examine and fully consider the project's impact on these important aspects of the affected environment.[3] This failure is surprising since

[2] Poor air quality is a well document problem in Maricopa County. As noted by the EPA in its communications to the Departments regarding the project, the FEIS and background analysis wholly fails to address the substantial human health impacts arising from the direct, indirect and cumulative effects of the project.

[3] While the Departments provide a limited discussion of some aspects of recreation (visual and trails) in the Sec. 4(f) evaluation found at Chapter 5 of the document, this is not a substitute for NEPA compliance, nor could it be given the limited analysis contained therein. *See South Fork*

5

Code	Issue	Response
7	**Environmental Impact Statement Process**	Chapter 6 outlines the extensive public outreach undertaken throughout the environmental impact statement process to make environmental information available. The Arizona Department of Transportation, the project sponsor, working in close consultation with the Federal Highway Administration, the lead federal agency for the project, and in cooperation with the U.S. Army Corps of Engineers, the U.S. Bureau of Indian Affairs, and the Western Area Power Administration, prepared the Draft and Final Environmental Impact Statements and Section 4(f) Evaluations for the South Mountain Freeway in accordance with: the National Environmental Policy Act of 1969 [42 United States Code Section 4332(2)(c)], Section 4(f) of the Department of Transportation Act of 1966 (49 United States Code Section 303, as amended), and Section 404 of the Clean Water Act of 1977 (33 United States Code Section 1251). The Draft and Final Environmental Impact Statements and Section 4(f) Evaluations: 1) satisfy the Federal Highway Administration's and Arizona Department of Transportation's environmental analysis requirements; 2) provide a comparison of the social, economic, and environmental impacts that may result from implementation of the proposed project—construction and operation of a major transportation facility; and 3) identify measures to avoid, reduce, or otherwise mitigate adverse impacts. The Draft and Final Environmental Impact Statements include sufficient preliminary design information to compare alternatives.
8	**Section 4(f) and Section 6(f)**	Figure 5-8 on page 5-15 of the Final Environmental Impact Statement presents prominent resources of Phoenix South Mountain Park/Preserve (park), including the Bursera Trail in its alignment as shown on a City of Phoenix trail map (see <phoenix.gov/parkssite/Documents/062880.pdf>). The section, *Public Parkland Resources (SMPP) Associated with the South Mountains*, beginning on page 5-14 of the Final Environmental Impact Statement, acknowledges: · the high Section 4(f) value of the park in its entirety as the centerpiece of the Phoenix Sonoran Preserve System · the important contribution of the park's many attributes, like the Bursera Trail, as contributing to the park's value as a Section 4(f) resource—pointing out that the park offers opportunities to over 3 million annual visitors for hiking, bicycling, horseback riding, and interacting with the natural Sonoran Desert adjacent to the metropolitan area, with each park user seeking his or her own benefits from visiting the park The discussion of the park as a Section 4(f) resource recognizes that many prominent features of the park contribute to its value. These include its setting as one of the largest urban parks in the country, its function in the Phoenix Sonoran Preserve System, and many prominent features within the park, including its trails. As noted in the response to a comment on page B964 in Volume III of the Final Environmental Impact Statement, "These trails are typically used for high-intensity recreational activities such as running, hiking, and biking, not noise- or viewshed-sensitive activities." To clarify, amenities such as the park's trail system are not the sole contributors to the park's Section 4(f) value, and trails throughout the park are used for both active and passive activities. The Bursera Trail is located in a lesser-used area of the park. Points along the trail allow some trail users to enjoy expansive views to the south and away from the urban setting to the north. Other permitted uses of the trail include more active activities, such as biking. Some trail users seek peaceful solitude while others, perhaps to a lesser extent, seek physical

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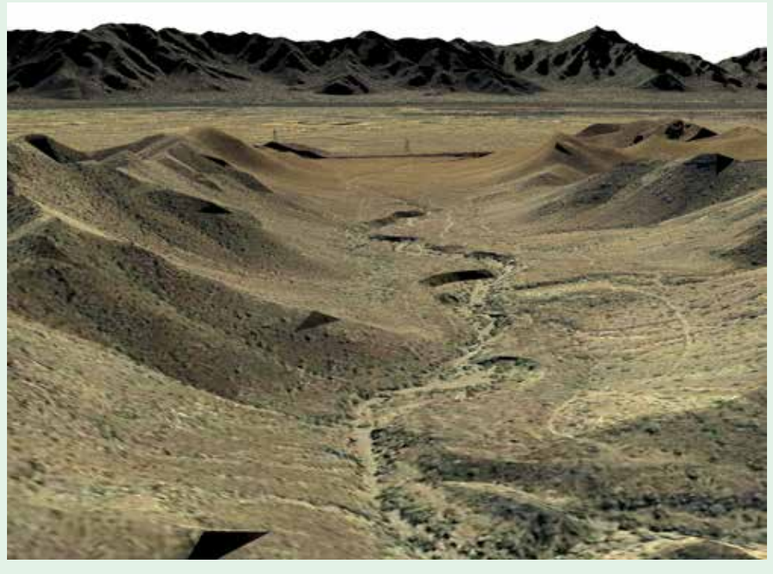
8 (cont.)		activity. It is important to note that viewsheds are not contributing attributes to a determination of a resource as being afforded protection under Section 4(f). While direct use of the park (the conversion of approximately 31.3 acres of the park for freeway use) is presented, the text also acknowledges the intrusion of the freeway section that would displace parkland, the proximity of other freeway sections that would alter views from certain park locations (see the *Visual Resources* section beginning on page 4-167 and page 5-14 in the Final Environmental Impact Statement), the introduction of an intensive human-made use into an otherwise passive and natural setting (as evidenced by the remainder of the park to the north and the Gila River Indian Community to the south), and the alteration of biological resources associated with the park's southwestern section. Sections of the freeway will be visible from certain vantage points along the Bursera Trail. The figure below depicts the scale at which the freeway will likely be viewed. As part of the planning to minimize harm to the park, measures to minimize the effects of altering the views include: · reducing the freeway's footprint from the original 40 acres as proposed in 1988 to the 31.3 acres planned for under the current design · skirting the park as much as possible to avoid bisecting the 16,000-acre park · providing replacement lands to compensate for the use of 31.3 acres of the park · using slope treatments, rock sculpting, native vegetation landscaping and buffering, and native vegetation transplanting to blend the appearance of the freeway and slope cuts with the surrounding natural environment, as feasible · working with park stakeholders through the City of Phoenix in finalizing these improvements.  *View from the Bursera Trail southwest across the valley between Main Ridge North and Main Ridge South, with the Sierra Estrella in the background. The freeway passes through the far western end of the ridges and is represented by the dark shading next to the towers for the high-voltage overhead power lines.*

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larger audience." *Inland Empire Pub. Lands Council v. U.S. Forest Serv.*, 88 F.3d 754, 758 (9th Cir. 1996). The NEPA procedures used by agencies "must insure that environmental information is available to public officials and citizens before decisions are made and before actions are taken." 40 C.F.R. § 1500.1(b). Thus, the "NEPA process is intended to help public officials make decisions that are based on understanding of environmental consequences, and take actions that protect, restore, and enhance the environment." 40 C.F.R. § 1500.1(c).

The FEIS, however, fails to live up to these important requirements of NEPA. Instead, the Departments have failed to (a) disclose and take a hard look at the project's impact on recreational uses and values and the role of the Park in the cultural identity of Phoenix, which are all an important resource under NEPA; (b) meaningfully examine and fully consider the effects of the project on other important aspects of the affected environment, such as biological resources, air,[2] water, visual resources and historical and cultural resources; (c) identify and analyze cumulative impacts of the project, including past, present and reasonably foreseeable future actions; (d) disclose or discuss mitigation plans in sufficient detail to ensure that the environmental consequences of the action have been fairly evaluated by the Departments and the public at large; and (e) address other important requirements of NEPA.

A. The FEIS Fails to Disclose and Take a "Hard Look" at the Impact of the SR 202L Project on Recreational Uses and Values

Under NEPA, environmental factors must be considered on an equal basis with other, more traditional, concerns. *See Foundation for North American Wild Sheep v. United States Department of Agriculture*, 681 F.2d 1172, 1177 (9th Cir. 1982). With this approach to decision making, agencies must take the necessary "hard look" at environmental consequences before approving any major federal action. *See Kleppe v. Sierra Club*, 427 U.S. 390, 410, n.21, 96 S. Ct. 2718, 49 L. Ed. 2d 576 (1976). This includes impacts to recreational uses and values. *See, e.g., LaFlamme v. FERC*, 852 F.2d 389 (9th Cir. 1988).

The E1 Alternative for SR 202L would cut through the southwestern end of the SMPP, blasting through ridges, bisecting trails and injecting substantial direct, indirect and cumulative impacts to the recreational purposes, uses, and values of the Park. This, in turn, will have significant economic impacts due to loss of tourism and Park visitorship. However, the FEIS completely fails to examine and fully consider the project's impact on these important aspects of the affected environment.[3] This failure is surprising since

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[2] Poor air quality is a well document problem in Maricopa County. As noted by the EPA in its communications to the Departments regarding the project, the FEIS and background analysis wholly fails to address the substantial human health impacts arising from the direct, indirect and cumulative effects of the project.

[3] While the Departments provide a limited discussion of some aspects of recreation (visual and trails) in the Sec. 4(f) evaluation found at Chapter 5 of the document, this is not a substitute for NEPA compliance, nor could it be given the limited analysis contained therein. *See South Fork*

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8 (cont.)		The comment infers that the expansive views to the south and west are unencumbered open space. Where the Bursera Trail would be closest to the freeway (at a distance of approximately 4,000 feet), a private land developer has submitted plans to the City of Phoenix to construct over 100 homes in the area immediately south of the park limits between two ridgelines. As of February 2015, the developer had begun developing a road across the mountain ridgeline to the east to access the area for home development. This development, along with others such as the recent expansion of the Vee Quiva Casino on Gila River Indian Community land southwest of the park, illustrate the planned growth that is turning undeveloped lands into urbanizing areas in the Study Area. This urbanization is discussed in the section, *Land Use*, in Chapter 4 of the Final Environmental Impact Statement. The freeway will also generate noise that will be audible from certain points along the trail as acknowledged in the Final Environmental Impact Statement; however, based on the distance of the freeway to the closest trail points (for example, the National Trail is 2,000 feet away and the Bursera Trail is 4,000 feet away), noise levels are not likely to be above the noise abatement criteria levels for recreational activities. Trail users located 2,000 feet or more away from the freeway will hear an increased hum, but the decibel levels will not be above noise abatement criteria levels for recreational activities. While noise mitigation was evaluated to minimize harm, the use of mitigation, such as noise barriers, would have little effect for receptors 2,000 feet or more away from the freeway (and at elevated positions). Even if it were shown that noise levels are higher on the trail, noise impacts would be temporary because trail users would be moving along the trail and because only a short portion of the trail is in a direct line to the freeway. Although noise barriers were not feasible in this case, the Arizona Department of Transportation has decided to use quiet pavement on the South Mountain Freeway to minimize noise along the corridor.
9	**Air Quality**	Since the release of the Draft Environmental Impact Statement, the Arizona Department of Transportation and Federal Highway Administration have consulted extensively with the U.S. Environmental Protection Agency on the air quality analytical approach and methods used in the Final Environmental Impact Statement. This consultation has resulted in agreement on the analysis methodologies and the results of these analyses. The extensive air quality analyses for the project are documented in pages 4-75 through 4-85 of the Final Environmental Impact Statement and in the air quality technical report. The Federal Highway Administration identified no adverse health impacts from the project related to the National Ambient Air Quality Standards or mobile source air toxic pollutants.

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8	ADOT and the NHWA admit in the summary to the FEIS that "[v]isual and noise intrusions would affect rural, natural areas and recreational areas adjacent to the E1 Alternative." FEIS at S-12, Table S-3, Environmental Impact Summary Matrix (emphasis added); *see also* FEIS at 4-191 ("Implementation of the E1 Alternative would adversely affect recreational, visual, natural, and cultural values of resources in the South Mountain"). In addition, the Departments acknowledge as part of the 4(f) evaluation that at least 16 other existing or planned parks (in addition to SMPP) are adjacent to or near one of the alternatives to the planned freeway,[4] and that 12 Public School Recreational Facilities are similarly located nearby (some less then 100 feet from the proposed E1 Alternative).[5] Recreational uses that would be affected by the project include (among other things), hiking and horseback riding, mountain biking, passive recreational opportunities for wildlife viewing, nature study and the enjoyment of scenic views and rock outcroppings, picnicking, outdoor interpretation, and the rare opportunity for quiet enjoyment in the Sonoran Desert, so close to an urban environment.[6] These forms of recreational uses provide substantial benefits to the health and well-being of citizens of Phoenix and visitors from around the world.[7] Recreational activities are well documented as having a myriad of direct benefits beyond physical fitness, including stress reduction, enhancing mental health and feelings of personal well-being, and the treatment of mental health related illnesses, including even post-traumatic stress disorder – a problem that our returning veterans *Band Council of W. Shoshone v. DOI*, 588 F.3d 718, 726 (9th Cir. 2009) (explaining that a "non-NEPA document . . . cannot satisfy a federal agency's obligations under NEPA."). 10 [4] *See* Section 4(f) Evaluation at 5-13, Figure 5-7. In addition, Fig. 5-7 fails to identify Vista Canyon Park, which is an existing Phoenix City Park. *See*: https://www.phoenix.gov/pddsite/Documents/pdd_pz_pdf_00021.pdf#search=ahwatukee%2520village%2520parks [5] *See id.* at 5-11, Figure 5-6. 11 [6] The FEIS fails to identify the newer Bursera Trail, located a mile north from Pecos Road, in Figure 5-6 and Figure 5-8, which is located off 19th Ave., on south side of SMPP. Pyramid goes northeast while Bursea travels to the southwest. This trail will be significantly impacted by noise and view shed impacts despite the fact that this error was pointed out in comments on the Draft Environmental Impact Statement (DEIS). https://www.phoenix.gov/parkssite/Documents/062880.pdf [7] It is noteworthy that the original area of South Mountain Park was conveyed from the U.S. Government to the City of Phoenix under a series of grants issued under a Special Act of Congress, 43 Stat. 643, P.L. 68-256 ch. 334 (June 7, 1924). The Act specifies that the conveyed South Mountain Park area were conveyed for a number of purposes, including for municipal, park, recreation, and playgrounds. 6

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10	**Section 4(f) and Section 6(f)**	As stated on page 5-3 of the Final Environmental Impact Statement, the ¼ mile distance is used because it is the approximate maximum distance from which traffic noise would be disruptive to human or wildlife uses. All other proximity impacts, such as those to the viewshed, would be detected at distances less than ¼ mile. In terms of noise analyses, several reasons support why the analysis did not extend beyond ¼ mile: noise impacts at 2,000 feet or greater from the freeway would be minimal (decibels would not be above minimum thresholds); the Federal Highway Administration Traffic Noise Model has limitations for predicting noise levels beyond approximately 500 feet; mitigation, such as noise walls, would not be effective for receptors at 2,000 feet or greater (and at elevated positions) away from the freeway; and, even if it were shown that noise levels are higher on the trail, the impacts would be temporary in nature because trail users would be moving along the trail and because only a short portion of the trail is in a direct line to the freeway (no picnic areas appear to be located along this trail).
11	**Section 4(f) and Section 6(f)**	Figure 5-8 on page 5-15 of the Final Environmental Impact Statement presents prominent resources of Phoenix South Mountain Park/Preserve (park), including the Bursera Trail in its alignment as shown on a City of Phoenix trail map (see <phoenix.gov/parkssite/Documents/062880.pdf>). The section, *Public Parkland Resources (SMPP) Associated with the South Mountains*, beginning on page 5-14 of the Final Environmental Impact Statement, acknowledges: · the high Section 4(f) value of the park in its entirety as the centerpiece of the Phoenix Sonoran Preserve System · the important contribution of the park's many attributes, like the Bursera Trail, as contributing to the park's value as a Section 4(f) resource—pointing out that the park offers opportunities to over 3 million annual visitors for hiking, bicycling, horseback riding, and interacting with the natural Sonoran Desert adjacent to the metropolitan area, with each park user seeking his or her own benefits from visiting the park The discussion of the park as a Section 4(f) resource recognizes that many prominent features of the park contribute to its value. These include its setting as one of the largest urban parks in the country, its function in the Phoenix Sonoran Preserve System, and many prominent features within the park, including its trails. As noted in the response to a comment on page B964 in Volume III of the Final Environmental Impact Statement, "These trails are typically used for high-intensity recreational activities such as running, hiking, and biking, not noise- or viewshed-sensitive activities." To clarify, amenities such as the park's trail system are not the sole contributors to the park's Section 4(f) value, and trails throughout the park are used for both active and passive activities. The Bursera Trail is located in a lesser-used area of the park. Points along the trail allow some trail users to enjoy expansive views to the south and away from the urban setting to the north. Other permitted uses of the trail include more active activities, such as biking. Some trail users seek peaceful solitude while others, perhaps to a lesser extent, seek physical activity. It is important to note that viewsheds are not contributing attributes to a determination of a resource as being afforded protection under Section 4(f). While direct use of the park (the conversion of approximately 31.3 acres of the park for freeway use) is presented, the text also acknowledges the intrusion of the freeway section that would displace parkland, the proximity of other freeway

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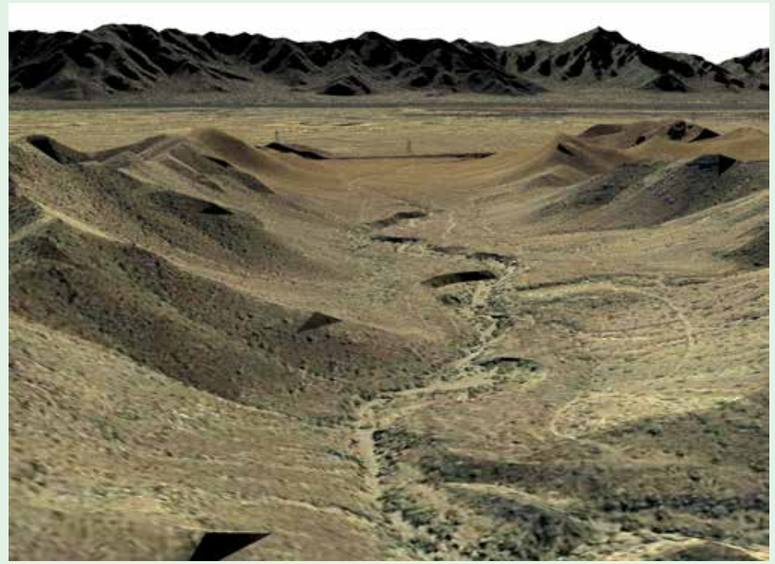
11 (cont.)		sections that would alter views from certain park locations (see the *Visual Resources* section beginning on page 4-167 and page 5-14 in the Final Environmental Impact Statement), the introduction of an intensive human-made use into an otherwise passive and natural setting (as evidenced by the remainder of the park to the north and the Gila River Indian Community to the south), and the alteration of biological resources associated with the park's southwestern section. Sections of the freeway will be visible from certain vantage points along the Bursera Trail. The figure below depicts the scale at which the freeway will likely be viewed. As part of the planning to minimize harm to the park, measures to minimize the effects of altering the views include: · reducing the freeway's footprint from the original 40 acres as proposed in 1988 to the 31.3 acres planned for under the current design · skirting the park as much as possible to avoid bisecting the 16,000-acre park · providing replacement lands to compensate for the use of 31.3 acres of the park · using slope treatments, rock sculpting, native vegetation landscaping and buffering, and native vegetation transplanting to blend the appearance of the freeway and slope cuts with the surrounding natural environment, as feasible · working with park stakeholders through the City of Phoenix in finalizing these improvements  *View from the Bursera Trail southwest across the valley between Main Ridge North and Main Ridge South, with the Sierra Estrella in the background. The freeway passes through the far western end of the ridges and is represented by the dark shading next to the towers for the high-voltage overhead power lines.* The comment infers that the expansive views to the south and west are unencumbered open space. Where the Bursera Trail would be closest to the freeway (at a distance of approximately 4,000 feet), a private land developer has

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have struggled with in great numbers over the last decade of multiple deployments and combat.[8]

12 The FEIS explains that all of the action alternatives would be on a common alignment through SMPP, with 0.9 mile of freeway actually passing through the southwestern edges of the Park, resulting in the "direct use" of approximately 31.3 acres of parkland. *See, e.g.*, FEIS at S-39. This characterization of the project's impact on the SMPP and its recreational uses and values ignores the larger (and likely irreparable) impacts that would result from the freeway construction project and the destruction of recreational uses and values, soil crusts, desert washes and drainages, plants and biodiversity and other important features of the Park, both during and after construction.

13 In fact, it is difficult to see how the construction (including blasting) and the ultimate presence of a large freeway cutting through or adjacent to these recreation lands would not impose substantial direct, indirect and cumulative impacts to the recreational uses and overall integrity of the Park as discussed here, due to visual and view shed impacts, aesthetic impacts, air quality and haze, increased noise and traffic, including truck traffic,[9] nighttime lighting, potential trail re-alignments and impacts to

[8] Trails provide the serenity, safety, and outdoor environment that are healing these veterans. The Phoenix VA Hospital can utilize the South Mountain Park trail systems as one of the closest areas for veterans' equine therapy treatment. The 202 South Mountain Freeway would negate the value of the South Mountain Park trail system for Wounded Warrior program treatment. For information about the **"Horses for Heroes"** national program at PATH International, please see: http://www.pathintl.org/ For statistical information, please see the Veteran's Administration 2010 report on veteran's suicides: http://www.va.gov/opa/docs/Suicide-Data-Report-2012-final.pdf

The specific section in this report is encaptioned, *Suicide among Veterans – As Reported on Death Certificates*." Among cases where history of U.S. military service was reported, Veterans comprised approximately 22.2% of all suicides reported during the project period. If this prevalence estimate is assumed to be constant across all U.S. states, an estimated **22 Veterans will have died from suicide each day** in the calendar year 2010. Recreation and activities in the outdoor environment, such as activities within a tranquil and undisturbed SMPP, can play a role in reducing this tragedy.

[9] ADOT and the FHWA reject suggestions that SR 202L will become a corridor for truck traffic for drivers hoping to avoid traveling through Phoenix on their way to other destinations. The Departments explain that "[i]t is not a goal of ADOT and FHWA for the proposed freeway to function as a truck bypass." FEIS at S-42. This statement is not only unsupported by appropriate analysis, it also deliberately misses the point. There can be little doubt that the development of a freeway that will allow truckers to bypass the traffic and congestion of Phoenix will result in substantial increases in semi-truck traffic on this new segment of the freeway – above normal levels. This increase in truck traffic and the noise and disturbance caused by the increase is, at the minimum, an indirect effect of the proposed action under NEPA. The Council on Environmental Quality regulations define indirect effects as those "caused by the action, [and] later in time or further removed in distance, [but] still reasonably foreseeable." 40 C.F.R. § 1508.8(b). The Departments must consider it. *See* 40 C.F.R. § 1508.8(b). Moreover, as an indirect effect of the action, the Departments also are required to consider mitigation options for

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11 (cont.)		submitted plans to the City of Phoenix to construct over 100 homes in the area immediately south of the park limits between two ridgelines. As of February 2015, the developer had begun developing a road across the mountain ridgeline to the east to access the area for home development. This development, along with others such as the recent expansion of the Vee Quiva Casino on Gila River Indian Community land southwest of the park, illustrate the planned growth that is turning undeveloped lands into urbanizing areas in the Study Area. This urbanization is discussed in the section, *Land Use*, in Chapter 4 of the Final Environmental Impact Statement. The freeway will also generate noise that will be audible from certain points along the trail as acknowledged in the Final Environmental Impact Statement; however, based on the distance of the freeway to the closest trail points (for example, the National Trail is 2,000 feet away and the Bursera Trail is 4,000 feet away), noise levels are not likely to be above the noise abatement criteria levels for recreational activities. Trail users located 2,000 feet or more away from the freeway will hear an increased hum, but the decibel levels will not be above noise abatement criteria levels for recreational activities. While noise mitigation was evaluated to minimize harm, the use of mitigation, such as noise barriers, would have little effect for receptors 2,000 feet or more away from the freeway (and at elevated positions). Even if it were shown that noise levels are higher on the trail, noise impacts would be temporary because trail users would be moving along the trail and because only a short portion of the trail is in a direct line to the freeway. Although noise barriers were not feasible in this case, the Arizona Department of Transportation has decided to use quiet pavement on the South Mountain Freeway to minimize noise along the corridor.
12	**Section 4(f) and Section 6(f)**	The portion of the park that will be used for the freeway will be 31.3 acres, or approximately 0.2 percent of the park's approximately 16,600 acres (see Final Environmental Impact Statement pages S-39 and 5-31). The activities that make the park such a highly valued resource (recreational activities, interaction with the Sonoran Desert) will remain. As noted in response code 2, the Department of the Interior reviewed the Final Environmental Impact Statement and agreed with the conclusions presented. The complete letter can be found in page A5 of this Appendix A.
13	**Section 4(f) and Section 6(f)**	The section, *Public Parkland Resources (SMPP) Associated with the South Mountains*, beginning on page 5-14 of the Final Environmental Impact Statement, acknowledges: · the high Section 4(f) value of the park in its entirety as the centerpiece of the Phoenix Sonoran Preserve System · the important contribution of the park's many attributes, like the Bursera Trail, as contributing to the park's value as a Section 4(f) resource—pointing out that the park offers opportunities to over 3 million annual visitors for hiking, bicycling, horseback riding, and interacting with the natural Sonoran Desert adjacent to the metropolitan area, with each park user seeking his or her own benefits from visiting the park The discussion of the park as a Section 4(f) resource recognizes that many prominent features of the park contribute to its value. These include its setting as one of the largest urban parks in the country, its function in the Phoenix Sonoran Preserve System, and many prominent features within the park, including its trails. As noted in the text of the Final Environmental Impact Statement beginning on page 4-179 addressing secondary and cumulative impacts, the Section 4(f) evaluation for the park (beginning on page 5-14 of that same document) included consideration of direct and indirect impacts.

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13 (cont.)		While direct use of the park (the conversion of approximately 31.3 acres of the park for freeway use) is presented, the text also acknowledges the intrusion of the freeway section that would displace parkland, the proximity of other freeway sections that would alter views from certain park locations (see the *Visual Resources* section beginning on page 4-167 and page 5-14 in the Final Environmental Impact Statement), the introduction of an intensive human-made use into an otherwise passive and natural setting (as evidenced by the remainder of the park to the north and the Gila River Indian Community to the south), and the alteration of biological resources associated with the park's southwestern section. For example, sections of the freeway will be visible from certain vantage points along some trails within the park. The figure below depicts the scale at which the freeway will likely be viewed. As part of the planning to minimize harm to the park, measures to minimize the effects of altering the views include: · reducing the freeway's footprint from the original 40 acres as proposed in 1988 to the 31.3 acres planned for under the current design · skirting the park as much as possible to avoid bisecting the 16,000-acre park · providing replacement lands to compensate for the use of 31.3 acres of the park · using slope treatments, rock sculpting, native vegetation landscaping and buffering, and native vegetation transplanting to blend the appearance of the freeway and slope cuts with the surrounding natural environment, as feasible · working with park stakeholders through the City of Phoenix in finalizing these improvements  *View from the Bursera Trail southwest across the valley between Main Ridge North and Main Ridge South, with the Sierra Estrella in the background. The freeway passes through the far western end of the ridges and is represented by the dark shading next to the towers for the high-voltage overhead power lines.*

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have struggled with in great numbers over the last decade of multiple deployments and combat.[8]

The FEIS explains that all of the action alternatives would be on a common alignment through SMPP, with 0.9 mile of freeway actually passing through the southwestern edges of the Park, resulting in the "direct use" of approximately 31.3 acres of parkland. *See, e.g.*, FEIS at S-39. This characterization of the project's impact on the SMPP and its recreational uses and values ignores the larger (and likely irreparable) impacts that would result from the freeway construction project and the destruction of recreational uses and values, soil crusts, desert washes and drainages, plants and biodiversity and other important features of the Park, both during and after construction.

In fact, it is difficult to see how the construction (including blasting) and the ultimate presence of a large freeway cutting through or adjacent to these recreation lands would not impose substantial direct, indirect and cumulative impacts to the recreational uses and overall integrity of the Park as discussed here, due to visual and view shed impacts, aesthetic impacts, air quality and haze, increased noise and traffic, including truck traffic,[9] nighttime lighting, potential trail re-alignments and impacts to

[8] Trails provide the serenity, safety, and outdoor environment that are healing these veterans. The Phoenix VA Hospital can utilize the South Mountain Park trail systems as one of the closest areas for veterans' equine therapy treatment. The 202 South Mountain Freeway would negate the value of the South Mountain Park trail system for Wounded Warrior program treatment. For information about the **"Horses for Heroes"** national program at PATH International, please see: http://www.pathintl.org/ For statistical information, please see the Veteran's Administration 2010 report on veteran's suicides: http://www.va.gov/opa/docs/Suicide-Data-Report-2012-final.pdf

The specific section in this report is encaptioned, *Suicide among Veterans – As Reported on Death Certificates*." Among cases where history of U.S. military service was reported, Veterans comprised approximately 22.2% of all suicides reported during the project period. If this prevalence estimate is assumed to be constant across all U.S. states, an estimated 22 **Veterans will have died from suicide each day** in the calendar year 2010. Recreation and activities in the outdoor environment, such as activities within a tranquil and undisturbed SMPP, can play a role in reducing this tragedy.

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[9] ADOT and the FHWA reject suggestions that SR 202L will become a corridor for truck traffic for drivers hoping to avoid traveling through Phoenix on their way to other destinations. The Departments explain that "[i]t is not a goal of ADOT and FHWA for the proposed freeway to function as a truck bypass." FEIS at S-42. This statement is not only unsupported by appropriate analysis, it also deliberately misses the point. There can be little doubt that the development of a freeway that will allow truckers to bypass the traffic and congestion of Phoenix will result in substantial increases in semi-truck traffic on this new segment of the freeway – above normal levels. This increase in truck traffic and the noise and disturbance caused by the increase is, at the minimum, an indirect effect of the proposed action under NEPA. The Council on Environmental Quality regulations define indirect effects as those "caused by the action, [and] later in time or further removed in distance, [but] still reasonably foreseeable." 40 C.F.R. § 1508.8(b). The Departments must consider it. *See* 40 C.F.R. § 1508.8(b). Moreover, as an indirect effect of the action, the Departments also are required to consider mitigation options for

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14	**Trucks**	As with all other freeways in the region, trucks will use it for the through-transport of freight, for transport to and from distribution centers, and for transport to support local commerce. Nevertheless, the primary vehicles using the freeway will be automobiles. The Maricopa Association of Governments regional travel demand model projects that truck traffic will represent approximately 10 percent of the total traffic on the freeway. The analysis of direct impacts, such as noise and air quality, presented in the Final Environmental Impact Statement included the impacts associated with projected truck traffic on the freeway.

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animal and plant species, just to name a few issues. And yet, the FEIS contains no substantive analysis of the direct, indirect and cumulative impacts to these important uses and values stemming from the project.[10]

In addition, even for people who do not use the SMPP, the sweeping and rugged presence of the South Mountains, whether on the horizon or just outside one's backdoor, plays an important role in the fabric and culture of our City. It is a landmark, a sacred site and an icon that represents a part of the cultural identity of Phoenix. To damage South Mountain by blasting through its ridges is to damage Phoenix and the people who live here. Indeed, such an action would strongly indicate to all who look that we do not value our natural resources in Phoenix, and in a way, our own well-being. The failure of the Departments' to consider this important aspect in the FEIS further demonstrates their overall failure to take the "hard look" required by NEPA.

Furthermore, because the FEIS fails to analyze the potential impacts to recreational uses and values and the integrity of the South Mountain as a whole in any substantive way, it similarly fails to meaningfully consider or offer sufficiently mitigating measures that might reduce these impacts as required by NEPA.[11]

For example, while it is true that the FEIS generally examines noise impacts as part of the affected environment, it does not examine or consider mitigation in any specific way relative to the SMPP. To be sure, the increased noise levels resulting from the freeway construction project and the freeway itself would have a significant impact on recreational values and uses and the overall purpose of the SMPP as a place of solace and quiet enjoyment. While the FEIS discusses noise impacts in Chapter 4, it does not meaningfully model or consider noise impacts on these important resources. Interestingly, while the Departments explain that noise receivers were modeled adjacent to "noise-sensitive locations" along the E1 Alternative, Figure 4-29 and Table 4-39

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the additional noise caused by the increased truck traffic, which could include restricting truck traffic on the freeway, reducing the posted speed limit for semi-trucks or reducing weight limits. ADOT and FHWA refuse to consider these options, ironically noting they are not "consistent with the purpose and need for the proposed action . . . ." See FEIS at 4-100. This too violates NEPA.

[10] At Table 4-54 (FEIS at 4-180), the Departments erroneously conclude (without explanation) that indirect (secondary) effects to "recreational land" need not be considered in the secondary impact analysis.

[11] The Departments' broad generalizations and vague references in the FEIS to potential mitigation measures that might be used to reduce visual impacts due to the cuts through the ridgelines in and near the SMPP or to allow connectivity of trails through crossings, (a) do not address all of the known impacts of the project to the variety of recreational uses and values, discussed above; and (b) nevertheless fail to provide sufficient detail and certainty relative to the mitigation measures as required by NEPA. *See, e.g., Neighbors of Cuddy Mountain v. USFS*, 137 F.3d 1372, 1381 (9th Cir. 1998). This is discussed further in Section II(B) of this Letter.

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Code	Issue	Response
15	**Section 4(f) and Section 6(f), Noise**	Figure 5-8 on page 5-15 of the Final Environmental Impact Statement presents prominent resources of Phoenix South Mountain Park/Preserve (park), including the Bursera Trail in its alignment as shown on a City of Phoenix trail map (see <phoenix.gov/parkssite/Documents/062880.pdf>). The section, *Public Parkland Resources (SMPP) Associated with the South Mountains*, beginning on page 5-14 of the Final Environmental Impact Statement, acknowledges: · the high Section 4(f) value of the park in its entirety as the centerpiece of the Phoenix Sonoran Preserve System · the important contribution of the park's many attributes, like the Bursera Trail, as contributing to the park's value as a Section 4(f) resource—pointing out that the park offers opportunities to over 3 million annual visitors for hiking, bicycling, horseback riding, and interacting with the natural Sonoran Desert adjacent to the metropolitan area, with each park user seeking his or her own benefits from visiting the park The discussion of the park as a Section 4(f) resource recognizes that many prominent features of the park contribute to its value. These include its setting as one of the largest urban parks in the country, its function in the Phoenix Sonoran Preserve System, and the many prominent features within the park, including its trails. Amenities, such the park's trail system, are not the sole contributors to the park's Section 4(f) value, and trails throughout the park are used for both active and passive activities. The Bursera Trail is located in a lesser-used area of the park. Points along the trail allow some trail users to enjoy expansive views to the south and away from the urban setting to the north. Other permitted uses of the trail include more active activities, such as bicycling. Some trail users seek peaceful solitude while others, perhaps to a lesser extent, seek physical activity. It is important to note that viewsheds are not contributing attributes to a determination of a resource as being afforded protection under Section 4(f). While direct use of the park (the conversion of approximately 31.3 acres of the park for freeway use) is presented, the text also acknowledges the intrusion of the freeway section that would displace parkland, the proximity of other freeway sections that would alter views from certain park locations (see the *Visual Resources* section beginning on page 4-167 and page 5-14 in the Final Environmental Impact Statement), the introduction of an intensive human-made use into an otherwise passive and natural setting (as evidenced by the remainder of the park to the north and the Gila River Indian Community to the south), and the alteration of biological resources associated with the park's southwestern section. Sections of the freeway will be visible from certain vantage points along some trails within the park. The figure below depicts the scale at which the freeway will likely be viewed. As part of the planning to minimize harm to the park, measures to minimize the effects of altering the views include: · reducing the freeway's footprint from the original 40 acres as proposed in 1988 to the 31.3 acres planned for under the current design · skirting the park as much as possible to avoid bisecting the 16,000-acre park · providing replacement lands to compensate for the use of 31.3 acres of the park

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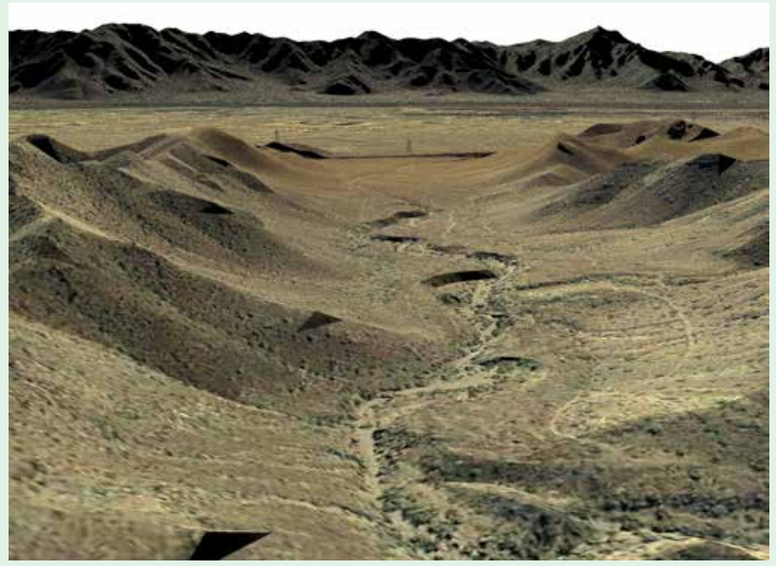
15 (cont.)		· using slope treatments, rock sculpting, native vegetation landscaping and buffering, and native vegetation transplanting to blend the appearance of the freeway and slope cuts with the surrounding natural environment, as feasible · working with park stakeholders through the City of Phoenix in finalizing these improvements  *View from the Bursera Trail southwest across the valley between Main Ridge North and Main Ridge South, with the Sierra Estrella in the background. The freeway passes through the far western end of the ridges and is represented by the dark shading next to the towers for the high-voltage overhead power lines.* The freeway will also generate noise that will be audible from certain points along the trail as acknowledged in the Final Environmental Impact Statement; however, based on the distance of the freeway to the closest trail points (for example, the National Trail is 2,000 feet away and the Bursera Trail is 4,000 feet away), noise levels are not likely to be above the noise abatement criteria levels for recreational activities. Trail users located 2,000 feet or more away from the freeway will hear an increased hum, but the decibel levels will not be above noise abatement criteria levels for recreational activities. While noise mitigation was evaluated to minimize harm, the use of mitigation, such as noise barriers, would have little effect for receptors 2,000 feet or more away from the freeway (and at elevated positions). Even if it were shown that noise levels are higher on the trail, noise impacts would be temporary because trail users would be moving along the trail and because only a short portion of the trail is in a direct line to the freeway. The noise and visual resources analyses did consider the impacts from trails within the corridor, as applicable (see text beginning on pages 4-88 and 4-167, respectively, of the Final Environmental Impact Statement).

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reveal that virtually no ambient or existing noise level readings were take in portions of the SMPP that are to be the most impacted by the freeway as it cuts through the Park.

In addition, due to the location of the noise receivers discussed above and as shown in Table 4-39 (FEIS at 4-92), the results of the ambient noise monitoring shown at Table 4-40 (FEIS at 4-97), reveal that rather than modeling noise impacts within the Park (which generally has trails – not roads) the Departments examined noise impacts and unmitigated action noise levels for the SMPP by incorporating significant existing ambient noise from arterial and surface streets in the baseline. *See also* FEIS at 4-91 (ambient noise impacts from traffic included in the No-Action Alternative). This undermines the results of the noise modeling and fails to take the "hard look" required by NEPA.

16

In a somewhat similar fashion, the document acknowledges that the E1 Alternative would be located adjacent to planned and existing trails,[12] and would cross over trail segments within or connected to the SMPP (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), resulting in the "potential harm" to these segments, *see, e.g.*, Summary at S-32, Table S-4; however, the Departments summarily conclude that because the freeway, as proposed, would be constructed as an elevated span to clear the trail segments, any impacts would be mitigated. This approach is completely insufficient under NEPA to analyze the impact of the project on recreational values and uses. While elevating the freeway would allow for the physical connectivity of trails, it ignores the myriad of other impacts that the presence of the freeway would have on the recreational values and uses of these trails (at least 5 trails are located within less than a mile of freeway), such aesthetic impacts, the loss of quiet enjoyment and solitude, loss of the Sonoran Desert experience, impacts to wildlife viewing and safety, among others.[13] None of these impacts were analyzed. This violates NEPA.

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[12] Significantly, the impact to specific trails is mostly discussed in the Section 4(f) evaluation and not in the FEIS. As noted above, however, the analysis of impacts in Section 4(f) does not relieve the Departments of their obligation to take a "hard look" and consider mitigation of these impacts under NEPA.

[13] Parks need to feel safe for people to want to use them. Research has documented that perception of safety can be more significant in influencing human behavior than crime statistics. If citizens perceive a park to be unsafe, they may be less likely to use it. This is particularly true for women. When freeways bisect trails or walking paths, safety (and the perception of safety) can be adversely impacted. Trails that necessarily require a hiker or traveler to walk or ride under bridges (as proposed here) present a significant safety issue that must be considered. This was not analyzed in the FEIS.

Code	Issue	Response
16	**Section 4(f) and Section 6(f)**	The map and table in Figure 5-5 on pages 5-8 and 5-9 of the Final Environmental Impact Statement disclose impacts on recreational trails outside of Phoenix South Mountain Park/Preserve (park) by an action alternative. The freeway will not have a direct impact on these trails because it will span the trails. The trails' importance as Section 4(f) resources is based on their recreational value and is not based on any noise-sensitive activities or viewshed characteristics. As correctly noted in Figure 5-5, "These trails are typically used for high-intensity recreational activities such as running, hiking, and biking, not noise and viewshed-sensitive activities." Within the park, the Final Environmental Impact Statement acknowledges the important contribution of the park's many attributes, such as its trail system, as contributing to the park's value as a Section 4(f) resource—pointing out that the park offers opportunities to over 3 million annual visitors for hiking, bicycling, horseback riding, and interacting with the natural Sonoran Desert adjacent to the metropolitan area, with each park user seeking his or her own benefits from visiting the park. To clarify, the park is used for both active and passive activities. As an example, the Bursera Trail is located in a lesser-used area of the park. Points along the trail allow some trail users to enjoy expansive views to the south and away from the urban setting to the north. Other permitted uses of the trail include more active activities, such as bicycling. Some trail users seek peaceful solitude while others, perhaps to a lesser extent, seek physical activity. It is important to note that viewsheds are not contributing attributes to a determination of a resource as being afforded protection under Section 4(f). While direct use of the park (the conversion of approximately 31.3 acres of the park for freeway use) is presented, the text also acknowledges the intrusion of the freeway section that would displace parkland, the proximity of other freeway sections that would alter views from certain park locations (see the *Visual Resources* section beginning on page 4-167 and page 5-14 in the Final Environmental Impact Statement), the introduction of an intensive human-made use into an otherwise passive and natural setting (as evidenced by the remainder of the park to the north and the Gila River Indian Community to the south), and the alteration of biological resources associated with the park's southwestern section. Sections of the freeway will be visible from certain vantage points along some trails within the park. The figure below depicts the scale at which the freeway will likely be viewed. As part of the planning to minimize harm to the park, measures to minimize the effects of altering the views include: · reducing the freeway's footprint from the original 40 acres as proposed in 1988 to the 31.3 acres planned for under the current design · skirting the park as much as possible to avoid bisecting the 16,000-acre park · providing replacement lands to compensate for the use of 31.3 acres of the park · using slope treatments, rock sculpting, native vegetation landscaping and buffering, and native vegetation transplanting to blend the appearance of the freeway and slope cuts with the surrounding natural environment, as feasible · working with park stakeholders through the City of Phoenix in finalizing these improvements

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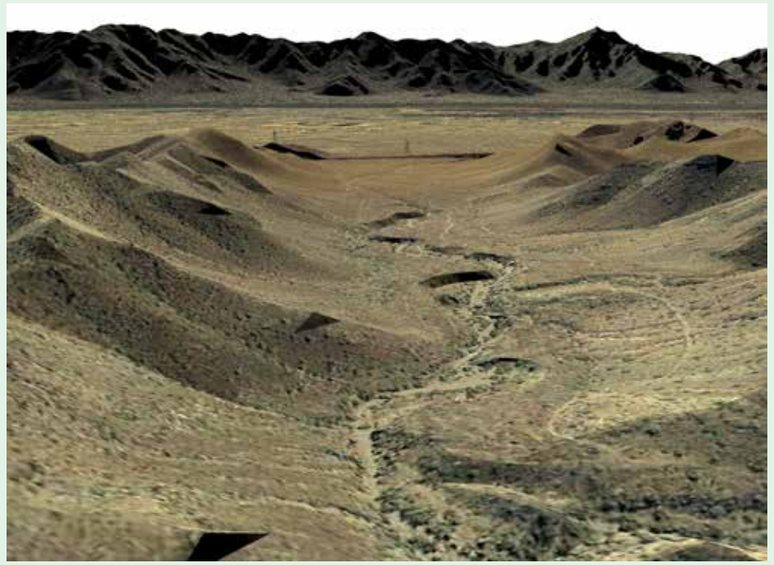
16 (cont.)		 *View from the Bursera Trail southwest across the valley between Main Ridge North and Main Ridge South, with the Sierra Estrella in the background. The freeway passes through the far western end of the ridges and is represented by the dark shading next to the towers for the high-voltage overhead power lines.* Sensitive receivers for noise were included in the noise analyses in accordance with State and federal guidance. The section, *Noise*, beginning on Final Environmental Impact Statement page 4-88, has addressed requirements under the National Environmental Policy Act. As stated on page 4-89 of the Final Environmental Impact Statement, over 220 sensitive receivers were evaluated at exterior locations from a traffic noise perspective. All of the receivers represent noise-sensitive land uses in proximity to the proposed project, including homes, schools, and parks, and these receivers would have higher noise levels than similar facilities more distant from the proposed action. The existing trails within the park nearest the freeway are 2,000 feet or more away (for example, the National Trail is 2,000 feet away and the Bursera Trail is 4,000 feet away). In terms of noise analyses, several reasons support why the analysis did not extend beyond ¼ mile: noise impacts at 2,000 feet or greater from the freeway would be minimal (decibels would not be above minimum thresholds); the Federal Highway Administration Traffic Noise Model has limitations for predicting noise levels beyond approximately 500 feet; mitigation, such as noise walls, would not be effective for receptors at 2,000 feet or greater (and at elevated positions) away from the freeway; and, even if it were shown that noise levels are higher on trails, such as the Bursera Trail, the impacts would be temporary in nature because trail users would be moving along the trail and because only a short portion of the trail is in a direct line to the freeway (no picnic areas appear to be located along this trail).

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B. The Departments Fail to Meaningfully Examine and Fully Consider the Impact of the Project on Other Aspects of the Affected Environment

17 The Departments' NEPA analysis also fails to examine and fully disclose and consider the direct, indirect and cumulative impact of the SR 202L proposal on a number of aspects of the affected environment, including but not limited to biological resources (including plants and animals), visual resources, water, [14] and topography/geography and the fragmentation of the endangered Sonoran Desert ecosystem – which was listed in 2011 as one of the 12 most threatened landscapes in the U.S. by the Cultural Landscape Foundation.[15]

Many of these impacts are discussed in the PARC's comments, which are expressly incorporated herein, as well as in the previous and current comments of our members and other stakeholders, including, without limitation:

18
- Increase in types of invasive species and spread of existing invasive species, in that their distribution will be encouraged by the highway that will provide a corridor for their movement, further impacting individual native plant and animal species and habitat/ecosystem

19
- Loss of connectivity for plants and animals with Sierra Estrellas, Sonoran Desert National Monument

20
- Increase in heavy metals, particularly lead from vehicles, and cancer-causing pollutants emitted from asphalt

21
- Increase in elevated levels of particulates such as black carbon, nitrogen oxides and carbon monoxide downwind from freeway resulting in increased pulmonary and cardio health issues (Environ Health. 2007; 6:23)

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[14] The FEIS admits that both that portions of the Salt and Gila Rivers are on the CWA Section 303(d) list, including that portion of the Salt River in the Study Area (ADEQ 2011), and that "[i]ncreased pollutant loading from freeway operation might further impair listed reaches of the Salt River and might need measures in addition to existing permit controls to achieve or maintain water quality standards in accordance with CWA Section 303(d)." FEIS at 4-105. However, the CWA prohibits discharges of a pollutant in an impaired water body if that pollutant is the reason for the impairment (i.e. the reason why the water body is on the 303(d) list), unless certain stringent planning and stream remediation efforts are in place – which has not been done in this case. *See Friends of Pinto Creek v. U.S. E.P.A.*, 504 F.3d 1007 (9th Cir. 2007). The failure to disclose what remediation efforts might be needed as part of the FEIS process violates NEPA.

[15] http://travel.usatoday.com/destinations/dispatches/post/2011/09/cultural-landscapefoundation-most-threatened-landscapes/548464/1

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17		Comment noted. Responses to specific comments are provided on the following pages.
18	**Biology, Plants, and Wildlife**	The Arizona Department of Transportation regularly implements mitigation measures to control and minimize the presence of invasive and noxious species on its facilities and would do the same for this project, in compliance with Executive Order 13112. This requirement is described on page 4-127 of the Final Environmental Impact Statement and confirmed in the Record of Decision in Table 3, beginning on page 38. This includes identifying, controlling, and monitoring for invasive species as well as preventing their incidence in areas where they are not presently found. The Executive Order also includes restoration of native plant species where invasive plant species are found.
19	**Biology, Plants, and Wildlife**	The freeway will be designed to protect and maintain opportunities for wildlife movement between the South Mountains, Gila River, and Sierra Estrella. These opportunities will be located in the region where the South Mountain Freeway will intersect the southwestern portion of the South Mountains. Some drainage structures incorporated into the roadway plans will be designed to accommodate multifunctional crossings in appropriate locations that will allow limited use by the Gila River Indian Community and will also serve wildlife. These crossing structures and associated fences will be designed to reduce the incidence of vehicle-wildlife collisions and to reduce the impact of the freeway on wildlife connectivity between the South Mountains, Gila River, and Sierra Estrella. The Arizona Department of Transportation will coordinate with the U.S. Fish and Wildlife Service, Arizona Game and Fish Department, and the Gila River Indian Community's Department of Environmental Quality during the design phase regarding the potential for locating and designing wildlife-sensitive roadway structures.
20	**Health Effects**	Lead is discussed on page 4-69 of the Final Environmental Impact Statement. Since the ban on the sale of leaded gasoline, lead emissions have declined significantly. Motor vehicles are no longer considered a significant source of lead, and lead is not regulated under the U.S. Environmental Protection Agency's transportation conformity regulations. Regarding the potential for cancer-causing emissions from asphalt, the U.S. Environmental Protection Agency provided recommendations for mobile source air toxics analysis prior to the Draft Environmental Impact Statement, and also discussed air toxics in its comments on both the Draft and Final Environmental Impact Statements. At no time did the agency suggest or recommend that the Federal Highway Administration evaluate the impacts of emissions from asphalt.
21	**Air Quality**	Under the Clean Air Act, the U.S. Environmental Protection Agency is responsible for establishing National Ambient Air Quality Standards to protect public health and the environment from adverse effects of air pollutants. As explained in the *Responses to Frequently Submitted Public Comments* (see page A371), the U.S. Environmental Protection Agency's National Ambient Air Quality Standards are required by law to protect public health with an adequate margin of safety. For the South Mountain Freeway project, modeling for carbon monoxide and particulate matter (PM_{10}) was conducted using worst-case (most congested or highest traffic) modeling locations at discrete receptor locations around each analysis location (primarily residences near the interchanges). Black carbon emissions are a component of particulate matter (PM_{10}) and were included in the particulate matter (PM_{10}) analysis. The carbon monoxide and particulate matter (PM_{10}) analyses demonstrated that the freeway will not contribute to any new

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22	• With increase in pollutants, increased hazard to humans who hike and bike in South Mountain Park, particularly the west end – bicycling and walking increase exposure to air pollutants
23	• Air pollutants negatively affect many plants whether airborne or in the soil (most particles fall to ground) – loss of photosynthetic ability, reduced plant health and vigor; those plants that can exist near highways have increased susceptibility to environmental stresses when compared to plants further away from highway • Construction kills plants including such iconic plants as ironwood, saguaro, Arizona Queen of the Night, elephant tree, ocotillo; those that are removed to be replanted, such as saguaro and littleleaf paloverde, historically experience a very high mortality rate; and • Roads are highly correlated with changes in species composition and population sizes – populations of the more specialized species such as elephant tree, saguaro, Arizona escheveria, will respond negatively due to loss of habitat, including appropriate substrate. The FEIS fails to meaningfully address these prior comments or to adequately analyze or mitigate for the cumulative effects of these impacts. *See* Section II(C) of our Comment Letter (addressing cumulative effects). In addition to the foregoing, a number of key failures found in the FEIS related to the natural environment are discussed further, below. First, while the FEIS at least discloses some of the potential impacts of the project to wildlife,[16] it makes few references (other than noting potential "vegetation removal" and the possible introduction and spread of invasive species) to the profound and irreparable direct, indirect and cumulative impacts that the construction and ultimate presence of the freeway project will have on important plants and plant communities within the Study Area and in particular, in and around SMPP. *See* Comments of Wendy C. Hodgson, Desert Botanical Garden, Phoenix Arizona, attached here as Attachment "A", and fully incorporated by reference. These impacts include, among others things, impacts that extend far beyond the immediate road and vegetation clearing activities needed for the freeway. These impacts are direct, indirect and/or cumulative effects of the proposed action. For example, roads and freeways decrease genetic diversity of affected populations (due to population size and genetic drift), fragment plant corridors that provide genetic conduits between individuals and populations for plant species, introduce and serve as dispersal corridors for invasive plants and exotic species, and increase the possibility of fire, [16] The analysis contained in the FEIS relative the freeway's potential impact on wildlife and plants is abbreviated, at best. *See ROADS AND THEIR MAJOR ECOLOGICAL EFFECTS*, Richard T. T. Forman and Lauren E. Alexander, Harvard University Graduate School of Design, Cambridge, Massachusetts 02138. 11

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21 (cont.)		localized violations, increase the frequency or severity of any existing violation, or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones (see discussion beginning on pages 4-75 and 4-76 of the Final Environmental Impact Statement, respectively). The U.S. Environmental Protection Agency has also established National Ambient Air Quality Standards for nitrogen dioxide. The U.S. Environmental Protection Agency has designated the entire state of Arizona as "unclassifiable/attainment" for nitrogen dioxide (77 *Federal Register* 9532, February 17, 2012) and, because of this, the transportation conformity regulations at 40 Code of Federal Regulations Part 93 do not require analysis of nitrogen dioxide concentrations near the project area. The Federal Highway Administration and Arizona Department of Transportation consulted extensively with the U.S. Environmental Protection Agency on the air quality analysis for the South Mountain Freeway project, and the U.S. Environmental Protection Agency did not suggest or recommend that the Federal Highway Administration evaluate nitrogen dioxide impacts from the project. There are no National Ambient Air Quality Standards for "nitrogen oxides," a class of pollutants that includes nitrogen dioxide along with other oxides of nitrogen, but emissions of these pollutants are accounted for by the Maricopa Association of Governments in the regional emissions analyses for ozone as part of its conformity determination and in the emissions inventories for the Maricopa Association of Governments ozone state implementation plans.
22	**Air Quality**	The carbon monoxide and particulate matter (PM_{10}) analyses demonstrated that the freeway will not contribute to any new localized violations, increase the frequency or severity of any existing violation, or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones. All locations immediately adjacent to the modeled interchanges demonstrated compliance with the National Ambient Air Quality Standards, and the receptor diagrams in Figures 2 through 4 of the air quality technical report show that concentrations decrease rapidly as distance from the roadway increases. Since the U.S. Environmental Protection Agency's National Ambient Air Quality Standards are required to protect public health with an adequate margin of safety, and since the project meets these National Ambient Air Quality Standards, there is no increased hazard to public health in the project area related to the National Ambient Air Quality Standards. For mobile source air toxics, the updated analysis showed that for the Study Area, constructing the freeway will have a marginal effect on annual emissions in 2025 and 2035 (less than a 1 percent difference in total annual emissions between the Preferred Alternative and No-Action Alternative). With the Preferred Alternative in 2035, modeled mobile source air toxics emissions will decrease by 57 percent to more than 90 percent, depending on the pollutant, despite a 47 percent increase in vehicle miles traveled in the Study Area compared with 2012 conditions (see discussion beginning on page 4-78 of the Final Environmental Impact Statement).
23	**Biology, Plants, and Wildlife**	Within the context of overall vegetation, wildlife, and wildlife habitat, all action alternatives and options would decrease the amount of cover, nesting areas, and food resources for wildlife species caused by habitat loss, fragmentation, and traffic disturbance. See the section, *General Impacts on Vegetation, Wildlife, and Wildlife Habitat*, beginning on page 4-136 of the Final Environmental Impact Statement, for additional details on potential effects on vegetation, wildlife, and wildlife habitat. The conclusion for diminished wildlife resources accounts for

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- With increase in pollutants, increased hazard to humans who hike and bike in South Mountain Park, particularly the west end – bicycling and walking increase exposure to air pollutants

- Air pollutants negatively affect many plants whether airborne or in the soil (most particles fall to ground) – loss of photosynthetic ability, reduced plant health and vigor; those plants that can exist near highways have increased susceptibility to environmental stresses when compared to plants further away from highway

24

- Construction kills plants including such iconic plants as ironwood, saguaro, Arizona Queen of the Night, elephant tree, ocotillo; those that are removed to be replanted, such as saguaro and littleleaf paloverde, historically experience a very high mortality rate; and

25 23

- Roads are highly correlated with changes in species composition and population sizes – populations of the more specialized species such as elephant tree, saguaro, Arizona escheveria, will respond negatively due to loss of habitat, including appropriate substrate.

The FEIS fails to meaningfully address these prior comments or to adequately analyze or mitigate for the cumulative effects of these impacts. *See* Section II(C) of our Comment Letter (addressing cumulative effects). In addition to the foregoing, a number of key failures found in the FEIS related to the natural environment are discussed further, below.

First, while the FEIS at least discloses some of the potential impacts of the project to wildlife,[16] it makes few references (other than noting potential "vegetation removal" and the possible introduction and spread of invasive species) to the profound and irreparable direct, indirect and cumulative impacts that the construction and ultimate presence of the freeway project will have on important plants and plant communities within the Study Area and in particular, in and around SMPP. *See* Comments of Wendy C. Hodgson, Desert Botanical Garden, Phoenix Arizona, attached here as Attachment "A", and fully incorporated by reference.

These impacts include, among others things, impacts that extend far beyond the immediate road and vegetation clearing activities needed for the freeway. These impacts are direct, indirect and/or cumulative effects of the proposed action. For example, roads and freeways decrease genetic diversity of affected populations (due to population size and genetic drift), fragment plant corridors that provide genetic conduits between individuals and populations for plant species, introduce and serve as dispersal corridors for invasive plants and exotic species, and increase the possibility of fire,

[16] The analysis contained in the FEIS relative the freeway's potential impact on wildlife and plants is abbreviated, at best. *See ROADS AND THEIR MAJOR ECOLOGICAL EFFECTS*, Richard T. T. Forman and Lauren E. Alexander, Harvard University Graduate School of Design, Cambridge, Massachusetts 02138.

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23 (cont.)		general effects that would also apply to most species that occur along the action alternative corridors. Additional species with the potential to be affected by the project were summarized in the Final Environmental Impact Statement (see page 4-129 of the Final Environmental Impact Statement).
24	**Biology, Plants, and Wildlife**	The Arizona Department of Transportation has conducted studies on the best methods to use for transplanting desert species, particularly ironwood trees and saguaros, and was honored by the American Society of Landscape Architects in 2012 for this work. The research results have been incorporated in the procedures for plant salvage for Arizona Department of Transportation projects and throughout the industry. Reports on the research findings are available from the Arizona Department of Transportation Research Center at <azdot.gov/planning/researchcenter/research/research-reports>.
25	**Biology, Plants, and Wildlife**	Roads, development, or agricultural lands occur along almost the entire lengths (except for less than 2 miles) of the action alternatives, with nearly 1.3 miles of the 2 miles on private property affected by dirt trails. Species composition has already changed along a majority of the action alternative corridors, and the conditions for affecting species composition currently exist. Secondary and cumulative impacts of the freeway are disclosed beginning on page 4-179 of the Final Environmental Impact Statement. Specific comments from Attachment A are addressed in that section of the comment document.

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26	among other impacts. *See id.* None of these impacts are identified or adequately addressed in the FEIS. This is inconsistent with NEPA, which requires, at a base, a "reasonably thorough discussion of the significant aspects of probable environmental consequences." *Oregon Natural Resources Council v. Lowe,* 109 F.3d 521, 526 (9th Cir. 1997). In addition to the foregoing, the FEIS also fails to disclose, analyze and discuss in any detail the substance of the mitigation measures that ADOT and the FWHA intend to utilize to address the direct, indirect and cumulative impacts of the construction activities and the ultimate presence of SR 202L freeway on "biological resources" and other affected resources located within the unique Sonoran ecosystem in the project area, including impacts to plants and vegetation, discussed above, and to wildlife and wildlife habitat. These impacts are significant and include adverse direct, indirect and cumulative affects to (among other things), (a) candidate species protected under the Endangered Species Act (desert tortoise – Sonoran population and the Tucson shovel-nosed snake); (b) numerous plants protected under Arizona's Native Plant Act, which are often unusual or rare, have high value for landscaping or are long-lived and not easily replaced, susceptible to theft and vandalism or are being unnecessarily lost because of development (Arizona Department of Agriculture [ADA] 2009; Maricopa County 2004b); and (c) as well as other animals and plants that are unique to the Sonoran Desert or otherwise considered wildlife of special concern. Some animal species impacted by the project are also protected under the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act, such as the rare Desert Nesting Bald Eagle and Golden Eagles. The Departments acknowledge in the FEIS that, "all action alternatives and options would decrease the amount of cover, nesting areas, and food resources for wildlife species caused by habitat loss, fragmentation, and traffic disturbance." FEIS at 4-136. They also admit (with little analysis) that "[c]onstruction of any action alternatives and options would involve vegetation removal and would cause a decrease in habitat, foraging, and nesting resources for wildlife." *Id.* Additional impacts would occur, according to the Departments' own analysis, during construction and blasting, *see id.,* although the manner and scope of these impacts are not discussed in the FEIS in any meaningful way. The FIES further explains at 4-136 that, [i]n the Eastern Section of the Study Area, the E1 (Preferred) Alternative would affect wildlife because of the presence of undeveloped areas and open space land uses along the SMPP and [Gila River Indian] Community boundaries—the areas with the most natural habitat." In addition, the FEIS discloses at 4-136: Operation of the freeway would cause a long-term increase in noise levels that would vary in intensity depending on factors such as time of day and day of the week. Nighttime noise levels, excluding evening periods, would be less than daytime noise levels; therefore, species active during daytime periods may be affected more than species active at night. Some species rely on hearing to avoid predators, communicate, and find food (Noise 12

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26	**Biology, Plants, and Wildlife**	Candidate species, the Arizona Native Plant Act, and other wildlife species of special concern, including those protected by the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act, are described beginning on page 4-127 of the Final Environmental Impact Statement. In addition, the Arizona Department of Transportation and Federal Highway Administration completed a Biological Evaluation containing analysis of the project effects on listed and candidate species under the Endangered Species Act. The Biological Evaluation was completed in May 2014 following identification of the Preferred Alternative in the Draft Environmental Impact Statement and is available for public review on the project Web site: <azdot.gov/southmountainfreeway>. The Biological Evaluation was sent to the U.S. Fish and Wildlife Service, Arizona Game and Fish Department, and Gila River Indian Community Department of Environmental Quality. The U.S. Fish and Wildlife Service was asked for technical assistance with minimizing impacts on candidate species prior to completion of the Final Environmental Impact Statement. In a letter dated July 18, 2014, the Gila River Indian Community provided comments on the Biological Evaluation and included a list of plant and animal species that are culturally important to the Gila River Indian Community. The Biological Evaluation was revised to incorporate an evaluation of the identified species (see page 4-127 of the Final Environmental Impact Statement). The Arizona Department of Transportation and Federal Highway Administration have committed to continue coordination with the Arizona Game and Fish Department, Gila River Indian Community Department of Environmental Quality, and U.S. Fish and Wildlife Service regarding wildlife concerns as a result of the freeway's implementation. Mitigation measures for biological resources are presented in Table 3, beginning on page 38, of the Record of Decision.

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Pollution Clearinghouse 2004). An increase in traffic noise may affect the ability of some animals to hear at a level necessary for survival when near the proposed action. In addition, hearing loss resulting from vehicle noise has been shown to occur in some desert animals (Bondello and Brattstrom 1979).

The FEIS also states (at least in passing) that the project will result in impacts to wildlife movement and habitat connectivity, explaining at 4-138:

> Impacts on biological resources caused by construction and operation of public roads include vehicle-wildlife collisions, habitat loss, and habitat fragmentation (FHWA 2011) as well as disturbances caused by traffic noise (Barber et al. 2010). A report supported by AGFD and the Arizona Wildlife Linkages Workgroup summarizes a workshop attended by a broad range of organizations and interests that interactively provided input and mapping for important wildlife linkages across Maricopa County (AGFD 2012). The report identifies the area between SMPP and the Sierra Estrella as a landscape movement area.

The Departments, having disclosed the above described adverse impacts on wildlife and plants throughout the range of the Study Area, including within and adjacent to the SMPP, *see* 2 U.S.C. § 4332(2)(C)(ii), were next obligated under NEPA to describe **what mitigating efforts will be used** to off-set the harms that would result from the project. *See* 40 C.F.R. § 1502.16(h) (stating that an EIS "shall include discussions of . . . means to mitigate adverse environmental impacts"). The FEIS fails to do this.

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Instead, the FEIS repeatedly suggests that the specifics of the mitigation measures will be developed at a later time, either during the design phase or just prior to or during construction activities. This approach is devoid of specifics or even a firm commitment to actually conduct the mitigation measures at all in many cases.[17] This is a significant failure that permeates the entire FEIS document and is used repeatedly to essentially "punt" specifics regarding mitigation until after the FEIS process is complete. This tactic is used when discussing a myriad of currently vague (but crucial) mitigation measures, such as the potential use of multi-functional road crossings and culverts for wildlife movement and to reduce vehicle-wildlife collisions, mitigating for impacts to 303(d) impaired waters and impacts to protected plants, developing species-specific mitigation measures to minimize potential impacts to birds and animals, conducting plant and animal surveys, determining the ultimate location of noise barriers and the configuration of bridges to span historic features and trails, determining the means to limit damage to visual resources, including the cuts through SMPP, among other things. *See, e.g.*, Table S-4 (providing a summary of the mitigation measures for this project).

[17] *See Neighbors of Cuddy Mountain v. USFS*, 137 F.3d 1372, 1381 (9th Cir. 1998) (rejecting as insufficient mitigation measures proposed by the Forest Service when it was not certain that the mitigation measures, would in fact, be adopted).

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27	**Biology, Plants, and Wildlife**	Mitigation measures and measures to minimize harm as the result of extensive consultation, avoidance alternatives analyses, and efforts in developing mitigation strategies are presented throughout the Final Environmental Impact Statement to sufficient detail to demonstrate actions leading to impact reduction. Some specifics remained unknown upon publication of the Final Environmental Impact Statement because the design detail was not yet available or because it was procedurally necessary to do so. Table 3, beginning on page 38 of the Record of Decision, contains specific mitigation measures related to biological resources, including species afforded federal protection under the Migratory Bird Treaty Act, for the Sonoran desert tortoise, for salvage of native plants, for prevention of introduction and spread of invasive plants, and for maintenance of habitat connectivity. Measures were included to coordinate with others following the Record of Decision regarding the potential for additional mitigation for sensitive species and for determining the location and design of wildlife crossings as the final design proceeds. The surveys for Sonoran desert tortoise are already underway and are being conducted by the Arizona Game and Fish Department. The resulting documentation will include recordings of all species observed. If other species are determined to exist in the project area and will be affected by the project, additional coordination with the Arizona Game and Fish Department will occur. The Arizona Department of Transportation and Federal Highway Administration, through signing the Record of Decision, commit to fulfill all commitments and mitigation measures in the Record of Decision.

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28	It is well settled under NEPA that a mere perfunctory description of mitigating measures is inconsistent with the "hard look" ADOT and the FHWA is required to take under NEPA. Rather, "[m]itigation must 'be discussed in sufficient detail to ensure that environmental consequences have been fairly evaluated.'" *City of Carmel-By-the-Sea v. U.S. Dep't of Transp., 123 F.3d 1142, 1154 (9th Cir. 1997)* (quoting *Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 353, 104 L. Ed. 2d 351, 109 S. Ct. 1835 (1989)*). "A mere listing of mitigation measures is insufficient to qualify as the reasoned discussion required by NEPA." *Northwest Indian Cemetery Protective Ass'n. v. Peterson, 795 F.2d 688, 697 (9th Cir. 1986), rev'd on other grounds, 485 U.S. 439, 99 L. Ed. 2d 534, 108 S. Ct. 1319 (1988).* Here, the Departments' decision to punt the specifics of its mitigation measures until the design or construction phase of the project is not explained in the FEIS, nor have they even provided an estimate of how effective the mitigation measures would be if adopted or given a reasoned explanation as to why such an estimate is not possible. This also violates NEPA. *See Neighbors*, 137 F.3d at 1381; *see also Klamath-Siskiyou Wildlands Ctr. v. Bureau of Land Mgmt.*, 387 F.3d 989, 993 (9th Cir. 2004) (rejecting as insufficient an environmental assessment that failed to meaningfully analyze mitigation measures where the agency concluded that the "[i]mpacts are being avoided by project design", because "[t]he EA[s] [are] silent as to the degree that each factor will be impacted and how the project design will reduce or eliminate the identified impacts."). Furthermore, an essential component of a reasonably complete mitigation discussion is an assessment of whether the proposed mitigation measures can be effective. Compare *Neighbors of Cuddy Mountain v. U.S. Forest Service, 137 F.3d 1372, 1381 (9th Cir. 1998)* (disapproving an EIS that lacked such an assessment) with *Okanogan Highlands Alliance v. Williams, 236 F.3d 468, 477 (9th Cir. 2000)* (upholding an EIS where "[e]ach mitigating process was evaluated separately and given an effectiveness rating"). The Supreme Court has required a mitigation discussion precisely for the purpose of evaluating whether anticipated environmental impacts can be avoided. See *Methow Valley, 490 U.S. at 351-52* (citing 42 U.S.C. § 4332(2)(C)(ii)). A mitigation discussion without at least some evaluation of effectiveness is useless in making that determination. None of these requirements are met in the FEIS. In short, the Departments' broad generalizations and vague references to mitigation measures in relation to the project do not constitute the requisite detail that ADOT and the FHWA were required to provide since they fail to disclose at any level of specificity what mitigation measures would be undertaken and the potential effectiveness of these measures. For these reasons, the FEIS must be revisited and substantially improved before a record of decision can be entered. **C. The FEIS Fails to Sufficiently Identify and Analyze Cumulative Impacts of the Project, Including Past, Present and Reasonably Foreseeable Future Actions** 14

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28	**Environmental Impact Statement Process**	The Arizona Department of Transportation, the project sponsor, working in close consultation with the Federal Highway Administration, the lead federal agency for the project, and in cooperation with the U.S. Army Corps of Engineers, the U.S. Bureau of Indian Affairs, and the Western Area Power Administration, prepared the Draft and Final Environmental Impact Statements and Section 4(f) Evaluations for the South Mountain Freeway in accordance with: the National Environmental Policy Act of 1969 [42 United States Code Section 4332(2)(c)], Section 4(f) of the Department of Transportation Act of 1966 (49 United States Code Section 303, as amended), and Section 404 of the Clean Water Act of 1977 (33 United States Code Section 1251). The Draft and Final Environmental Impact Statements and Section 4(f) Evaluations: 1) satisfy the Federal Highway Administration's and Arizona Department of Transportation's environmental analysis requirements; 2) provide a comparison of the social, economic, and environmental impacts that may result from implementation of the proposed project—construction and operation of a major transportation facility; and 3) identify measures to avoid, reduce, or otherwise mitigate adverse impacts. The Draft and Final Environmental Impact Statements include sufficient preliminary design information to compare alternatives. Mitigation measures and measures to minimize harm as the result of extensive consultation, avoidance alternatives analyses, and efforts in developing mitigation strategies are presented throughout the Final Environmental Impact Statement to sufficient detail to demonstrate actions leading to impact reduction. Some specifics remained unknown upon publication of the Final Environmental Impact Statement because the design detail was not yet available or because it was procedurally necessary to do so. The final commitments are presented in the Record of Decision. The Arizona Department of Transportation and Federal Highway Administration, by signing the Record of Decision, commit to fulfill all commitments and mitigation measures in the Record of Decision.

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29	The FEIS fails to sufficiently identify and analyze cumulative impacts of the project, including impacts stemming from past, present and reasonably foreseeable future actions in the Study Area. Federal guidance defines cumulative impacts as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions" 40 C.F.R. § 1508.7. "Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time." 40 C.F.R. § 1508.7. In addition, cumulative impacts are considered direct effects, which are "caused by the action and occur at the same time and place" 40 C.F.R. § 1508.8. In sum, cumulative impacts occur where several actions in an area combine to create an impact greater than any one individual activity. Here, the FEIS devotes a scant few pages to addressing the cumulative impacts of the project on the affected environment, only briefly discussing cumulative impacts related to biological resources, water, cultural resources, land use, environmental justice, visual resources, recreational lands, noise and air quality. This is not sufficient for NEPA, since the Departments' analysis of cumulative impacts "must give a sufficiently detailed catalogue of past, present, and future projects, and provide adequate analysis about how these projects, and differences between the projects, are thought to have impacted the environment." *Te-Moak Tribe of Western Shoshone v. DOI*, 608 F.3d 592, 603 (9th Cir. 2010) (*quoting Lands Council v. Powell*, 395 F.3d 1019, 1027, 1028 (9th Cir. 2005) (internal quotation marks omiitted). The FEIS identifies only a handful of activity types that the Departments believe could contribute to cumulative impacts, including highway projects, planned mass transit in the Study Area, other major infrastructure projects, like utility expansions, and "other general development patterns." FEIS at 4-183. Of these activities, the chief type of cumulative impact that is discussed in the document is the ongoing, planned and permitted residential and commercial development with the Study Area. *Id.* However, the FEIS discusses the location, scope and effects of past, present and future projects in the Study Area only in generalities, without offering any specific analysis of how the developments actually interact with the affected environment to result in a cumulative effect. This sort of vague discussion of cumulative impacts can be found in virtually every part of the cumulative effects section. This is inconsistent with the requirements of NEPA. For example (and without limitation to the failings in each subpart of the section), in discussing habitat loss, the FEIS notes that the project would "irrevocably convert existing natural habitat to transportation and use and, therefore, contribute to a reduction in the amount of wildlife habitat in the region." FEIS at 4-183. The FEIS goes on to explain that urbanization in the affected area increased by 15 percent from 1975-2000, but then merely concludes (without offering any specifics) that: Ongoing planned and permitted residential, commercial, and transportation development would likely further this trend of habitat loss 15

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29	**Secondary and Cumulative Impacts**	Secondary and cumulative impacts of the freeway are reported in the Final Environmental Impact Statement beginning on page 4-179 as defined in 40 Code of Federal Regulations Sections 1508.7 and 1508.8. The disclosure of secondary and cumulative impacts does not require the Arizona Department of Transportation to propose and implement mitigation measures to address such impacts. Project-specific mitigation measures as proposed to address direct impacts inherently address reduction in such overall impacts as well. The commitments and mitigation measures for the project are described in Table 3, beginning on page 38, of the Record of Decision.

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through direct conversion, habitat isolation (addressed below), and native plant loss (addressed below). Also, wildlife typically is displaced, causing either increased competition among species members and/or population reduction.

Furthermore, in discussing habitat isolation, as referenced above, the FEIS merely reiterates its prior conclusions on direct effects, saying only that:

> Construction and operation of the proposed action would bisect existing natural habitat for the purposes of a transportation use and, therefore, would contribute to habitat isolation, inhibiting the movement of wildlife for life requirements. This effect would likely be most prevalent in the areas between the South Mountains Sierra Estrella. *Id.*

In short, the Departments' purported discussion of cumulative effects on habitat isolation does nothing to further the analysis, since the FEIS merely concludes that, when considering ongoing planned residential, commercial, and transportation development together, "[t]hese ongoing developments would contribute to continued adverse effects on habitat connectivity. The provision of mitigation for the proposed action in the form of multiuse crossings to be situated in cooperation with federal and State wildlife officials would minimize impacts attributable to the proposed action." *Id.* at 4-184.

The FEIS takes the same approach with regard to analyzing cumulative impacts to plant loss, as noted above, summarily concluding that:

> Future residential, industrial, commercial, and transportation projects in conjunction with the proposed action can be reasonably expected to contribute to a loss of native vegetation, as defined and protected under the Arizona Native Plant Act (A.R.S. § 3-901 *et seq.*). Notably, the proposed action as currently planned would convert natural areas around the South Mountains to a transportation use.

FEIS at 4-184 – 4-185. This form of vague and insufficient cumulative effects analysis continues throughout the cumulative effects section. *See, e.g.* FEIS at 4-184 (concluding the "over time" development in the southwestern Phoenix will result in a diminishment of vehicle-animal collisions "as habitat decreases and becomes less able to sustain large wildlife populations"); FEIS at 4-185 (observing cumulative impacts on ESA listed species will occur due to proposed SR 30 freeway, but noting only that "NEPA requirements will be addressed in an environmental assessment for that federally funded project); FEIS at 4-185 (noting that associated development from "other projects" such as "transportation, commercial, and residential developments" would "result in a higher runoff volumes and a higher potential for pollutant discharges into receiving waters."); FEIS at 4-186 (noting that "[o]ngoing planned and permitted residential, commercial, and industrial development in the region would likely continue to place a demand on water availability. The proposed action would have little

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cumulative effect on water availability."); FEIS at 4-187 (concluding that visual resources would be impacted by "rapid transition in land use from low-density, open uses to residential, commercial and light industrial uses"); FEIS at 4-188 (stating, with no analysis. that "[w]ith the planned growth and urbanization in the Study Area, noise levels would be expected to increase because of the increased density of human activities", but saying impacts to be minimized with best practices).

The Departments' description of past, present and reasonably foreseeable future developments and projects in the Study Area which are based on mere generalities is insufficient to permit adequate review of their cumulative impact under NEPA. *See, e.g., City of Carmel-by-the-Sea v. USDOT*, 123 F.3d 1142, 1160-61 (9th Cir. 1997) (general references to development projects and ongoing urbanization was insufficient for a proper cumulative effects analysis under NEPA); *see also Natural Resources Defense Council, Inc. v. Hodel*, 275 U.S. App. D.C. 69, 865 F.2d 288, 299 (D.C. Cir. 1988) ("These perfunctory references do not constitute analysis useful to a decisionmaker in deciding whether, or how, to alter the program to lessen cumulative environmental impacts.").

So too is the Departments' mere recitation of direct effects and reliance of mitigation measures in lieu of conducting a true cumulative effects analysis. *See Te-Moak Tribe of Western Shoshone v. DOI*, 608 F.3d 592, 603 (9th Cir. 2010) (finding inadequate a cumulative effects analysis where the majority of the discussion focused on how effects of the proposed activities will be avoided or mitigated and noting that the document's "discussion of the . . . direct effects in lieu of a discussion of cumulative impacts.").

D. The FEIS is Replete with Other Failings Under NEPA

As discussed in the comments of our members and PARC, incorporated here, the FEIS falls short under NEPA on a myriad of other fronts, as well, all of which demonstrate that ADOT and the FHWA have failed to take the requisite "hard look" required by NEPA. These include, but are not limited to:

30 • The failure to meaningfully identify, analyze and mitigate for the indirect (secondary) impact of the proposed action;

31 • Failure to consider reasonable alternatives, in particular, with regard to the E1 Alternative that would bisect SMPP;

32 • The unlawful use of pre-decisional actions and the irretrievable commitment of resources in the purchase of lands, planning actions and other activities towards a pre-determined outcome as prohibited under NEPA;

33 • Denial of the growth inducing impacts of the project; and

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30	**Secondary and Cumulative Impacts**	Secondary and cumulative impacts of the freeway are reported in the Final Environmental Impact Statement beginning on page 4-179 as defined in 40 Code of Federal Regulations Sections 1508.7 and 1508.8.
31	**Alternatives**	In accordance with the National Environmental Policy Act, a range of reasonable action alternatives to carry forward for further analysis was determined through application of multidisciplinary criteria in a logical, step-wise progression. Alternatives were not disposed of or dismissed without a thorough evaluation using the multidisciplinary criteria outlined in the systematic alternatives development and screening process presented in Chapter 3 of the Draft and Final Environmental Impact Statements. This process, which occurred early in the environmental impact statement process, was revisited and validated in the Final Environmental Impact Statement (see page 3-2). The alternatives development and screening process considered the ability of an alternative to minimize impacts on the human and natural environments (see page 3-3 of the Final Environmental Impact Statement). Throughout the process described beginning on page 3-3, environmental impacts are used to eliminate alternatives. In the evaluation of action alternatives (see text beginning on page 3-62 of the Final Environmental Impact Statement) environmental and societal impacts play a substantial role in the identification of the W59 and E1 Alternatives as the Preferred Alternative. In comparison with the other action alternatives studied in detail, the Preferred Alternative is the least harmful alternative.
32	**Acquisitions and Relocations**	Land acquisition and relocation assistance services for the project are available to all individuals in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended. The implementing regulations for federally funded highway projects are 49 Code of Federal Regulations Part 24. The process for hardship and advanced acquisitions is explained in text on page 4-50 of the Final Environmental Impact Statement. The comment infers that by taking such action, the objective equal consideration of the alternatives studied in detail in the Draft and Final Environmental Impact Statements is tainted. Advanced acquisitions in parallel to a National Environmental Policy Act environmental determination process are not unprecedented and are common practice. In this case, property acquisitions by the Arizona Department of Transportation for purposes of implementing the freeway are done at risk as communicated to the agency by the Federal Highway Administration. If another action alternative had been ultimately selected, the agency would have to place the acquired properties on the market for sale and purchase. The Arizona Department of Transportation attempts to balance the risk against its mission of timely delivery of transportation infrastructure to the traveling public. Further, Federal Highway Administration regulations do not allow the ownership of right-of-way to be a factor in the decision regarding the selection of an alternative.
33	**Acquisitions and Relocations**	Unplanned growth is often termed "urban sprawl." Generally, this term is used in the context of rapid and uncontrolled urban growth onto previously undeveloped land, usually on the outskirts of an existing urban area. Projects like the freeway are often identified as contributors to urban sprawl. Freeway projects are often cited as making land at the urban fringe more accessible and, therefore, more attractive for development. However, examination of data comparing population and land use between 1975 and 2000 suggests major transportation projects like

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- The wrongful segmentation of the larger Loop 202 highway system and related actions.

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III. The Section 4(f) Evaluation is Insufficient to Meet the Requirements of the U.S. Department of Transportation Act, 49 U.S.C. § 303(c)

In addition to performing the NEPA analysis described above, because the SR 202L project will impact Section 4(f) resources, including historic sites,[18] trails, the SMPP and other public parks and recreational facilities, ADOT and the FHWA have a separate and independent duty to properly consider and document their Section 4(f) evaluation as required by 49 U.S.C. 303(c) of the U.S. Department of Transportation Act, 23 C.F.R. 774 and applicable law, before they can approve the use, as defined in §774.17, of the Section 4(f) properties to be affected by the project.

The Departments have failed to comply with their obligations under Section 4(f), by (among other things), ignoring the very real and adverse direct and constructive uses of the affected 4(f) properties and their resources as defined in § 774.15, and by failing to ensure that all possible planning to minimize harm to the properties has been undertaken (as defined in § 774.17), before the final 4(f) determination and not after, as required by § 774.3(a)(2).

Given the serious failings of the Departments' 4(f) evaluation, PMPC urges ADOT and the FHWA to perform a proper 4(f) evaluation before issuing a Record of Decision in this matter. Anything less violates the law.

Section 303(a) of the U.S. Department of Transportation Act explains that it is the "policy of the United States Government that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites." To this end, under § 303(c), the Secretary of Transportation:

> [M]ay approve a transportation program or project . . . requiring the use of publicly owned land of a recreation area, or wildlife and waterfowl refuge of national, State, or local significance, or land of an historic site of national, State, or local significance (as determined by the Federal, State, or local officials having jurisdiction over the park, area, refuge, or site) only if—(1) there is no prudent and feasible alternative to using that land; and (2) the program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use.

[18] These historic sites include the whole of the SMPP and places and sites recognized as traditional cultural properties (TCPs) under Section 106 of the NHPA, as well as certain sites within the SMPP and elsewhere. The Departments have failed to meaningfully examine the impact of the proposed project on the integrity and purposes of these historic sites or undertake the appropriate planning required by law to minimize for such impacts. This also violates the NHPA and its implementing regulations, as well as NEPA and Section 4(f).

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33 (cont.)		the freeway do not induce growth in the region (see Final Environmental Impact Statement pages 4-179 through 4-183). The freeway will be implemented in a historically quickly urbanizing area (most noticeably in the Western Section of the Study Area, although the nationwide recession which began in 2007 slowed growth). In the Eastern Section of the Study Area, the freeway will abut public parkland, Native American land, and a near-fully developed area; therefore, any contribution to accelerated or induced growth will be constrained. The freeway will be built in an area planned for urban growth as established in local jurisdictions' land use plans for at least the last 25 years.
34	**Alternatives**	The proposed action was not wrongfully segmented. As discussed in text beginning on page 3-11 of the Final Environmental Impact Statement, the South Mountain Freeway has logical termini and independent utility.
35	**Section 4(f) and Section 6(f)**	Chapter 5 of the Draft and Final Environmental Impact Statements presents the Section 4(f) evaluation for the South Mountains in terms of the resource's protection as a Section 4(f) resource as a regional park, historic property, and traditional cultural property. The freeway will pass through the park's southwestern edge. Section 4(f) of the Department of Transportation Act of 1966 extends protection to significant publicly owned public parks, recreation areas, and wildlife and waterfowl refuges, as well as significant historic sites, whether they are publicly or privately owned. This protection stipulates that those facilities can be used for transportation projects only if there is no prudent and feasible alternative to using the land and the project includes all possible planning to minimize harm to the land [see Final Environmental Impact Statement, Chapter 5, *Section 4(f) Evaluation*]. Such alternatives to avoid the Phoenix South Mountain Park/Preserve were identified, but were determined to not be feasible and prudent alternatives to avoid the use of the park. Use of a portion of the mountains for the purposes of the freeway represents two-tenths of one percent of the total mountain range (31.3 acres of the park's approximately 16,600 acres; see Final Environmental Impact Statement pages S-39 and 5-31). Since 1988, and as part of this environmental impact statement process, several measures have been undertaken and will be undertaken to further reduce effects on the mountains. These measures, including narrowing the design footprint, acquiring replacement land immediately adjacent to the mountains, and providing highway crossings, are outlined in text beginning on page 5-23 of the Final Environmental Impact Statement. Phoenix South Mountain Park/Preserve will remain the largest municipally owned park in the United States. The activities that make the park a highly valued resource (recreational activities, interaction with the Sonoran Desert) will remain. Nine-tenths of a mile of the freeway will pass through the park's southwestern edge (see Final Environmental Impact Statement page 5-13). When there is a direct use (take) of a Section 4(f) property, such as Phoenix South Mountain Park/Preserve, analysis to determine whether proximity impacts would result in a constructive use is not applicable (23 Code of Federal Regulations § 774.15). As noted in response code 2, the Department of the Interior reviewed the Final Environmental Impact Statement and agreed with the conclusions presented. The complete letter can be found in page A5 of this Appendix A.

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In *Sierra Club v. USDOT*, 948 F.2d 568, 573 (9th Cir. 1991), the Ninth Circuit summarized the important role of Section 4(f), explaining: "If a planned road will use park land, and if the state will use federal funds to construct that road, then section 4(f) requires that the road be relocated unless no prudent and feasible alternative exists. 49 U.S.C. § 303(c)(1)." (Emphasis added).

In examining the Congressional History behind Sec. 4(f), the Court in *Sierra Club* observed that Congress had enacted 4(f) because "it was concerned that roads and other infrastructures would encroach upon the beauty of existing parks." *Id.* at 574. The Court pointed to a report in the Congressional Record that explained, "section 4(f) is designed to insure that in planning highways . . . and other transportation facilities, care will be taken . . . not to interfere with or disturb established recreational facilities and refuges. S. Rep. No. 1659, 89th Cong., 2d Sess. 5-6 (1966)." *Id.* (internal quotation marks omitted).

Thus, if a planned freeway will "use" park land, historic sited or public recreation facilities, as in the current instance, then Section 4(f) requires that the freeway be relocated unless no other prudent or feasible alternative exists. 49 U.S.C. 303(c)(1). The Ninth Circuit has interpreted this provision to apply **to constructive uses** as well as actual use of park land. In this Circuit, "constructive use" of park land occurs when a road significantly and adversely affects park land even in those portions of the park that are not physically used by the road. *See Adler v. Lewis*, 675 F.2d 1085, 1091-92 (9th Cir. 1982). Furthermore, the court in *Adler*, 675 F.2d at 1092, interpreted the word "use" broadly to apply to any road that would "substantially impair the value of the site in terms of its prior significance and enjoyment." *See also Brooks v. Volpe*, 460 F.3d 1193 (9th Cir. 1972) (applying the definition of "use" under the Federal-Aid Highway Act, 23 U.S.C. § 138 broadly to find that a freeway that did not directly bisect (but encircled) an alpine campground was nevertheless a "use" of the campground under the Act).

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A. The Departments Have Failed to Address Both the Direct and the Constructive Uses of the Project on Sec. 4(f) Resources

With regard to the current project, the Departments identified multiple Section 4(f) resources in relation to the project,[19] including: (a) at least 17 public parks, including SMPP, Sec. 4(f) Analysis at 5-13, Figure 5-7; (b) at least 7 recreation trails or trail systems, Sec. 4(f) Analysis at 5-9, Figure 5-5; (c) at least 12 public school recreational facilities (some less than 100 feet from the freeway), *see* Sec. 4(f) Analysis at 5-11, Table 5-6; and (d) at least 8 properties eligible for inclusion on the National Register of Historic Places in addition to SMPP, *see* Sec. 4(f) Analysis at 5-7, Figure 5-4. Yet, in relation to every one of these 4(f) resources (except SMPP), the Departments incredulously conclude that none of the action alternatives or options would result in the

[19] For reasons already discussed in this Letter, above, PMPC disputes the accuracy of this information, having found a number of 4(f) resources that were not properly identified or discussed by the Departments.

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Code	Issue	Response
36	**Section 4(f) and Section 6(f)**	Chapter 5 of the Draft and Final Environmental Impact Statements presents the Section 4(f) evaluation; discussion of direct and constructive use is fully disclosed throughout the chapter. As noted in response code 2, the Department of the Interior reviewed the Final Environmental Impact Statement and agreed with the conclusions presented. The complete letter can be found in page A5 of this Appendix A.

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direct or constructive use of these resources and therefore, the Departments determined that no measures to minimize harm to these resources is warranted. *See id.*

Furthermore, in relation to SMPP, the Departments acknowledge that the E1 Alternative would result in the direct use of SMPP, but then unlawfully limit their analysis of the "use" to only those 31.3 acres to be directly (physically) impacted by the project, instead of examining the larger and more substantial impacts to the uses of the Park as a whole (such as recreation, hiking, horseback riding, historical integrity, solitude and quiet enjoyment, wildlife viewing and the preservation of the unique Sonoran Desert ecosystem), concluding under § 774.15, that, "as a rule, applicable in this case, when direct use of a Section 4(f) resource would occur, analysis to determine whether proximity impacts would result in constructive use is no longer applicable." Sec. 4(f) Analysis at 5-17 (emphasis added). This unduly narrow interpretation of the constructive use test strains the bounds of reason and is inconsistent with the purpose of the Transportation Act itself and applicable rulings from the Ninth Circuit.[20]

37

1. Impacts to Resources Other Than SMPP

While the Departments identify a multitude of resources afforded protection under Section 4(f) within the Study Area, they determine, with virtually no substantive analysis, but only conclusory statements, that no constructive uses of these resources would occur. This violates the requirements of Section 4(f).

The standards for determining whether a "constructive use" of resources will occur are outlined in § 774.15. Specifically, a constructive use occurs when:

> [T]he transportation project does not incorporate land from Section 4(f) property, but the project's proximity impacts are so severe that the protected activities, features, or attributes that qualify the property for protection under Section 4(f) are substantially impaired. Substantial impairment occurs only when the protected activities, features, or attributes of the property are substantially diminished.

In this instance, with regard to the multiple public parks, NRHP eligible historic places (including Traditional Cultural Properties), recreational trails, and public school recreational facilities to be impacted by the project, the Departments simply conclude that, irrespective of the construction and presence of a large multiple lane freeway nearby (in many instances less than 1,000 feet from the resource or less), none of the action alternatives would result in the constructive use of these resources. This in turn, conveniently obviates the need for the Departments to determine under Section 4(f) whether measures to minimize the harm are warranted under the law. This fatal flaw permeates the entire Section 4(f) analysis and must be corrected.

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[20] Even the FHWA's own policy does not support this constrained review. *See* Appendix A – Excerpt from FHWA *Section 4(f) Policy Paper, FHWA Office of Planning, Environment and Realty, Project Development and Environmental Review (March 1, 2005).*

Code	Issue	Response
37	**Section 4(f) and Section 6(f)**	Chapter 5 of the Draft and Final Environmental Impact Statements presents the Section 4(f) evaluation; discussion of direct and constructive use is fully disclosed throughout the chapter. As noted in response code 2, the Department of the Interior reviewed the Final Environmental Impact Statement and agreed with the conclusions presented. The complete letter can be found in page A5 of this Appendix A.

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For example, the Departments acknowledge that some segments of recreational trails will be bisected by the proposed freeway, but conclude that because the freeway would be constructed as "elevated spans" to "clear" the trail segments, no direct impact would occur (a point that is disputed by PMPC) and, amazingly, they further conclude (without explanation) that there will be no constructive uses of these recreational resources.

Again, this strains reality. It is difficult to see how having a freeway running over one's head (on a previously undisturbed and once quiet and natural hiking, biking or horseback riding trail) would not affect the resources and purpose of the trail. Indeed, this idea was long ago rejected both in the Ninth Circuit and elsewhere. *See, e.g., Brooks*, 460 F.3d at 1193; Adler, 675 F.2d at 1092; *see also D.C. Federation of Civic Associations v. Volpe*, 148 U.S. App. D.C. 207, 459 F.2d 1231, 1239 (D.C.Cir.1971), *cert. denied*, 405 U.S. 1030, 92 S. Ct. 1290, 31 L. Ed. 2d 489 (1972).

Under § 774.15(d), the Departments were required to perform a constructive use determination based, among other things, on:

> (1) Identification of the current activities, features, or attributes of the property which qualify for protection under Section 4(f) and which may be sensitive to proximity impacts;
>
> (2) An analysis of the proximity impacts of the proposed project on the Section 4(f) property. If any of the proximity impacts will be mitigated, only the net impact need be considered in this analysis. The analysis should also describe and consider the impacts which could reasonably be expected if the proposed project were not implemented, since such impacts should not be attributed to the proposed project; and
>
> (3) Consultation, on the foregoing identification and analysis, with the official(s) with jurisdiction over the Section 4(f) property.[21]

A plain review of the Departments' 4(f) evaluation of the project's proximity impacts on recreational trails demonstrates that they did not comply with this important requirement of 4(f). Also, as noted above, relying on unspecific plans for an elevated freeway over these recreational trails is also insufficient for purposes of 4(f) and it cannot be considered mitigation or minimization for purposes of their net impact analysis.

Furthermore, with regard to the directly bisected trails, the Departments make no effort whatsoever to identify the current features and attributes of these trails (which have been discussed at length in this letter and in other comments) which will be impacted by the project – attributes that form the very basis for the trails' 4(f)

[21] Construction of the proposed South Mountain freeway has been opposed by the City of Phoenix Parks Board. *See* FEIS, p. 5-14. The District 7 Executive Committee (FEIS, p. 2-8) and District 6 City Councilman Sal DiCiccio (FEIS Appendix, p. B120) have also submitted letters of opposition for this project.

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Code	Issue	Response
38	**Section 4(f) and Section 6(f)**	Chapter 5 of the Draft and Final Environmental Impact Statements presents the Section 4(f) evaluation. The freeway will not have a direct impact on these trails because it will span the trails. The trails' importance as Section 4(f) resources is based on their recreational value and is not based on any noise-sensitive activities or viewshed characteristics. During construction, trails that will be spanned or will be near potential freeway construction will be closed for limited times for safety reasons. Closures will necessitate that trail users detour around construction sites to rejoin the trails farther along their length. These impacts would be defined as temporary occupancy under the exceptions of Section 4(f) identified in 23 Code of Federal Regulations § 774.13. Subsection (d) details that "temporary occupancies of land that are so minimal as to not constitute a use within the meaning of Section 4(f)" would be an exception if certain conditions are met. The project will meet those conditions (see Appendix 5-2 in Volume II of the Final Environmental Impact Statement). As noted in response code 2, the Department of the Interior reviewed the Final Environmental Impact Statement and agreed with the conclusions presented. The complete letter can be found in page A5 of this Appendix A.

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qualification in the first place. The Departments certainly take no further steps to analyze the proximity impacts of the project on these trails, except to minimize and ignore said impacts. With regard to potential proximity impacts to those trail segments located within ¼ mile of the action alternatives, the Departments inexplicably conclude (without any foundation) that "[n]one of the trail segments . . .have noise-sensitive activities or viewshed characteristics that contribute to their importance as Section 4(f) resources", because (according to the Departments) these trails are merely used for "high-intensity recreational activities such as running, hiking, and biking, not noise or viewshed sensitive activities." Sec. 4(f) Analysis at 5-9, Figure 5-5. Common sense and multiple comments about the uses of these trails by members of the public (including for solitude and due to the natural setting and views) demonstrate there is no basis for these conclusions in the document and the Departments make no effort to support these specious determinations.

To make matters worse, this sort of conclusory analysis is also found throughout the remainder of the Departments' 4(f) analysis with regard to other impacted uses. *See, e.g.*, Sec. 4(f) Analysis at 5-11, Figure 5-6 (concluding public school recreational facilities do not have "noise-sensitive activities or viewshed characteristics); Sec. 4(f) Analysis at 5-13, Figure 5-7 ("None of the public parks . . . have noise-sensitive activities or viewsheds."). Also, the Departments use much of the same tactic with regard to eligible NRHP properties and features, including historic trails and TCPs. *See* Sec. 4(f) Analysis at 5-7, Figure 5-4.

39

2. Impacts to South Mountain Park/Preserve

The Departments make all of the same mistakes discussed above with regard to examining the impact of the project on SMPP, both as it bisects the Park and where it would be built in close proximity to the Park, once again discounting the constructive use of Park resources in every instance. True, ADOT and FHWA at least make a half-hearted attempt to examine the direct impacts to a handful of Park resources from the physical presence of the proposed freeway, such as landscape alteration, intrusion, access, and habitat connectivity, and historic resources, but they quickly conclude these impacts are mitigated or simply not compromised. This is not believable or supported in the 4(f) document.

However, the Departments then compound their 4(f) failings exponentially by concluding as a matter of law, that, under § 714.15, "when direct use of a Section 4(f) resource would occur, analysis to determine whether proximity impacts would result in a constructive use is no longer applicable." Sec. 4(f) Analysis at 5-17 (emphasis added). Having made this convenient conclusion, the Departments then simply wash their hands of any obligation to perform a constructive use analysis of the Park and its many resources and values that have been discussed herein or to examine whether all possible efforts have been undertaken to avoid or minimize these impacts. This is unlawful.

22

Code	Issue	Response
39	**Section 4(f) and Section 6(f)**	Chapter 5 of the Draft and Final Environmental Impact Statements presents the Section 4(f) evaluation for the South Mountains in terms of the resource's protection as a Section 4(f) resource as a regional park, historic property, and traditional cultural property. The freeway will pass through the park's southwestern edge. Section 4(f) of the Department of Transportation Act of 1966 extends protection to significant publicly owned public parks, recreation areas, and wildlife and waterfowl refuges, as well as significant historic sites, whether they are publicly or privately owned. This protection stipulates that those facilities can be used for transportation projects only if there is no prudent and feasible alternative to using the land and the project includes all possible planning to minimize harm to the land [see Final Environmental Impact Statement, Chapter 5, *Section 4(f) Evaluation*]. Such alternatives to avoid the Phoenix South Mountain Park/Preserve were identified, but were determined to not be feasible and prudent alternatives to avoid the use of the park. Use of a portion of the mountains for the purposes of the freeway represents two-tenths of one percent of the total mountain range (31.3 acres of the park's approximately 16,600 acres; see Final Environmental Impact Statement pages S-39 and 5-31). Since 1988, and as part of this environmental impact statement process, several measures have been undertaken and will be undertaken to further reduce effects on the mountains. These measures, including narrowing the design footprint, acquiring replacement land immediately adjacent to the mountains, and providing highway crossings, are outlined in text beginning on page 5-23 of the Final Environmental Impact Statement. These commitments are confirmed in Table 3, beginning on page 38, of the Record of Decision. Phoenix South Mountain Park/Preserve will remain the largest municipally owned park in the United States. The activities that make the park a highly valued resource (recreational activities, interaction with the Sonoran Desert) will remain. Nine-tenths of a mile of the freeway will pass through the park's southwestern edge (see Final Environmental Impact Statement page 5-13). As noted in response code 2, the Department of the Interior reviewed the Final Environmental Impact Statement and agreed with the conclusions presented. The complete letter can be found in page A5 of this Appendix A.

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The Departments appear to base their erroneous legal conclusion on an overly narrow interpretation of the definition of "constructive use" found at § 714.15(a), which provides in relevant part:

> A constructive use occurs when the transportation project does not **incorporate land** from a Section 4(f) property, but the project's proximity impacts are so severe that the protected activities, features, or attributes that qualify the property for protection under Section 4(f) are substantially impaired. [Emphasis added].

Thus, it appears that the Departments believe that because (in this instance) the project would incorporate land within the SMPP, they are relieved of any obligation to perform a constructive use analysis under § 714.15 of other areas of uses of the Park. The law does not support this conclusion.

First, what ADOT and the FHWA have essentially concluded strains the bounds of common sense and runs contrary to the purpose of the statute, which is, after all, to ensure that a "special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites." 49 § U.S.C 303(a). Indeed, under the Departments' reading of the rule, they would be required to conduct a constructive use analysis where a freeway runs right up to or along the boundary of a Section 4(f) resource like a park, but would have absolutely no obligation to consider the project's proximity impacts where the freeway **actually runs through the park**, as is the case here.

The unlawful nature of this position hardly requires further analysis, and indeed, it has been rejected in the past by the Ninth Circuit in any event. For example, in *Adler*, 675 F.2d at 1092, the Ninth Circuit observed Section 4(f) requires "far more than calculating the number of acres to be asphalted", noting that "the location of the affected areas in relation to the remainder of the parkland may be a more important determination than the number of acres affected." *Quoting D.C. Federation of Civic Associations*, 459 F.2d at 1239 (internal quotation marks omitted).

Finally, under 714.15(e), it is clear that the potential for constructive use of SMPP and its important resources has already been anticipated by the FHWA, and determined in this case. It matters not that the freeway is actually "incorporating lands" of the Park as opposed to circling or running along side the Park. Specifically, 714.156(e) provides in part:

> The Administration has reviewed the following situations and determined that a constructive use occurs when:
>
> (1) The projected noise level increase attributable to the project substantially interferes with the use and enjoyment of a noise sensitive facility of a property protected by Section 4(f), such as:
> (i) Hearing the performances at an outdoor amphitheater;

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(ii) Sleeping in the sleeping area of a campground;
(iii) Enjoyment of a historic site where a quiet setting is a generally recognized feature or attribute of the site's significance;
(iv) Enjoyment of an urban park where serenity and quiet are significant attributes; or
(v) Viewing wildlife in an area of a wildlife and waterfowl refuge intended for such viewing.

(2) The proximity of the proposed project substantially impairs esthetic features or attributes of a property protected by Section 4(f), where such features or attributes are considered important contributing elements to the value of the property. Examples of substantial impairment to visual or esthetic qualities would be the location of a proposed transportation facility in such proximity that it obstructs or eliminates the primary views of an architecturally significant historical building, or substantially detracts from the setting of a Section 4(f) property which derives its value in substantial part due to its setting . . . .

(3) The project results in a restriction of access which substantially diminishes the utility of a significant publicly owned park, recreation area, or a historic site.

It is sufficient to say that none of these proximity impacts where evaluated in any meaningful way, since the Departments concluded that applicable law did not require such an evaluation. This is a deep failing in the Section 4(f) analysis that must be corrected.

40

B. **The Departments Have Failed to Ensure that All Possible Planning to Minimize Harm to 4(f) Resources Has Been Undertaken as Required By § 774.3(a)(2).**

ADOT and the FHWA are required, prior to the issuance of the Record of Decision, to ensure that the action "includes all possible planning, as defined in 774.17, to minimize harm to the property resulting from such use . . .". § 774.3. In this respect, "all possible planning" means that "all reasonable measures identified in the Section 4(f) evaluation to minimize harm or mitigate for adverse impacts and effects must be included in the project." § 774.17.

Setting aside all of the failings already described here, which have resulted in the gross failure of the Departments to even consider the need for minimization of harm to most of the 4(f) resources imperiled by this project, the Departments also fall far short where they look to the mitigation measures outlined in the FEIS to cure their failure to ensure that "all possible planning" has already been undertaken to minimize harm or mitigate for those few adverse impacts they admit will occur as a direct result of the construction and ultimate physical presence of the proposed freeway, such as landscape alteration, intrusion, access, and habitat connectivity, and historic resources.

Code	Issue	Response
40	**Section 4(f) and Section 6(f)**	Chapter 5 of the Draft and Final Environmental Impact Statements presents the Section 4(f) evaluation; measures to minimize harm are presented throughout the chapter and represent, as disclosed in the chapter, exhaustive efforts to establish reasonable measures to minimize harm or mitigate for adverse impacts. The Arizona Department of Transportation and Federal Highway Administration, by signing the Record of Decision, commit to fulfill all commitments and mitigation measures in the Record of Decision. As noted in response code 2, the Department of the Interior reviewed the Final Environmental Impact Statement and agreed with the conclusions presented. The complete letter can be found in page A5 of this Appendix A.

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For the same reasons outlined by PMPC regarding the Departments' decision to "punt" mitigation to future planning opportunities after NEPA, as discussed in Section II(B) of this letter, this approach similarly fails to meet the obligations of § 774.17, for purposes of Section 4(f).[22]

IV. Conclusion

In conclusion, PMPC opposes any alignment of the Loop 202 South Mountain Freeway that would trespass onto the South Mountain Park/Preserve or result in the destruction of ridgelines or lands within Park. SMPP is undoubtedly unique and must remain a place for people and wildlife, not freeways, noise and concrete.

ADOT and the FHWA have failed to fulfill their statutory obligations under NEPA, Sec. 4(f) and other applicable provisions of law. For this reason, PMPC urges the Departments to take a step back and revisit the FEIS and the Section 4(f) process in order to meaningfully address the serious failings in these documents. Nothing less complies with the Department's obligations under the law. Nothing less will preserve the integrity SMPP and by correlation, our community's own values that have long recognized and appreciated our natural landscapes, historic sites and traditional cultural properties, parks and recreational facilities.

Yours Truly,

Robin Salthouse

Robin Salthouse, President
Phoenix Mountain Preservation Council, Inc.

CC: Executive Board, Phoenix Mountain Preservation Council, Inc.
S. Montgomery, Esq.

[22] Furthermore, the Departments have failed to meaningfully examine and consider "prudent alternatives" to the use of the 4(f) lands described in this letter, as required by § 774.3(a)(1), just as they have failed to consider reasonable alternatives under NEPA.

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41	ATTACHMENT A

Code	Issue	Response
41		Attachment.

Code	Comment Document

LOOP 202 SOUTH MOUNTAIN FREEWAY PROJECT:

ACTUAL AND POTENTIAL IMPACTS ON PLANTS & PLANT COMMUNITIES

By Wendy Hodgson, November 7, 2014

I. Fragmentation of Habitat

42

Roads often decrease the genetic diversity of affected populations due to reduced population size and genetic drift. [1] Like animals, plant corridors exist, providing genetic conduits between individuals and populations for many plant species. Although there are limited studies done in our region, the presence of a genetic corridor for individual species is an important population dynamic. With loss of habitat and corresponding fragmentation, genetic bottlenecking can be expected, reducing the population vigor and possibly increasing the risk of local extirpation. How it affects certain species, such as those whose pollen and seed dispersal are more limited, is not known. For example, recent studies have suggested that the elephant tree (*Bursera microphylla*) populations are represented by plants that are mainly female (that only produce fruit) or male flowers, but sometimes hermaphroditic (flower has both male and female functional parts); plants may also have flowers that change sexes with external factors such as severe frost. This plant is known to occur in the impact zone of the Loop 202 within South Mountain Park. How further fragmentation within the Park and from surrounding mountain ranges such as the Sierra Estrella and White Tank Mountains affects this special plant of South Mountain and its insect pollinators is unknown. Such fragmentation of habitat and its impact on connectivity of plant populations are not addressed in the FEIS.

II. Invasive Species

43

Roads and road verges serve as dispersal corridors in plants, including exotic species (Holderegger & DiGiulio, 2010). The potential conduit function of roads depends on the habitat specificity of the spreading species, its dispersal range relative to the spacing of roads in the landscape, and the relative importance of long- and short-range dispersal. Effective management of an invasion requires distinguishing between the habitat and conduit functions, a distinction difficult to make with only snapshot data. [2] None of this was addressed in the FEIS.

The proposed highway loop 202 will act as a major corridor for invasive species dispersal and establishment via the tremendous habitat disturbance, vehicular traffic, and the increased access to this southwest side (which has previously experienced

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[1] Holderegger, R. and DiGiulio, M. 2010. The genetic effects of roads: A review of empirical evidence. *Basic and Applied Ecology* 11: 522–531.
[2] Christen, D. and Matlack, G. 2006. The Role of Roadsides in Plant Invasions: A Demographic Approach. *Conservation Biology*, volume 20: 385–391.

Code	Issue	Response
42	**Biology, Plants, and Wildlife**	The section, *General Impacts on Vegetation, Wildlife, and Wildlife Habita*t, beginning on page 4-136 of the Final Environmental Impact Statement, discloses by what means the proposed action and its alternatives would affect vegetation, wildlife, and wildlife habitat. The Federal Highway Administration and Arizona Department of Transportation have committed to avoiding and reducing impacts by including multifunctional crossing structures designed for wildlife and for limited human use as well as culverts designed for connectivity for smaller species.
43	**Invasive Species**	The Arizona Department of Transportation requires standard mitigation measures to prevent the spread of invasive plants on long-term ground disturbing projects. Invasive species surveys will be conducted during the design phase of the freeway (see page 4-127 of the Final Environmental Impact Statement and Table 3, beginning on page 38, of the Record of Decision). If noxious or invasive species are found to be present in the project footprint during that survey, a measure requiring the contractor to develop and implement an invasive and noxious species control plan would be included in the construction contract. Because the species and locations of invasive plants are likely to change in the period prior to initiation of construction of the freeway, delaying the survey until closer to that time will provide a more effective and efficient use of limited taxpayer funds. Mitigation measures to prevent the introduction of invasive species seeds are presented on page 4-139 of the Final Environmental Impact Statement. These commitments are confirmed in Table 3, beginning on page 38, of the Record of Decision.

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relatively minimal influence from development). Disturbance-tolerant species predominate, especially with intensive management adjacent to highways, and exotic species typically are common. [3] Hansen and Clevanger (2005) showed how compared to forests, highway corridor edges in arid or semi-arid habitats act as microhabitats for non-native species and are more prone to invasion, especially if disturbed. The study's results emphasize the importance of minimizing the disturbance of adjacent plant communities along highways and railways during construction and maintenance, particularly in arid or semi-arid habitats and in areas sensitive to additional fragmentation and habitat loss, such as that found in South Mountain. [4] The only mitigation addressing invasive species in the FEIS was to have the construction equipment cleaned. This is unacceptable; further discussion and proposed actions to minimize disturbance of plant communities adjacent to corridor should have been addressed in the FEIS.

In addition, the following statements can be applied to Loop 202 with respect to invasive species:

- Numerous seeds are carried and deposited along roads by vehicles. [5]
- Plants may also spread along roads due to vehicle-caused air turbulence or favorable roadside conditions. [6] For example, the short-distance spread of an exotic wetland species, purple loosestrife (*Lythrum salicaria*), along a New York highway was facilitated by roadside ditches, as well as culverts connecting opposite sides of the highway and the median strip of vegetation.
- Non-authorized hiker/biker access encourages disturbance and increase in accidental seed dispersal for invasive species establishment and proliferation.
- Nutrient enrichment from nearby agriculture enhances the growth of aggressive weeds and can be a major stress on a roadside native-plant community (Panetta FD, Hopkins AJM. 1991, pp. 341–351).

None of the above has been addressed in the FEIS.

Finally, I found that there are relatively few invasive species in this area, an observance of significance especially following an epic summer precipitation pattern that would have encouraged establishment and spread of invasive species.

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[3] Tyser, R. and Worley, C. 1992. Alien flora in grasslands adjacent to road and trail corridors in Glacier National Park, Montana (U.S.A.) *Conservation Biology*, 6:253–62.
[4] Hansen and Clevanger. 2005. *Biological Conservation* 125: 249–259; http://www.lauxen.net/conecte/referencias/Hansen_2005a.pdf.
[5] Schmidt W. 1989. Plant dispersal by motor cars. *Vegetatio* 80:147–52.
[6] Panetta FD, Hopkins AJM. 1991. Weeds in corridors: invasion and management. pp. 341–351, in: Saunders DA, Hobbs RJ, eds. 1991. Nature Conservation 2: The Role of Corridors. Chipping Norton, Australia

Code	Issue	Response

Code	Comment Document
44	**III. Fire** Human access and disturbance effects on remote areas tend to increase with higher road density. [7] Similarly, human-caused fire ignitions may increase. Fires, which are fueled by invasive species and often ignited by humans along such corridors, have devastating impacts on the local Sonoran Desert flora, including the iconic saguaros. Once established, alien grasses such as buffelgrass (*Pennisetum ciliare*) and Sahara mustard (*Brassica tournefortii)* may contribute to a grass/fire cycle; a short fire return interval can cause local extinctions of saguaros (*Carnegia gigantea*) and foothills paloverde (*Cercidium microphyllum*), the latter, along with several other small shrubs such as bursage (*Ambrosia deltoidea, A. dumosa*), are important nurse plants for saguaro seedlings and young plants. [8]
45	**IV. Floristic Analysis** A bare-bones, poor floristic analysis was provided in the FEIS, which included only an assessment of some of the major species in the various habitats provided by a "biologist." I conducted a two hour reconnaissance of the area and following a relatively quick referral to SEINet herbarium database, I listed at least 75 species as occurring in the impacted area. In addition, I located several areas supporting biological soil and desert pavement in the impacted area, which was not addressed in the FEIS. Regarding whether or not a Park visitor's experience will be negatively affected by the Loop 202, the response was that there would be "no impact for the visitor to have a Sonoran Desert experience." What is a Sonoran Desert experience? The experience involves not only seeing, touching and/or smelling, but also listening to Sonoran Desert sounds *and* lack of sounds, save for birds, insects and other inhabitants. It also involves being present in an area whose indications of impacts, such as roads, car noise and pollution are minimal at best. Five major trails are within ¾ of a mile of this multi-lane roadway. Increased traffic leads to an increased establishment and pervasiveness of invasive species that leads to increased fire risk and frequency. All of this lead towards changing the Sonoran Desert ecosystem from a diverse assemblage of cacti, shrubs, trees and annuals, to a less diverse scrub-alien grassland plant community. This also changes the visitors' opportunity to experience the Sonoran Desert as we knew it. To say that Park visitors will not have their experience in the desert impacted is ludicrous. **V. Disposition of Plants Affected And Follow-Up Maintenance** Although the FEIS states that ADOT will contact the Arizona Department of Agriculture regarding what plants will be affected, there is no statement as to what options they will have (ex., transplanting or allowing salvage), and depending on the [7] Forman RTT. 1995. Land Mosaics: The Ecology of Landscapes and Regions. Cambridge, UK: Cambridge Univ. Press, Mech LD. 1989. Wolf population survival in an area of high road density. Am. Midl.Nat. 121:387–389. [8] Rogers, G. F. 1985. Mortality of burned *Cereus giganteus*. *Ecology*. 66: 630-632. 3

Code	Issue	Response
44	**Biology, Plants, and Wildlife**	Comment noted. See response code 40 related to invasive species.
45	**Section 4(f) and Section 6(f)**	As stated in the Council on Environmental Quality's Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act, environmental impact statements should be analytic rather than encyclopedic [40 Code of Federal Regulations Part 1502.2(a)]. The discussion included in the Final Environmental Impact Statement appropriately illustrates the plant communities present in the Study Area. The context and attributes of the South Mountains are described in the Final Environmental Impact Statement. The acreage of parkland to be converted to a transportation use is reported on page 5-14 in the section, *Direct Use*. It is reported that 31.3 acres, or just less than 0.2 percent of the parkland, will be converted to a transportation use (this is a reduction in the amount of use planned for in 1988). The text goes on to point out other concerns associated with the direct use reported, and text on page 5-14, in the sidebar, "*The South Mountains in Phoenix's Sonoran Preserve System*," describes the importance of Phoenix South Mountain Park/Preserve in the region. Beginning on page 5-23 in the section, *Measures to Minimize Harm*, measures are presented to be undertaken to address the use impacts, including land replacement, on properties adjacent to the park. City of Phoenix planning efforts since the mid-1980s illustrate an awareness of the potential for the proposed freeway to affect Phoenix South Mountain Park/ Preserve. In 1989, the South Mountain Park Master Plan was adopted by the Phoenix City Council. The master plan shows the freeway alignment as adopted by the State Transportation Board in 1988. In 1990, the Phoenix Mountain Preserve Act was ratified by the Arizona Legislature. The Act did not apply to roadways through a designated mountain preserve if the roadway was in the State Highway System prior to August 15, 1990. The proposed freeway was in the State Highway System prior to 1990. Records prior to the Act suggest a primary reason for the exception was to allow the proposed freeway to go through Phoenix South Mountain Park/Preserve (see page 5-14 of the Final Environmental Impact Statement). The project team examined alternatives to avoid the park, but did not identify any feasible and prudent alternatives to avoid impacts. The Arizona Department of Transportation continues to work with park stakeholders to minimize impacts and address concerns. Measures to minimize harm to the park were developed (see Final Environmental Impact Statement, starting on page 5-23). The U.S. Department of the Interior reviewed the Final Environmental Impact Statement and commented, "The Department agrees that the South Mountain Park and Preserve (SMPP) is a Land and Water Conservation Fund (LWCF) assisted site that will be directly impacted by the subject project. These documents assess the direct use of park land for freeway purposes to be 31.3 acres. We agree with the conclusions stated. We note that the "*Measures to Minimize Harm*" on the Section 4(f) Statement pages 5-23, 5-24, and 5-25 have annotated a commitment to provide replacement land for the converted park land. The Department concurs with the assessment of the impacts to the LWCF-assisted resource and acknowledges the mitigation commitment."

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III. Fire

Human access and disturbance effects on remote areas tend to increase with higher road density. [7] Similarly, human-caused fire ignitions may increase. Fires, which are fueled by invasive species and often ignited by humans along such corridors, have devastating impacts on the local Sonoran Desert flora, including the iconic saguaros. Once established, alien grasses such as buffelgrass (*Pennisetum ciliare*) and Sahara mustard (*Brassica tournefortii)* may contribute to a grass/fire cycle; a short fire return interval can cause local extinctions of saguaros (*Carnegia gigantea*) and foothills paloverde (*Cercidium microphyllum*), the latter, along with several other small shrubs such as bursage (*Ambrosia deltoidea, A. dumosa*), are important nurse plants for saguaro seedlings and young plants. [8]

IV. Floristic Analysis

A bare-bones, poor floristic analysis was provided in the FEIS, which included only an assessment of some of the major species in the various habitats provided by a "biologist." I conducted a two hour reconnaissance of the area and following a relatively quick referral to SEINet herbarium database, I listed at least 75 species as occurring in the impacted area. In addition, I located several areas supporting biological soil and desert pavement in the impacted area, which was not addressed in the FEIS.

Regarding whether or not a Park visitor's experience will be negatively affected by the Loop 202, the response was that there would be "no impact for the visitor to have a Sonoran Desert experience." What is a Sonoran Desert experience? The experience involves not only seeing, touching and/or smelling, but also listening to Sonoran Desert sounds *and* lack of sounds, save for birds, insects and other inhabitants. It also involves being present in an area whose indications of impacts, such as roads, car noise and pollution are minimal at best. Five major trails are within ¾ of a mile of this multi-lane roadway. Increased traffic leads to an increased establishment and pervasiveness of invasive species that leads to increased fire risk and frequency. All of this lead towards changing the Sonoran Desert ecosystem from a diverse assemblage of cacti, shrubs, trees and annuals, to a less diverse scrub-alien grassland plant community. This also changes the visitors' opportunity to experience the Sonoran Desert as we knew it. To say that Park visitors will not have their experience in the desert impacted is ludicrous.

V. Disposition of Plants Affected And Follow-Up Maintenance

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Although the FEIS states that ADOT will contact the Arizona Department of Agriculture regarding what plants will be affected, there is no statement as to what options they will have (ex., transplanting or allowing salvage), and depending on the

[7] Forman RTT. 1995. Land Mosaics: The Ecology of Landscapes and Regions. Cambridge, UK: Cambridge Univ. Press, Mech LD. 1989. Wolf population survival in an area of high road density. Am. Midl.Nat. 121:387–389.
[8] Rogers, G. F. 1985. Mortality of burned *Cereus giganteus*. *Ecology*. 66: 630-632.

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46	**Biology, Plants, and Wildlife**	Improved techniques and knowledge regarding the transplanting of salvaged native plants in Arizona have increased survival rates. The Arizona Department of Transportation has considerable experience transplanting native plants protected by the Arizona Native Plant Law and has experienced a high survival rate. The Arizona Department of Transportation has conducted studies on the best methods to use for transplanting desert species, particularly ironwood trees and saguaros, and was honored by the American Society of Landscape Architects in 2012 for this work. The research results have been incorporated in the procedures for plant salvage for Arizona Department of Transportation projects and throughout the industry. Reports on the research findings are available from the Arizona Department of Transportation Research Center at <azdot.gov/planning/researchcenter/research/research-reports>. There is a plan and budget for landscaping and maintenance along the project. The specific questions are noted. These details will be determined during the final design, construction, and maintenance periods of the project.

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(46) options, how they will ensure that chosen options are followed through using best practices for the highest success rate. In addition:

- Is there be a plan and budget for what kind of vegetation will be planted along the corridor, including roadsides, ie., mixture of plantings representing several species to have some semblance to native plant distribution and species makeup or "mass plantings" of few species?
- Is there a plan and budget for continued maintenance and plant care of transplants or newly acquired and planted native plants? Too often plants are installed and tended for only a short amount of time at best, only to be ignored prior to the plants' successful establishment.
- From where will they get their plant material? Nurseries? Will nursery staff and contractor really know exactly what they are providing? For example, will they know how to differentiate a South American mesquite or a hybrid from a native velvet mesquite? I doubt it, based on what I have seen over the decades.
- Will herbicides be used and how will the herbicides affect native species along and outside the corridor? Herbicides often kill non-target plants, particularly from blanket applications in drifting air.
- Will they hire people who actually know how to transplant saguaros so that the plants have a higher risk of establishment? How dense are the plantings? Will the different types of plantings affect wildlife and influence road-kill, including carrion feeders?

VI. Area Pollutants

(47) Runoff pollutants alter soil chemistry and may be absorbed by plants, the effects of which are poorly known amongst desert plants but varying amongst species. Soils adjacent to the road surface typically contain the greatest mass of heavy metals. In one study, elevated concentrations in grass tissue may occur within 5–8 m of a road, although high lead levels were found in soil out to 25 m. As far as I can tell, this was not addressed in the FEIS. Road dust (which is little-studied) sediment transfer may directly damage vegetation, provide nutrients for plant growth, or change the pH and vegetation. [9] Effect-distances are usually < 10–20 m but may extend to 200 m downwind. In arid lands such as the South Mountain area, soil erosion and drainage are common road problems. [10] How pollutants and dust can affect the native plants along Loop 202 was not addressed in the FEIS.

Finally, this development of another major freeway mirrors that of a larger policy of most, if not all highway developments in the U.S., where environmental transportation policy largely ignores a range of ecological issues including biodiversity loss, habitat

[9] Santelman MV, Gorham EV. 1988. The influence of airborne road dust on the chemistry of Sphagnum mosses. *J. Ecol.* 76:1219–31.
[10] Iverson RM, Hinckley BS, Webb RM. 1981. Physical effects of vehicular disturbances on arid landscapes. *Science* 212:915–17.

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47	**Water Resources**	Controlling and treating runoff is a normal function of Arizona Department of Transportation projects. The U.S. Army Corps of Engineers, as a cooperating agency, has participated and contributed in each step of the environmental process. The agency has found the logical sequence of decision making to be sound and in line with National Environmental Policy Act requirements. The Arizona Department of Environmental Quality has also contributed to the process. Both agencies have oversight roles in project permitting as established in the Clean Water Act (Sections 401, 402, and 404). Extensive mitigation in accordance with the permitting requirements can be found in the *Water Resources* and *Waters of the United States* sections of Chapter 4 of the Final Environmental Impact Statement. These commitments are confirmed in Table 3, beginning on page 38, of the Record of Decision. The Arizona Department of Transportation is fully obligated and committed to implementation and adherence to those mitigation strategies.

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	fragmentation and disruption of horizontal natural processes (which contrasts sharply with a policy that focuses on recreating "nature, including natural processes and biodiversity; and enhancing the national ecological network" as is found in the Netherlands). It was very clear that the FEIS paid little attention to plants and plant communities and how they would be affected by the construction of Loop 202; short-term, let alone, long-term consequences were not addressed and any mitigation offered was of little import.
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Grand Canyon Chapter • 202 E. McDowell Rd, Ste 277 • Phoenix, AZ 85004
Phone: (602) 253-8633 Fax: (602) 258-6533 Email: grand.canyon.chapter@sierraclub.org

December 29, 2014

South Mountain Freeway Project Team
Arizona Department of Transportation
1655 West Jackson Street, MD 126F
Phoenix, AZ 85007
Submitted via electronic mail to projects@azdot.gov

Re: Comments on the South Mountain Freeway Final Environmental Impact Statement and Errata

Dear South Mountain Freeway Project Team:

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Thank you for the opportunity to review and comment on the Final Environmental Impact Statement (FEIS) for the South Mountain Freeway (Loop 202). Please accept these comments on behalf of Sierra Club's Grand Canyon Chapter and our more than 35,000 members and supporters.

The Sierra Club's mission is "to explore, enjoy, and protect the wild places of the earth; to practice and promote the responsible use of the earth's ecosystems and resources; and to educate and enlist humanity to protect and restore the quality of the natural and human environments." Our members have a significant interest in and are directly affected by the proposed South Mountain Freeway and its impacts on air quality, public health, native plants and animals, South Mountain Park, and other natural resources. Many of our members enjoy watching wildlife, hiking, and other outdoor and educational activities on the lands affected by this proposed project.

The information presented in the FEIS and associated Errata is disappointing, inadequate, and non-responsive. Relatively few changes or clarifications were made from the Draft Environmental Impact Statement (DEIS) to the FEIS. The fact that the Arizona Department of Transportation (ADOT) failed to consider Sierra Club's comments when preparing the FEIS and that an Errata had to be issued indicates quite clearly that our comments were not adequately considered or incorporated into the FEIS. In the Errata, responses to our comments focused primarily on justifying the project, rather than on responding to the issues that we raised. Additionally, the only changes that were made in the FEIS relative to our comments were due to the same points being raised in other people/organization's comments. In some cases, clarification or a response to a specific point we made were included in the Errata, but these changes were not made in the FEIS. Further, a number of our questions and comments were not addressed in the responses in the Errata.

Sierra Club's comments here will primarily address some of the information presented in the FEIS and Errata, but will also reiterate previous comments that were not adequately addressed in the FEIS and where ADOT was nonresponsive. Please refer to our comments on the DEIS for a complete list of our concerns. We incorporate by reference the Sierra Club comments on the DEIS dated July 24, 2013.

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1		Comments noted. Responses to specific comments are provided in the following pages.

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2	As Sierra Club stated in its comments on the he National Environmental Policy Act (NEPA) requires the lead agency, ADOT, to "[r]igorously explore and objectively evaluate all reasonable alternatives," including those that are "not within the jurisdiction of the lead agency" (40 CFR 1502.14(a) and (c)). The Study Area for the proposed South Mountain Freeway was arbitrarily limited with no real justification for doing so as ADOT did not seriously consider addressing transportation issues via improving infrastructure outside the Study Area, how Highway 85 could address transportation needs, nor how improved mass transit both in and outside the Study Area could improve transportation. On the east end of the project, the Study Area was narrowed inappropriately to basically limit the freeway to the Preferred Alternative and No Action Alternative. ADOT failed to meet this basic NEPA requirement as it did not rigorously explore and evaluate all reasonable alternatives. ADOT inappropriately excluded other alternatives from further and more detailed consideration in violation of 40 CFR 1502.14. These alternatives should have included other locations and alignments. However, we agree that alignment on the Gila River Indian Community lands is inappropriate and would likely have many of the same negative impacts as the Preferred Alternative, so that alternative was appropriately excluded from further consideration. ADOT basically limited the analysis to the one type of development and the one area it wants to build the freeway,[1] which was clearly predecisional. The agency evaded a response to this comment in the FEIS.
3	In the FEIS, ADOT also failed to adequately analyze an alternative or alternatives that would include increased funding for public transportation options such as fuel-efficient buses and light-rail or commuter rail projects to address transportation needs. ADOT failed to consider transit-oriented development to integrate public transit, land use (residential, commercial, industrial, open-space), and the environment or to encourage innovative incentive-based programs that encourage walking, biking, carpooling, or the use of public transportation.
4	Based on the information provided in the FEIS and the Errata, and as noted in our previous comments, the proposed freeway is inappropriate for this area. The proposed freeway will not meet the Purpose and Need of this project, will further exacerbate air quality and public health concerns, will further fragment the landscape, will negatively impact natural resources, will negatively affect cultural resources and practices, and more. These impacts were not adequately addressed the FEIS as required by NEPA. The information presented indicates that the No Action Alternative is the only reasonable alternative at this time.
	Proposed Action and Alternatives
5	In the FEIS and in the response to Sierra Club comments in the Errata, ADOT continually points to the "benefits" of the Preferred Alternative, yet many of these presumed benefits are not justified by the information provided in the FEIS. This was one of our primary comments on the DEIS. For example, the notes in the Errata refer to Table 3-9 (FEIS, p. 3-38) for benefits of the proposed action compared to the No Action Alternative. However, many of the statements in this table are clearly slanted toward selection of an action alternative without adequate justification, use of the best available science, or current research provided in the text. Only a few of these "benefits" are backed up by numbers or by

[1] See question/answer 2a of "Forty Most Asked Questions Concerning CEQ's NEPA Regulations": "In determining the scope of alternatives to be considered, the emphasis is on what is 'reasonable' rather than on whether the proponent or applicant likes or is itself capable of carrying out a particular alternative. Reasonable alternatives include those that are practical or feasible from the technical and economic standpoint and using common sense, rather than simply desirable from the standpoint of the applicant.")

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2	**Alternatives**	The parameters for delineation of the Study Area are described in Chapter 1, *Purpose and Need*, of the Draft and Final Environmental Impact Statements as the area defining the transportation problem. As presented in the chapter, transportation models were used to determine where the characteristics of the transportation problem would diminish, and, generally, it is at these locations where the definition of the Study Area took shape. This effort was coordinated with stakeholder agencies, including the U.S. Environmental Protection Agency. The statement that the project team excluded alternatives outside of the Study Area is not supported by the facts presented in the Draft Environmental Impact Statement. Alternatives considered in the Draft Environmental Impact Statement included many that were located outside of the Study Area. Examples include the Riggs Road Alternative (see page 3-9), the State Route 85/Interstate 8 Alternative (see page 3-9), the U.S. Route 60 Extension (see page 3-12), the Interstate 10 Spur (see page 3-12), and the Central Avenue Tunnel (see page 3-12). In accordance with the National Environmental Policy Act, a range of reasonable action alternatives to carry forward for further analysis was determined through application of multidisciplinary criteria in a logical, step-wise progression. Alternatives were not disposed of or dismissed without a thorough evaluation using the multidisciplinary criteria outlined in the alternatives development and screening process presented in Chapter 3 of the Draft Environmental Impact Statement. This process, which occurred early in the environmental impact statement process, was revisited and validated in the Final Environmental Impact Statement (see page 3-2).
3	**Alternatives**	The study has considered a variety of transportation modes: transportation system management/transportation demand management, mass transit (commuter rail, light rail, expanded bus service), arterial street improvements, land use controls, and a No-Action Alternative. These alternatives alone or in combination would have limited effectiveness in reducing overall traffic congestion in the Study Area and, therefore, would not meet the purpose and need criteria; specifically, they would not adequately address projected capacity and mobility needs of the region. Mass transit modes such as light rail and an expanded bus system were reexamined in the Final Environmental Impact Statement and were eliminated from further study because even better-than planned performance of transit would not adequately address the projected 2035 travel demand (see Final Environmental Impact Statement page 3-4). For example, the average daily ridership for the light rail system connecting downtown Phoenix and the Arizona State University campus was approximately 44,000 in 2014. This is only approximately 25 percent of the total daily vehicles projected to use the freeway in 2035.
4	**National Environmental Policy Act Process**	The environmental impact statement process followed the National Environmental Policy Act and Federal Highway Administration's implementing regulations for conducting social and economic evaluations. The impacts associated with the proposed action are appropriately disclosed in the Final Environmental Impact Statement.
5	**Alternatives, Purpose and Need**	The basis for the identification of the Preferred Alternative is presented beginning on page 3-62 of the Final Environmental Impact Statement. The identification was based on sound analytical methods such as the Maricopa Association of Governments regional travel demand model. In reaching its determination, the

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	previous studies. Similarly, ADOT repeatedly states that the proposed freeway would decrease energy consumption and improve air quality in the region, but these statements are based on general information or assumptions, not on relevant research or by past experience with freeway construction in the Phoenix-metropolitan area. ADOT cannot justify a project based on inadequately grounded assumptions and without using the best available science.
6	As noted in our previous comments, an alternative that focuses on increased transit was not adequately considered. Although ADOT appears to have considered increased transit as part of its alternatives analysis in the FEIS, such an alternative was eliminated from further study because it "would not adequately address the projected 2035 travel demand" (Errata, p. C5). Related to this, ADOT notes that two high-capacity transit corridors are currently being considered but will not meet the 2035 travel demand. Certainly, these two corridors on their own could not meet the travel demand. However, if implemented appropriately, increased transit could provide significant congestion relief and meet other requirements described in the Purpose and Need, especially over the long term. However, because ADOT continually focuses on freeway development and has not begun to adequately implement transit within our region, transit-oriented alternatives are pushed to the back burner. If ADOT were to begin focusing more on transit and other alternative modes of transportation, transit could become a viable option. As noted in our previous comments, transit would also provide a long-term solution, far beyond the 2035 timeframe discussed in this proposal. ADOT must begin to focus more on alternative modes of transportation. This project provides an ideal opportunity to do so and ADOT should have considered such an alternative.
7	In many of its responses to Sierra Club comments, ADOT states that impacts do not need to be analyzed because the magnitude of these impacts would be similar across all action alternatives (e.g., Errata, p. C47). However, this is not the point of an EIS. The point of an EIS is to provide full disclosure of the potential impacts of a proposed project when compared to the baseline (No Action Alternative). ADOT failed to provide adequate information about potential impacts of selecting an action alternative.
	Air Quality
	The FEIS and Errata are nonresponsive to air quality concerns raised by Sierra Club in our comments on the DEIS.
	In the Errata, ADOT merely restated the same language that appeared in the DEIS in several of its responses to Sierra Club comments regarding air quality. These comments were nonresponsive and make it clear that ADOT did not take our comments into consideration in developing the FEIS and that it is not able to provide further information relative to the questions we asked and concerns we raised and therefore has not done its due diligence relative to NEPA.
8	ADOT continually states that energy consumption and related air pollution would decrease if an action alternative were selected as congestion would be decreased in the region. However, as discussed in our previous comments, these statements neglect other projects currently occurring across the region, including transit projects, as well as planned or potential efforts to reduce congestion and to meet travel demands, and therefore do not address the indirect or cumulative impacts of the proposed action. Additionally, anticipated "benefits" from this project, such as congestion relief, would be short-lived, at best. This is not recognized in the FEIS. Over the long-term, this freeway would increase energy consumption and associated air pollution.

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5 (cont.)		Arizona Department of Transportation sought to balance its responsibilities to address regional mobility needs while being fiscally responsible and sensitive to local communities. As noted in the Final Environmental Impact Statement, when compared with the No-Action Alternative, the Preferred Alternative would result in less energy consumption (page 4-172). Increased levels of congestion (greater inefficiency) under the No-Action Alternative would result in higher energy consumption than with any of the action alternatives. The Arizona Department of Transportation does not claim that the project will improve air quality in the region. The air quality assessment for the proposed freeway analyzed impacts from carbon monoxide and particulate matter (PM_{10}) and followed U.S. Environmental Protection Agency guidelines. The carbon monoxide and particulate matter (PM_{10}) analyses demonstrated that the freeway will not contribute to any new localized violations, increase the frequency or severity of any existing violation, or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones. For mobile source air toxics, the updated analysis showed that for the Study Area, constructing the freeway would have a marginal effect on annual emissions in 2025 and 2035 (less than a 1 percent difference in total annual emissions between the Preferred Alternative and No-Action Alternative). With the Preferred Alternative in 2035, modeled mobile source air toxics emissions would decrease by 57 percent to more than 90 percent, depending on the pollutant, despite a 47 percent increase in vehicle miles traveled in the Study Area compared with 2012 conditions (see discussion beginning on page 4-78 of the Final Environmental Impact Statement).
6	**Alternatives**	Mass transit modes such as light rail and an expanded bus system were reexamined in the Final Environmental Impact Statement and were eliminated from further study because even better-than planned performance of transit would not adequately address the projected 2035 travel demand (see Final Environmental Impact Statement page 3-4). For example, the average daily ridership for the light rail system connecting downtown Phoenix and the Arizona State University campus was approximately 44,000 in 2014. This is only approximately 25 percent of the total daily vehicles projected to use the freeway in 2035.
7	**National Environmental Policy Act Process**	The impacts of all alternatives, including the No-Action Alternative, are disclosed in Chapter 4 of the Final Environmental Impact Statement.
8	**Air Quality**	The Maricopa Association of Governments regional travel demand model includes the planned multimodal projects as identified in the latest *Regional Transportation Plan*. Therefore, the benefits of these other projects are accounted for in the analysis of the No-Action Alternative and action alternatives. Within the 2035 planning horizon for the project, the energy use will be less with the freeway in place when compared with the No-Action Alternative. The carbon monoxide and particulate matter (PM_{10}) analyses demonstrated that the freeway will not contribute to any new localized violations, increase the frequency or severity of any existing violation, or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones. For mobile source air toxics, the updated analysis showed that for the Study Area, constructing the freeway will have a marginal effect on annual emissions in 2025 and 2035 (less than a 1 percent difference in total annual emissions between the

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Land Use

9 ADOT did not adequately address our comments related to induced traffic as a result of the proposed freeway. ADOT used aggressive growth projections and the assumption that these areas will be developed regardless of the freeway. Although it is true that development is likely to occur in some of these areas and that they are zoned for such development, development of the full area is not a certainty. As noted in our previous comments, the real estate market in Phoenix is highly speculative, and zoning changes are frequently made or development slated for an area is delayed or does not occur. Many of the growth projections are overly aggressive in the Study Area and are based on the assumption that a freeway will be built. If the freeway is not constructed, it is quite possible that these areas will not be developed.

ADOT claims that freeway projects such as this do not accelerate or induce growth (e.g., Errata, p. C8). However, the discussion related to this in the FEIS provides a direct contradiction to this statement (FEIS, p. 4-182). ADOT is correct that the relationship between transportation and land use is "complex." However, it then brushes this complexity aside by using aggressive growth models and assumptions of development. ADOT further contradicts itself by saying that accelerated or induced growth as a result of this freeway would be "constrained" (e.g., Errata, p. C8), which indicates that some induced growth is expected. Similarly, ADOT notes that not constructing the freeway would make it difficult to gain access to adjacent land uses (Errata, p. C14), which indicates that this freeway would make it easier to access and develop surrounding areas. ADOT also notes that a reasonably foreseeable impact from this project is "increased rate of land conversion" (FEIS, Table 4-55, p. 4-181).

10 ADOT also did not address our comment regarding its statements regarding compatibility of a transportation corridor with multifamily residential uses. Our comments noted that these statements were unfounded. In its response, ADOT merely restated the language yet did not provide any justification (Errata, p. C19) and therefore was nonresponsive to this concern.

Biological Resources

Habitat loss and degradation

11 The FEIS continues to underestimate potential habitat loss and degradation and also does not respond to our request for further discussion of potential impacts and associated analyses. For example, ADOT repeatedly asserts that impacts to wildlife habitat and to South Mountain Park will be minimal as the proposed freeway would only use 31.3 acres of the park or two-tenths of one percent (e.g., Errata, p. C9). Unfortunately, this statement is erroneous. By cutting through the park, the small fragment of habitat on that remains on the other side of the freeway would effectively be lost for most species as many cannot subsist in such a small area. The proposed crossing structures provide only limited mitigation for this problem (see further discussion below). By only focusing on the actual footprint of the freeway, ADOT vastly underestimates potential impacts of this project on wildlife, South Mountain Park, and other natural resources. Although several groups made this comment on the DEIS, ADOT failed to address it in the FEIS and therefore was nonresponsive.

9 ADOT also did not address our comment related to the *accelerated rate* of habitat loss. Its only response is that freeway projects do not induce growth (see discussion above) and that the freeway is planned for an area that is to be developed regardless (Errata, p. C42). However, our comment referred to specific language in the DEIS, which is also in the FEIS: a reasonably foreseeable impact of this project is "increased rate of land conversion" (FEIS, Table 4-55, p. 4-181). By not acknowledging the impacts of

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8 (cont.)		Preferred Alternative and No-Action Alternative). With the Preferred Alternative in 2035, modeled mobile source air toxics emissions will decrease by 57 percent to more than 90 percent, depending on the pollutant, despite a 47 percent increase in vehicle miles traveled in the Study Area compared with 2012 conditions (see discussion beginning on page 4-78 of the Final Environmental Impact Statement). To the best of the Federal Highway Administration's knowledge, the Final Environmental Impact Statement does not claim that the project will reduce air pollution. At the Draft Environmental Impact Statement stage, the mobile source air toxics emissions analysis for the Study Area showed that the project would reduce mobile source air toxics emissions compared with the No-Action Alternative, supporting statements that the project would result in improvements in air quality; however, the updated analysis for the Final Environmental Impact Statement showed that the project would result in a slight increase in mobile source air toxics emissions compared with the No-Action Alternative, and statements that the project would result in improvements in air quality were removed from the Final Environmental Impact Statement and Record of Decision. The actual quantitative results of the air quality analyses themselves are presented in the Final Environmental Impact Statement and air quality technical report.
9	**Land Use**	Freeway projects are often cited as making land at the urban fringe more accessible and, therefore, more attractive for development. However, examination of data comparing population and land use between 1975 and 2000 suggests major transportation projects like the freeway do not induce growth in the region (see Final Environmental Impact Statement pages 4-179 through 4-183). The freeway will be built in an area planned for urban growth as established in local jurisdictions' land use plans for at least the last 25 years. The reference made to the increased rate of land conversion deals with the specific timing of development in areas planned for development.
10	**Land Use**	As stated on page 4-16 of the Final Environmental Impact Statement, land use impacts caused by the freeway may extend beyond the proposed right-of-way and would include issues of access, community cohesion, economics, air quality, noise, cultural resources, visual impacts, and farmlands. The compatibility of land uses with the action alternatives and the No-Action Alternative was assessed by considering land uses within a ¼-mile buffer of the action alternatives' proposed right-of-way. The compatibility of a major transportation facility with existing land uses may have positive and negative consequences. These factors were disclosed when considering land use compatibility with the freeway.
11	**Biology, Plants, and Wildlife**	The Final Environmental Impact Statement discloses that construction and operation of any of the action alternatives would involve vegetation removal; would diminish habitat, foraging, and nesting resources for wildlife; and would continue the trend of increasing habitat fragmentation as urbanization continues around the South Mountains. As described throughout Chapter 4 of the Final Environmental Impact Statement, the study area for each environmental resource extends beyond the boundary of any single alternative's footprint.

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	accelerated habitat loss, ADOT greatly underestimates the impacts of this project and was again nonresponsive in the FEIS.
12	The Errata states that the project would not provide new public access points to South Mountain Park (p. C40). However, no justification for this statement is provided. Will the sides of the freeway be fenced to prohibit the public from leaving the roadway? As is evident on many of the freeways and other roads that cut through natural areas in Arizona, vehicle and on-foot travel frequently occurs off of these roadways. Similarly, the multiuse crossing structures may provide additional access to previously undisturbed areas (see further discussion below).
	Limited knowledge of species in Study Area
13	ADOT did not adequately address Sierra Club concerns regarding its limited understanding of what species occur in the area. As we noted in our previous comments, information provided on potential impacts to species is misleading and inaccurate. We appreciate that additional surveys will be coordinated if design commences on this project, but further information should have been acquired prior to compilation of the EIS. Without this knowledge, much of the information provided in the FEIS regarding impacts to species is based on weak assumptions.
14	ADOT also inappropriately used HabiMap to determine species presence and potential impacts. In several of its responses to our comments regarding sensitive species, ADOT states that HabiMap indicates that the majority of the project area "has a moderate-to-low value for most" of these species (e.g., Errata, p. C42). However, this is an inaccurate statement and is also not the intent of HabiMap. These values are based on the *number* of Species of Greatest Conservation Need that may occur in an area. HabiMap does not rate the quality of habitat for those species, so the statement that the area has a certain value for "most" of the species is wholly erroneous. Related to this, HabiMap is not intended to justify or condemn a proposed project based on species richness in that area. By doing so, ADOT invalidates the purpose of and potential analyses related to HabiMap.
15	Related to the above, we also need to reiterate that the Heritage Data Management System (HDMS) is also not an appropriate tool to determine absence of species from an area. The HDMS is based on incidental observations or surveys results that have been reported to HDMS managers; it is in no way a complete list of species presence and cannot be used to ascertain species absence. In its responses to our comments, ADOT completely ignored these facts. We do appreciate that ADOT noted that incidental observations it recorded do not equate to absence of those species from the Study Area (Errata, p. C47), but it needs to recognize that about the HDMS as well.
13	In our comments, we requested that site-specific surveys be completed to more adequately determine what species may be present. In response, ADOT said that "delaying the survey until closer to [initiation of construction] will provide a more effective and efficient use of limited taxpayer funds" (Errata, p. C47). This does not address our comments related to this. The point of initial surveys is not to identify specific locations of individual animals but to, instead, understand species presence and the full implications of the project. Without this knowledge, only impacts to individual animals that are encountered could be mitigated, not population-wide impacts.
16	ADOT also did not respond to our question about whether or not any surveys have been conducted and, if so, what methods were used (Errata, p. C47). Related to this, however, we question the efficacy of planned surveys for some species. For example, ADOT says that if indications of bat roosting sites are found during surveys for Sonoran desert tortoises, additional surveys and mitigation measures may be implemented (Errata, p. C54). We question how surveys for tortoises can be used to determine presence

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12	**Biology, Plants, and Wildlife**	The freeway will be a completely access-controlled facility. Right-of-way fencing will prohibit motorists from leaving the freeway right-of-way to access adjacent land. One multifunctional crossing will be located coincident with an existing Maricopa County trail. The other multifunctional crossings along the freeway will facilitate limited pedestrian access from the Gila River Indian Community to culturally important places and will also serve wildlife. These crossing structures and associated fences will be designed to reduce the incidence of vehicle-wildlife collisions and to reduce the impact of the freeway on wildlife connectivity between the South Mountains, the Gila River, and the Sierra Estrella. The Arizona Department of Transportation will coordinate with the U.S. Fish and Wildlife Service, Arizona Game and Fish Department, and the Gila River Indian Community's Department of Environmental Quality during the design phase regarding the potential for locating and designing wildlife-sensitive roadway structures.
13	**Biology, Plants, and Wildlife**	The analysis presented in the *Biological Resources* section of Chapter 4 of the Final Environmental Impact Statement and the Biological Evaluation completed in 2014 represent an appropriate analysis of existing conditions and potential impacts based on field surveys and available literature.
14	**Biology, Plants, and Wildlife**	While the HabiMap data were used to make a general observation of the quality of habitat in the Study Area, the determination of occurrence (known, likely, and unknown) was made based on field surveys of habitat and the review of available data by a qualified wildlife biologist. The determination was not made based on the HabiMap layers or scores as perceived by the commenter.
15	**Biology, Plants, and Wildlife**	Comment related to the Heritage Data Management System is noted. The system is only one source, of many, used to determine the occurrence of species.
16	**Biology, Plants, and Wildlife**	Field surveys were conducted by a qualified biologist to characterize habitat and the potential presence of species. The statement referenced on page C54 states that the surveys for bat roosting sites would occur during surveys for the tortoise "and other sensitive species."

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of bats as these species occupy very different niches and microhabitats. Again, we urge ADOT to conduct surveys specific to the species that may occur in the area.

17 As noted in our previous comments, ADOT needs to identify impacts to individual species, including the Species of Greatest Conservation Need that are identified through HabiMap and HDMS examination. These tools are starting points to indicate potential species that may occur in an area. Site-specific surveys and analyses are then needed to assess presence, distribution, potential impacts, and suitable mitigation measures. ADOT failed to do so and failed to address our comments related to this and therefore was nonresponsive.

Habitat connectivity/wildlife crossing structures

18 Sierra Club continues to have significant concerns that the proposed multifunctional crossings will not facilitate habitat connectivity and wildlife movement across the roadway. Language in the Errata indicates that use of these structures is intended to be limited to wildlife and tribal members (e.g., Errata, p. C43); however, such restrictions are not adequately noted in the FEIS. If such restrictions are intended, how does ADOT plan to ensure that other people, including the public, do not use these areas? Will they be gated and locked? If so, how would that permit wildlife movement? As is evidenced in other structures in the Phoenix area (e.g., Dreamy Draw), the public frequently uses such crossing structures. In fact, some of these areas have become popular with homeless persons and teenagers. Such activities would dissuade and may, in fact, prevent wildlife movement.

In order to maintain habitat connectivity, we strongly urge ADOT to separate crossing structures intended for human use from those intended for wildlife use. Although ADOT points to some situations in which multiuse crossings may be effective, numerous other studies indicate that such structures may not be effective (see our previous comments as well as those submitted by the Arizona Game and Fish Department [AGFD]).

ADOT also did not adequately address our comment related to the need for funnel fencing in conjunction with wildlife crossings. Instead, it states that "potential fencing" may be used to funnel wildlife to the crossing structures (e.g., Errata, p. C44). Why is such fencing only "potential"? As noted in our previous comments and by AGFD, such fencing is essential in order to minimize road mortality and maintain habitat connectivity.

Finally, ADOT did not address our comment that construction of these crossing structures may not maintain connectivity if the surrounding landscape is developed, as is assumed in the FEIS. Our comment related to this is that, although it is not within ADOT's purview to maintain connectivity in areas outside of its jurisdiction, it must be realistic in its discussion of impacts from the proposed action versus the No Action Alternative. By stating that this project will maintain connectivity (even though it assumes that the surrounding area will be developed), it artificially bolsters the proposed action and negates the No Action Alternative.

Coordination/Outdated information

19 ADOT did not address our concerns regarding the lack of coordination with AGFD and other agencies when preparing the DEIS. In addition, much of the information it provides in its responses to our comments are from outdated information. For example, it uses communications from AGFD from 2006 in order to justify the lack of wildlife surveys that have been completed in the area (e.g., Errata, p. C45). As AGFD noted in its comments, additional data and information have become available since this time,

Code	Issue	Response
17	**Biology, Plants, and Wildlife**	The analysis presented in the *Biological Resources* section of Chapter 4 of the Final Environmental Impact Statement and the Biological Evaluation completed in 2014 represent an appropriate analysis of existing conditions and potential impacts based on field surveys and available literature.
18	**Biology, Plants, and Wildlife**	One multifunctional crossing will be located coincident with a Maricopa County trail. The other multifunctional crossings along the freeway will facilitate limited pedestrian access from the Gila River Indian Community to culturally important places and will also serve wildlife. The crossings will not be gated or locked to restrict human use; however, there are no specific trails or paths associated with the crossings. Even if the crossings for wildlife were separated and designed specifically for wildlife, there is no guarantee that humans would not use the crossings, similar to the Dreamy Draw example included in the comment. These crossing structures and associated fences, such as funnel fencing, will be designed to reduce the incidence of vehicle-wildlife collisions and to reduce the impact of the freeway on wildlife connectivity between the South Mountains, the Gila River, and the Sierra Estrella. The Arizona Department of Transportation will coordinate with the U.S. Fish and Wildlife Service, Arizona Game and Fish Department, and the Gila River Indian Community's Department of Environmental Quality during the design phase regarding the potential for location and design of wildlife-sensitive roadway structures. The comment assumes that development patterns would be different if the freeway were not in place. The freeway will be implemented in a historically quickly urbanizing area (most noticeably in the Western Section of the Study Area). Historical and projected growth and the factors contributing to such growth are well-documented in the Final Environmental Impact Statement in Chapter 1, *Purpose and Need*, and in the Chapter 4 sections, *Land Use* and *Economic Impacts*, beginning on pages 4-3 and 4-56, respectively. The freeway will be built in an area planned for urban growth as established in local jurisdictions' land use planning activities for at least the last 25 years (see the section, *Induced Growth*, beginning on page 4-182 of the Final Environmental Impact Statement). Additionally, the area in question has become much more fragmented during the environmental impact statement process and continues to experience fragmentation, independent of the project. It is not reasonable to assume this will not continue or that concerned entities will prevent further fragmentation because that has not occurred to date.
19	**Biology, Plants, and Wildlife**	The information provided by the Arizona Game and Fish Department was reviewed and considered in the analysis presented in the section, *Biological Resources*, in the Final Environmental Impact Statement. An example includes the addition of movement areas to Figure 4-38 on page 4-126 of the Final Environmental Impact Statement. The updated information provided by the Arizona Game and Fish Department did not change the conclusions for biological resources. Based on the Arizona Game and Fish Department comments, changes were included in the Final Environmental Impact Statement to provide clarification.

Code	Comment Document

and it is important to use the most recent and best available data to make decisions. ADOT has failed to do so.

Noise

20 ADOT did not adequately address our comments regarding the impacts of noise. Specifically, it did not address potential impacts to recreationists and to wildlife in South Mountain Park. We again note that the mitigation measures proposed – namely, the noise walls – may have little impact in reducing the amount of noise experienced by recreationists and wildlife in the park. The noise walls will help reduce noise heard on the other side of the wall but may disperse that noise to higher levels, such as the hillsides where recreationists and wildlife will be. This is an important omission from the FEIS.

Summary

21 ADOT has not justified the need for this proposed freeway and has inaccurately and inadequately assessed and analyzed the potential impacts (direct, indirect, and cumulative) from selecting its action alternative. This project would have irreversible and irretrievable impacts on air quality, public health, wild lands, wildlife, and more. Further, ADOT has not analyzed the full range of reasonable alternatives for this project, as the law dictates. We strongly encourage ADOT to withdraw the proposed action, to select the No Action Alternative, and to, instead, invest in solutions that make sense for our region and our state.

Thank you for considering our comments.

Sincerely,

Sandy Bahr
Chapter Director
Sierra Club – Grand Canyon Chapter

Code	Issue	Response
20	**Noise**	With regard to wildlife, noise impacts are disclosed on page 4-136 of the Final Environmental Impact Statement. As stated on page 5-3 of the Final Environmental Impact Statement, ¼ mile is the approximate maximum distance from which traffic noise would be disruptive to human or wildlife uses. In terms of noise analyses, several reasons support why the analysis did not extend beyond ¼ mile: noise impacts at 2,000 feet or greater from the freeway would be minimal (decibels would not be above minimum thresholds); the Federal Highway Administration Traffic Noise Model has limitations for predicting noise levels beyond approximately 500 feet; mitigation, such as noise walls, would not be effective for receptors at 2,000 feet or greater (and at elevated positions) away from the freeway; and, even if it were shown that noise levels are higher on the trail, the impacts would be temporary in nature because trail users would be moving along the trail and because only a short portion of the trail is in a direct line to the freeway (no picnic areas appear to be located along this trail). The existing trails within the park nearest the freeway are 2,000 feet or more away (for example, the National Trail is 2,000 feet away and the Bursera Trail is 4,000 feet away).
21		Comments noted. Responses to specific comments are provided in the following pages.