

South Mountain Freeway (Loop 202)

Interstate 10 (Papago Freeway) to Interstate 10 (Maricopa Freeway)

Final Environmental Impact Statement and Section 4(f) Evaluation

Volume IV (Errata): E-mails Inadvertently Omitted from Volume III

Submitted pursuant to
42 U.S.C. § 4332(2)(c), 49 U.S.C. § 303, and 33 U.S.C. § 1251
by the

Federal Highway Administration
and
Arizona Department of Transportation

in cooperation with the
U.S. Army Corps of Engineers
U.S. Bureau of Indian Affairs
Western Area Power Administration



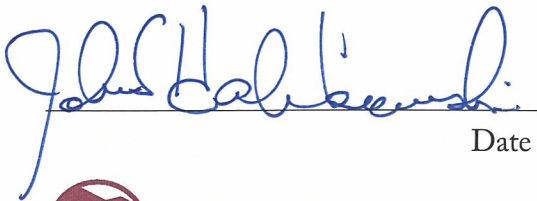
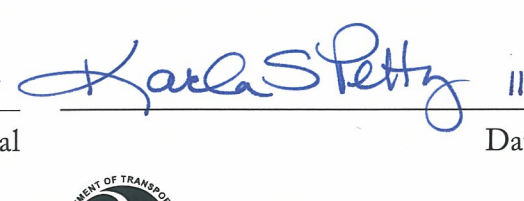
ERRATA TO THE SOUTH MOUNTAIN FREEWAY FINAL ENVIRONMENTAL
IMPACT STATEMENT AND SECTION 4(F) EVALUATION

After release of the *South Mountain Freeway (Loop 202) Interstate 10 (Papago Freeway) to Interstate 10 (Maricopa Freeway) Final Environmental Impact Statement and Section 4(f) Evaluation* (FEIS), the Arizona Department of Transportation (ADOT) was contacted by a stakeholder organization and told that the comments they submitted on the Draft Environmental Impact Statement were not included in the FEIS. ADOT examined this concern and found that the comments, submitted through e-mail, had been received, but were never brought to the attention of the project team. ADOT conducted a thorough search of the entire e-mail system and found that 10 e-mail comments had been inadvertently omitted from the FEIS. The omitted comments consist of the e-mail from the stakeholder organization and 9 e-mails from other interested parties. Based on this, Federal Highway Administration (FHWA), in conjunction with ADOT, published an omission notice in the *Federal Register* on November 7, 2014 and prepared this errata volume [Volume IV of the FEIS] to address these omissions.

As a result of these omissions, FHWA and ADOT will afford additional time for public review of the FEIS, including the errata volume. The additional 30-day review period will begin on the date a notice is published in the *Federal Register*. Notice will take place on November 28, 2014. The period during which the FEIS can be reviewed will end on December 27, 2014.

John Halikowski, Director
Arizona Department of Transportation

Karla S. Petty, Administrator
Arizona Division
Federal Highway Administration

 11/19/14  11-19-14
Date of Approval Date of Approval



Comments can be sent to:
South Mountain Freeway Project Team
Arizona Department of Transportation
1655 West Jackson Street, MD 126F
Phoenix, AZ 85007

Comments can also be sent by e-mail to:
projects@azdot.gov

Comments can be provided by phone at:
(602) 712-7006

Printing of all or parts of the FEIS is also available at:
FedEx Office Print & Ship Center
4940 East Ray Road
Phoenix, AZ 85044

Document Availability
The document is available online at <azdot.gov/
southmountainfreeway> and for review only and at no
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Saturday: 9 a.m. – 1 p.m.
Closed Sundays

ADOT Environmental Planning Group
1611 West Jackson Street
Phoenix, AZ 85007
Call for appointment, (602) 712-7767

(list of document repositories continues on next page)

Document Availability (continued)

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Gila River Indian Community Communications and Public Affairs Office
525 West Gu U Ki Road
Sacaton, AZ 85147
(520) 562-9851
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SPECIAL INTEREST GROUP COMMENTS AND RESPONSES

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	<div><div><div><div>SIERRA CLUB</div><div>FOUNDED 1892</div></div></div><div><div>Grand Canyon Chapter • 202 E. McDowell Rd, Ste 277 • Phoenix, AZ 85004</div><div>Phone: (602) 253-8633 Fax: (602) 258-6533 Email: grand.canyon.chapter@sierraclub.org</div></div></div> <p>July 24, 2013</p> <p>Chaun Hill, PE, Project Manager Arizona Department of Transportation 1655 West Jackson Street, MD126F Phoenix, AZ 85007 <i>Submitted via electronic mail to projects@azdot.gov</i></p> <p>Re: Comments on the South Mountain Freeway Draft Environmental Impact Statement (ADOT Project Number 202L MA 054 H5764 01L)</p> <p>Dear Chaun Hill:</p> <div><div>1</div><p>Thank you for the opportunity to comment on the Draft Environmental Impact Statement (DEIS) for the South Mountain Freeway (Loop 202). Please accept these comments on behalf of the Sierra Club’s Grand Canyon Chapter and our 12,000 members in Arizona and more than 40,000 supporters.</p><p>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.</p><p>In addition to the comments we are submitting, we incorporate by reference the comments submitted by Protecting Arizona Resources and Children, Inc. (PARC), et al., dated July 23, 2013.</p><p><u>I. BACKGROUND</u></p><div><div>2</div><p>Our country annually invested more than \$200 billion of our taxes in transportation infrastructure from 2008-2011.¹ This includes freeways, bridges, airports, public transportation, and sidewalks associated with roads. These projects have by-and-large continued to promote our nation’s reliance on oil and gas, exacerbate public health and safety issues, and, as noted, are a huge hit to federal, state, and local taxpayers.</p><p>The South Mountain Freeway is a proposed 22–24 mile, eight-lane freeway that would extend the southern portion of Loop 202 to connect with Interstate 10 west of Phoenix. The projected cost to build</p></div></div> <div><div>¹ Congressional Budget Office. 2012. Infrastructure Banks and Surface Transportation. Available online at http://www.cbo.gov/sites/default/files/cbofiles/attachments/07-12-12-InfrastructureBanks.pdf.</div></div>

Code	Issue	Response
1	Introduction	Introductory comments reviewed. The comments submitted by Protecting Arizona Resources and Children, Inc., have been addressed separately in the Final Environmental Impact Statement beginning on page B312 of Volume III.
2	Introduction	<p>Specific comments are addressed below; however, the Arizona Department of Transportation and Federal Highway Administration respectfully disagree with the referenced Sierra Club Report. 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), would result in no violations of the U.S. Environmental Protection Agency’s National Ambient Air Quality Standards (page 4-75), would provide economic benefits of reducing regional traffic congestion (page 4-65), and would be consistent with local and regional long-range planning efforts (page 4-18).</p> <p>The statement that the proposed project “was stalled due to a lack of support and funding” is incorrect. The regional freeway and highway has been constructed sequentially to meet the most pressing needs as funds became available (see page 1-8 of the Final Environmental Impact Statement). Support for a major transportation facility in the Study Area has been demonstrated through continuous inclusion in the region’s regional transportation plan as well as local municipalities’ general plans.</p>

Code	Comment Document
3	<p>it is more than \$2 billion. The project has been under consideration for more than 25 years but was stalled due to lack of support and funding. As proposed, the project would cut through the western portion of South Mountain Park/Preserve (SMPP), encourage long commutes, and could exacerbate urban sprawl. Furthermore, the project would destroy wildlife and habitat, increase local air pollution, and disrupt sacred places. Our concerns with this project are so significant that it made into our report on best and worst projects throughout the country,² in which the proposed South Mountain Freeway was identified as the worst transportation project in Arizona.³</p> <p>Issues associated with construction and operation of the proposed South Mountain Freeway include the following:</p> <ul style="list-style-type: none">• Increased traffic and congestion – Any potential benefits from construction of the South Mountain Freeway will be short lived. New freeways encourage additional vehicle use, and the new “uncongested” areas are soon just as congested as other roads in the area. This congestion further exacerbates air quality issues, resulting in more pollution spread out over a larger area. Additionally, the freeway will promote suburban sprawl, something not addressed in the DEIS. The new and/or increased access to areas previously undeveloped results in new housing, shopping, and business centers, and people must drive longer distances to reach their homes, schools, or work, creating more traffic and congestion. Urban and suburban sprawl also affects our standard of living by making car ownership mandatory. Without efficient transportation options, it becomes critical to own a car in order to participate in our society. Funding highway projects disproportionately with other transportation options severely limits our choices.• Diminishing air quality and increased potential for health problems and environmental degradation – South Mountain Freeway will result in more vehicles traveling more miles, which means there will be more air pollution. This project creates a huge potential for an increase in local truck traffic and the associated pollution with that. This is a problem for public health as well as for environmental health. The Phoenix area already suffers significantly from poor air quality, much of which is related to vehicles. Pollution from vehicles also contributes significantly to climate change.• Increased dependence on fossil fuels and energy waste – An increase in the daily vehicle miles traveled further increases our dependence on foreign fuel sources and puts even more strain on the natural resources of our own country.• Burden on the local tax base – Construction and maintenance of highways and the development associated with them increases our tax burden. When a new residential or commercial development is built outside of an existing community, roads, sewer systems, and water lines have to be built to service the urban sprawl. In most cases, neither the developers nor the new residents pay their full, fair share – it is the rest of the community that makes up the difference. In most urban areas, the middle class and poor bear a disproportionate share of this burden. Additionally, most new, sprawling development costs more to build and service than the taxes or fees it generates.• Destruction of habitat and dissection of wildlife corridors – Roads have been identified as a major threat to the persistence of many wildlife populations. They result in increased mortality, habitat loss and degradation, reduced access to vital resources, and division of populations. The proposed South Mountain Freeway will not only destroy habitat and result in direct mortality of some wildlife, but it will also bisect an important corridor that allows movement between SMPP and the Sierra Estrella Mountains, as well as to other areas. <p>² Sierra Club. 2012. Smart Choices, Less Traffic: The 50 Best and Worst Transportation Projects, Green Transportation Report. Available online at http://www.sierraclub.org/transportation/downloads/2012-11-Best-Worst-Transportation-Projects.pdf.</p> <p>³ Ibid.</p>

Code	Issue	Response
3	Neighborhoods/ Communities/ Purpose and Need	<p>Although the region’s freeways are now congested during the peak travel period, conditions in 2035 without the proposed freeway would be substantially worse with more congested areas and congested conditions for longer periods of time (see Final Environmental Impact Statement pages 1-21 and 1-22).</p> <p>Congestion relief resulting from the proposed freeway would provide localized reductions on arterial streets and at interchanges. Reduced travel times would result in lower exposure to elevated concentrations of mobile source air toxics occurring in traffic. Other benefits of the proposed freeway in comparison to the No-Action Alternative are presented in Table 3-9 on page 3-38 of the Final Environmental Impact Statement.</p> <p>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 proposed 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 the proposed freeway do not induce growth in the region (see Final Environmental Impact Statement pages 4-179 through 4-183). The proposed action would 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 proposed freeway would abut public parkland, Native American land, and a near-fully developed area—therefore, any contribution to accelerated or induced growth would be constrained. The proposed freeway would be built in an area planned for urban growth as established in local jurisdictions’ land use plans for at least the last 25 years.</p> <p>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). 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 proposed freeway. Most freeway/light rail combinations, however, radiate from a central travel demand generator such as a business district or airport. No such</p>

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	<p>it is more than \$2 billion. The project has been under consideration for more than 25 years but was stalled due to lack of support and funding. As proposed, the project would cut through the western portion of South Mountain Park/Preserve (SMPP), encourage long commutes, and could exacerbate urban sprawl. Furthermore, the project would destroy wildlife and habitat, increase local air pollution, and disrupt sacred places. Our concerns with this project are so significant that it made into our report on best and worst projects throughout the country,² in which the proposed South Mountain Freeway was identified as the worst transportation project in Arizona.³</p> <p>Issues associated with construction and operation of the proposed South Mountain Freeway include the following:</p> <ul style="list-style-type: none">• Increased traffic and congestion – Any potential benefits from construction of the South Mountain Freeway will be short lived. New freeways encourage additional vehicle use, and the new “uncongested” areas are soon just as congested as other roads in the area. This congestion further exacerbates air quality issues, resulting in more pollution spread out over a larger area. Additionally, the freeway will promote suburban sprawl, something not addressed in the DEIS. The new and/or increased access to areas previously undeveloped results in new housing, shopping, and business centers, and people must drive longer distances to reach their homes, schools, or work, creating more traffic and congestion. Urban and suburban sprawl also affects our standard of living by making car ownership mandatory. Without efficient transportation options, it becomes critical to own a car in order to participate in our society. Funding highway projects disproportionately with other transportation options severely limits our choices.• Diminishing air quality and increased potential for health problems and environmental degradation – South Mountain Freeway will result in more vehicles traveling more miles, which means there will be more air pollution. This project creates a huge potential for an increase in local truck traffic and the associated pollution with that. This is a problem for public health as well as for environmental health. The Phoenix area already suffers significantly from poor air quality, much of which is related to vehicles. Pollution from vehicles also contributes significantly to climate change.• Increased dependence on fossil fuels and energy waste – An increase in the daily vehicle miles traveled further increases our dependence on foreign fuel sources and puts even more strain on the natural resources of our own country.• Burden on the local tax base – Construction and maintenance of highways and the development associated with them increases our tax burden. When a new residential or commercial development is built outside of an existing community, roads, sewer systems, and water lines have to be built to service the urban sprawl. In most cases, neither the developers nor the new residents pay their full, fair share – it is the rest of the community that makes up the difference. In most urban areas, the middle class and poor bear a disproportionate share of this burden. Additionally, most new, sprawling development costs more to build and service than the taxes or fees it generates.• Destruction of habitat and dissection of wildlife corridors – Roads have been identified as a major threat to the persistence of many wildlife populations. They result in increased mortality, habitat loss and degradation, reduced access to vital resources, and division of populations. The proposed South Mountain Freeway will not only destroy habitat and result in direct mortality of some wildlife, but it will also bisect an important corridor that allows movement between SMPP and the Sierra Estrella Mountains, as well as to other areas. <p>² Sierra Club. 2012. Smart Choices, Less Traffic: The 50 Best and Worst Transportation Projects, Green Transportation Report. Available online at http://www.sierraclub.org/transportation/downloads/2012-11-Best-Worst-Transportation-Projects.pdf.</p> <p>³ Ibid.</p>

Code	Issue	Response
3 (cont.)		systems are known to follow a circumferential route, as the proposed 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 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.
4	Air Quality/ Trucks/Climate Change	<p>The U.S. Environmental Protection Agency issued the transportation conformity regulations (40 Code of Federal Regulations § 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 has complied with all requirements related to regional emissions required by the Clean Air Act and 40 Code of Federal Regulations § 93.</p> <p>Increases in traffic volumes attributable to a project do not necessarily result in an increase in emissions over time because the U.S. Environmental Protection Agency’s emissions control regulations and fleet turnover play an important role. In the U.S. Environmental Protection Agency’s MOVES model, emissions rates for mobile source air toxics drop by 80 to 90 percent between 2012 and 2025, and MOBILE6.2 estimated a similar reduction. The effects of this are apparent from the mobile source air toxic analysis conducted for the Final Environmental Impact Statement; in the mobile source air toxics study area, total mobile source air toxics emissions are estimated to decline by more than 80 percent even though traffic is expected to increase by 47 percent (Final Environmental Impact Statement Table 4-36 on page 4-81).</p> <p>The Final Environmental Impact Statement addresses the history of air quality in the region (see text beginning on page 4-68 of the Final Environmental Impact Statement). The Clean Air Act § 109(b)(1) requires the U.S. Environmental Protection Agency to establish primary National Ambient Air Quality Standards at levels that allow an adequate margin of safety to protect the public health. Air quality in the Phoenix metropolitan area has improved over time; Phoenix was redesignated to attainment/maintenance for carbon monoxide in 2005, and the U.S. Environmental Protection Agency determined on May 30, 2014, that Phoenix is in attainment/maintenance for the particulate matter (PM₁₀) standard. These improvements are largely associated with cleaner fuels and lower-emission vehicles along with local controls on fugitive dust. Future emissions would also be reduced by the use of cleaner-burning fuels, technological advances in automotive design (including the greater use of alternative fuel vehicles), reformulated gasoline, gas can standards, stricter enforcement of emission standards during inspections, heavy-duty diesel engine and on-highway diesel sulfur control programs, dust control programs, and others.</p> <p>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 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. The carbon monoxide and particulate matter (PM₁₀) analyses demonstrated that the proposed freeway would not contribute to</p>

(Response 4 continues on next page)

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Code	Issue	Response
4 (cont.)		<p>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 4-77 of the Final Environmental Impact Statement). Congestion relief resulting from the proposed freeway would 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.</p> <p>The proposed freeway is part of a transportation system developed to improve mobility in the region by increasing capacity and allowing traffic—including truck traffic—to access a segment of the “loop” system (see pages 1-21, 1-22, 3-1, and 3-3 of the Final Environmental Impact Statement) in the Phoenix metropolitan area. 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. 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. As disclosed in the Final Environmental Impact Statement, it is expected that “true” through-truck traffic (not having to stop in the metropolitan area) would 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).</p> <p>Text beginning on page 4-85 of the Final Environmental Impact Statement acknowledges that there is extensive scientific literature documenting the adverse effects of greenhouse gas emissions, and the Final Environmental Impact Statement discusses the relationship and the contribution of the proposed action to greenhouse gas emissions in the context of the affected environment (in this case, global emissions). The Federal Highway Administration has concluded, based on the nature of greenhouse gas emissions and the exceedingly small potential greenhouse gas impacts of the proposed action (as shown in Table 4-37 on page 4-86 of the Final Environmental Impact Statement), that greenhouse gas emissions from the proposed action would not result in “reasonably foreseeable significant adverse impacts on the human environment” [40 Code of Federal Regulations § 1502.22(b)]. The greenhouse gas emissions from the action alternatives would be insignificant and would not play a meaningful role in a determination of the environmentally preferable alternative or identification of the Preferred Alternative. More detailed information on greenhouse gas emissions is not “essential to a reasoned choice among reasonable alternatives” [40 Code of Federal Regulations § 1502.22(a)] or to making a determination in the best overall public interest based on a balanced consideration of transportation, economic, social, and environmental needs and impacts [23 Code of Federal Regulations § 771.105(b)]. For these reasons, no alternatives-level greenhouse gas analysis has been performed for this project. The Final Environmental Impact Statement also discusses mitigation activities underway at the Federal Highway Administration.</p>

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	<p>it is more than \$2 billion. The project has been under consideration for more than 25 years but was stalled due to lack of support and funding. As proposed, the project would cut through the western portion of South Mountain Park/Preserve (SMPP), encourage long commutes, and could exacerbate urban sprawl. Furthermore, the project would destroy wildlife and habitat, increase local air pollution, and disrupt sacred places. Our concerns with this project are so significant that it made into our report on best and worst projects throughout the country,² in which the proposed South Mountain Freeway was identified as the worst transportation project in Arizona.³</p> <p>Issues associated with construction and operation of the proposed South Mountain Freeway include the following:</p> <ul style="list-style-type: none">• Increased traffic and congestion – Any potential benefits from construction of the South Mountain Freeway will be short lived. New freeways encourage additional vehicle use, and the new “uncongested” areas are soon just as congested as other roads in the area. This congestion further exacerbates air quality issues, resulting in more pollution spread out over a larger area. Additionally, the freeway will promote suburban sprawl, something not addressed in the DEIS. The new and/or increased access to areas previously undeveloped results in new housing, shopping, and business centers, and people must drive longer distances to reach their homes, schools, or work, creating more traffic and congestion. Urban and suburban sprawl also affects our standard of living by making car ownership mandatory. Without efficient transportation options, it becomes critical to own a car in order to participate in our society. Funding highway projects disproportionately with other transportation options severely limits our choices.• Diminishing air quality and increased potential for health problems and environmental degradation – South Mountain Freeway will result in more vehicles traveling more miles, which means there will be more air pollution. This project creates a huge potential for an increase in local truck traffic and the associated pollution with that. This is a problem for public health as well as for environmental health. The Phoenix area already suffers significantly from poor air quality, much of which is related to vehicles. Pollution from vehicles also contributes significantly to climate change.• Increased dependence on fossil fuels and energy waste – An increase in the daily vehicle miles traveled further increases our dependence on foreign fuel sources and puts even more strain on the natural resources of our own country.• Burden on the local tax base – Construction and maintenance of highways and the development associated with them increases our tax burden. When a new residential or commercial development is built outside of an existing community, roads, sewer systems, and water lines have to be built to service the urban sprawl. In most cases, neither the developers nor the new residents pay their full, fair share – it is the rest of the community that makes up the difference. In most urban areas, the middle class and poor bear a disproportionate share of this burden. Additionally, most new, sprawling development costs more to build and service than the taxes or fees it generates.• Destruction of habitat and dissection of wildlife corridors – Roads have been identified as a major threat to the persistence of many wildlife populations. They result in increased mortality, habitat loss and degradation, reduced access to vital resources, and division of populations. The proposed South Mountain Freeway will not only destroy habitat and result in direct mortality of some wildlife, but it will also bisect an important corridor that allows movement between SMPP and the Sierra Estrella Mountains, as well as to other areas. <p>² Sierra Club. 2012. Smart Choices, Less Traffic: The 50 Best and Worst Transportation Projects, Green Transportation Report. Available online at http://www.sierraclub.org/transportation/downloads/2012-11-Best-Worst-Transportation-Projects.pdf.</p> <p>³ Ibid.</p>

Code	Issue	Response
5	Energy	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.
6	Urban Sprawl	<p>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 proposed freeway do not induce growth in the region (see Final Environmental Impact Statement pages 4-179 through 4-183). The proposed action would be implemented in a historically quickly urbanizing area (most noticeably in the Western Section of the Study Area, although the nationwide recession that began in 2007 slowed growth). In the Eastern Section of the Study Area, the proposed freeway would abut public parkland, Native American land, and a near-fully developed area—therefore, any contribution to accelerated or induced growth would be constrained. The proposed freeway would be built in an area planned for urban growth as established in local jurisdictions’ land use plans for at least the last 25 years.</p> <p>In 2004, the City of Phoenix hired Crystal and Company to perform an analysis of the fiscal, economic, and social impacts of three potential alignments for the South Mountain Freeway. Relative to the Preferred Alternative (W59 and E1 Alternatives), the analysts estimated that, at build-out, the proposed freeway would create over 86,400 jobs and result in annual sales and property tax receipts in excess of \$86.5 million. The study estimated that build-out would take approximately 20 years from freeway completion.</p> <p>The traveling public would also benefit from the proposed freeway. When considering travel time savings, this benefit averages approximately \$200 million per year between 2020 and 2035 (see Table 4-27 on page 4-67 of the Final Environmental Impact Statement).</p>
7	Biological Resources	<p>The section, <i>General Impacts on Vegetation, Wildlife, and Wildlife Habitat</i>, beginning on page 4-125 of the Draft Environmental Impact Statement, discloses by what means the proposed action and its alternatives would affect vegetation, wildlife, and wildlife habitat.</p> <p>Connectivity is planned to allow wildlife movement beneath the freeway in multiuse crossings (see page 4-137 of the Final Environmental Impact Statement). The Federal Highway Administration and Arizona Department of Transportation have committed to providing mitigation by including multifunctional crossing structures designed for wildlife and for limited human use as well as culverts designed for connectivity for smaller species. Wildlife-friendly design information would be considered during the design of drainage and crossing structures for the freeway (see <i>Mitigation</i>, beginning on page 4-138 of the Final Environmental Impact Statement). The Arizona Department of Transportation and Federal Highway Administration would continue to work with partners, including 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 design of multifunctional crossings that would allow wildlife passage across the proposed freeway alignment at natural drainages and that would allow Gila River Indian Community members to gain access to important traditional locations within the South Mountains.</p> <p>The proposed freeway would be built in an area planned for urban growth as established in local jurisdictions’ land use plans for at least the last 25 years.</p>

Code	Comment Document
8	<ul style="list-style-type: none"> Inefficient use of valuable land – Smart growth ideas are based on the ability to use land efficiently and for the greater good of the surrounding communities. It enables us to preserve open space and habitat while also making it easier for residents to live and work, thus enhancing quality of life. The amount of valuable space used up by the construction of this freeway further hinders the ability of smart growth plans to be implemented and maintained successfully. Furthermore, it destroys a portion of SMPP, an irretrievable loss of public resources that is unmitigable. <p>II. PURPOSE AND NEED (Chapter 1)</p> <p>As environmental advocates, we seek to ensure that the need for new roads and related facilities is not eclipsed by irreparable harm to unique and important ecosystems. We also want to confirm that a proposed freeway is actually needed. To this end, the Arizona Department of Transportation (ADOT) has not adequately justified the Purpose and Need for the proposed South Mountain Freeway.</p> <p>Furthermore, ADOT is proposing action that inconsistent with its mission “to provide a safe, efficient, cost-effective transportation system that links Arizona to the global economy, promotes economic prosperity, and demonstrates respect for Arizona’s environment and quality of life” (DEIS, p. 1-3). The proposed freeway – and especially the Preferred Alternative (W59 and E1) – is not cost-effective, nor does it demonstrate “respect for Arizona’s environment.” The proposed freeway would destroy a section of SMPP, seriously and negatively impact a large portion of it, negatively affect a significant portion of a Traditional Cultural Property, and further exacerbate air quality problems.</p> <p>ADOT uses aggressive growth projections for the Phoenix area overall to justify “a major transportation facility in the Study Area” (DEIS, p. S-6). Growth rates alone cannot justify the need for this freeway, however, nor is it appropriate to use the most aggressive growth projections. As has become clear over the last decade, the growth projections are not necessarily accurate, and addressing growth and associated transportation needs does not automatically point to construction of a freeway, nor does it justify a freeway in this particular location. Without this freeway, would more infill development occur? Could transportation needs be addressed via rail and other mass transit options? Will many of the lands in question remain in agricultural use or low-density development if the freeway is not built? The DEIS does not address or analyze any of these, nor does it consider them relative to the No Action Alternative. ADOT has clearly failed to justify the Purpose and Need for the proposed South Mountain Freeway.</p> <p>III. PROPOSED ACTION AND ALTERNATIVES (Chapter 3)</p> <p>The 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.</p>
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Code	Issue	Response
8	Section 4(f) and Section 6(f)	<p>The proposed freeway would pass through the Phoenix South Mountain Park/ Preserve’s southwestern edge. Section 4(f) of the Department of Transportation Act 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, <i>Section 4(f) Evaluation</i>]. The project team examined alternatives to avoid the Phoenix South Mountain Park/Preserve, but found no feasible and prudent alternatives. Use of a portion of the mountains for the purposes of the proposed 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 would 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 the provision of highway crossings, are outlined in text beginning on page 5-23 of the Final Environmental Impact Statement. Phoenix South Mountain Park/Preserve would 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) would remain. Nine-tenths of a mile of the proposed freeway would pass through the park’s southwestern edge (see Final Environmental Impact Statement page 5-13).</p> <p>The proposed freeway would be built in an area planned for urban growth as established in local jurisdictions’ land use plans for at least the last 25 years. Page 4-18 of the Final Environmental Impact Statement discusses the compatibility of the action alternatives to the long-range plans of Avondale, Phoenix, Chandler, and Tolleson, those municipalities most affected by or nearest the action alternatives. Implementation of smart growth initiatives are a local jurisdiction decision.</p>
9	Purpose and Need	<p>At the beginning of the environmental impact statement process, the need for a major transportation facility was reexamined to determine whether such a facility is still needed. Validation of those findings occurred throughout the entire environmental impact statement process. Analysis of the purpose and need for the proposed action followed National Environmental Policy Act and Federal Highway Administration implementing guidance on the subject matter and used state-of-the-practice analytical tools, as pointed out in Table 1-3, “Traffic Analysis Tools,” on page 1-13 of the Final Environmental Impact Statement. The results of the analysis determined that a transportation problem does exist and that problem will continue in the foreseeable future (see section, <i>Conclusions</i>, on page 1-21). As noted on page 3-1 in the section, <i>Reconfirm the Purpose and Need for the Proposed Action</i>, a continuous validation process was undertaken throughout the environmental impact statement process to ensure past conclusions in the environmental impact statement process remained valid.</p> <p>The relationship of the proposed action to Arizona Department of Transportation’s mission is explained on page 1-3 of the Final Environmental Impact Statement; the proposed action is consistent with this mission. Impacts to the Phoenix South Mountain Park/Preserve and air quality were previously addressed. The cultural and religious importance of the South Mountains is acknowledged in the Draft and Final Environmental Impact Statements in several locations, notably on page 5-26. The</p>

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	<div><ul style="list-style-type: none">Inefficient use of valuable land – Smart growth ideas are based on the ability to use land efficiently and for the greater good of the surrounding communities. It enables us to preserve open space and habitat while also making it easier for residents to live and work, thus enhancing quality of life. The amount of valuable space used up by the construction of this freeway further hinders the ability of smart growth plans to be implemented and maintained successfully. Furthermore, it destroys a portion of SMPP, an irretrievable loss of public resources that is unmitigable.</div> <div><p>II. PURPOSE AND NEED (Chapter 1)</p><p>As environmental advocates, we seek to ensure that the need for new roads and related facilities is not eclipsed by irreparable harm to unique and important ecosystems. We also want to confirm that a proposed freeway is actually needed. To this end, the Arizona Department of Transportation (ADOT) has not adequately justified the Purpose and Need for the proposed South Mountain Freeway.</p><p>Furthermore, ADOT is proposing action that inconsistent with its mission “to provide a safe, efficient, cost-effective transportation system that links Arizona to the global economy, promotes economic prosperity, and demonstrates respect for Arizona’s environment and quality of life” (DEIS, p. 1-3). The proposed freeway – and especially the Preferred Alternative (W59 and E1) – is not cost-effective, nor does it demonstrate “respect for Arizona’s environment.” The proposed freeway would destroy a section of SMPP, seriously and negatively impact a large portion of it, negatively affect a significant portion of a Traditional Cultural Property, and further exacerbate air quality problems.</p></div> <div><div>10</div><p>ADOT uses aggressive growth projections for the Phoenix area overall to justify “a major transportation facility in the Study Area” (DEIS, p. S-6). Growth rates alone cannot justify the need for this freeway, however, nor is it appropriate to use the most aggressive growth projections. As has become clear over the last decade, the growth projections are not necessarily accurate, and addressing growth and associated transportation needs does not automatically point to construction of a freeway, nor does it justify a freeway in this particular location. Without this freeway, would more infill development occur? Could transportation needs be addressed via rail and other mass transit options? Will many of the lands in question remain in agricultural use or low-density development if the freeway is not built? The DEIS does not address or analyze any of these, nor does it consider them relative to the No Action Alternative. ADOT has clearly failed to justify the Purpose and Need for the proposed South Mountain Freeway.</p></div> <div><p>III. PROPOSED ACTION AND ALTERNATIVES (Chapter 3)</p><p>The 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.</p></div> <div>3</div>

Code	Issue	Response
9 (cont.)		proposed project would accommodate and preserve (to the fullest extent possible from the available alternatives) access to the South Mountains for religious practices. Section 106 of the National Historic Preservation Act requires a government-to-government relationship between the Federal Government and Indian tribes as described beginning on page 4-140 of the Final Environmental Impact Statement. Section 106 requires federal agencies take into account the effects of their undertakings on historic properties and requires consultation with tribal authorities. Consultation has occurred with Gila River Indian Community government officials, the Gila River Indian Community Tribal Historic Preservation Officer, the Gila River Indian Community Cultural Resource Management Program, other tribes, and the State Historic Preservation Office and has led to concurrence from the Gila River Indian Community Tribal Historic Preservation Office, other tribes and consulting parties, and the State Historic Preservation Office on National Register of Historic Places eligibility recommendations (including traditional cultural properties like the South Mountains), project effects, and proposed mitigation and measures to minimize harm. This consultation has been ongoing and will continue until any commitments in a record of decision are completed.
10	Purpose and Need, Alternatives	<p>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 was the most appropriate information available. 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, <i>Alternatives</i>).</p> <p>As described in Chapter 1, <i>Purpose and Need</i>, of the Draft and Final Environmental Impact Statements, the Phoenix metropolitan area was subject to a conversion from natural desert landscape to an agricultural landscape well before any roadway existed in the area. As described in the section, <i>Land Use</i>, beginning on page 4-3, land use patterns are predominantly the result of local and regional land use planning activities. Growth projections for 2035 are not predicated on specific transportation improvements; rather, they are based on future land use plans, as envisioned by their respective jurisdictions. With few exceptions, land in the Study Area is privately owned; zoning requests to develop private land are typically based on these land use plans. In Phoenix in particular, development is occurring regardless of the proposed freeway.</p> <p>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</p>

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	<ul style="list-style-type: none">• Inefficient use of valuable land – Smart growth ideas are based on the ability to use land efficiently and for the greater good of the surrounding communities. It enables us to preserve open space and habitat while also making it easier for residents to live and work, thus enhancing quality of life. The amount of valuable space used up by the construction of this freeway further hinders the ability of smart growth plans to be implemented and maintained successfully. Furthermore, it destroys a portion of SMPP, an irretrievable loss of public resources that is unmitigable. <p>II. PURPOSE AND NEED (Chapter 1)</p> <p>As environmental advocates, we seek to ensure that the need for new roads and related facilities is not eclipsed by irreparable harm to unique and important ecosystems. We also want to confirm that a proposed freeway is actually needed. To this end, the Arizona Department of Transportation (ADOT) has not adequately justified the Purpose and Need for the proposed South Mountain Freeway.</p> <p>Furthermore, ADOT is proposing action that inconsistent with its mission “to provide a safe, efficient, cost-effective transportation system that links Arizona to the global economy, promotes economic prosperity, and demonstrates respect for Arizona’s environment and quality of life” (DEIS, p. 1-3). The proposed freeway – and especially the Preferred Alternative (W59 and E1) – is not cost-effective, nor does it demonstrate “respect for Arizona’s environment.” The proposed freeway would destroy a section of SMPP, seriously and negatively impact a large portion of it, negatively affect a significant portion of a Traditional Cultural Property, and further exacerbate air quality problems.</p> <p>ADOT uses aggressive growth projections for the Phoenix area overall to justify “a major transportation facility in the Study Area” (DEIS, p. S-6). Growth rates alone cannot justify the need for this freeway, however, nor is it appropriate to use the most aggressive growth projections. As has become clear over the last decade, the growth projections are not necessarily accurate, and addressing growth and associated transportation needs does not automatically point to construction of a freeway, nor does it justify a freeway in this particular location. Without this freeway, would more infill development occur? Could transportation needs be addressed via rail and other mass transit options? Will many of the lands in question remain in agricultural use or low-density development if the freeway is not built? The DEIS does not address or analyze any of these, nor does it consider them relative to the No Action Alternative. ADOT has clearly failed to justify the Purpose and Need for the proposed South Mountain Freeway.</p> <p>III. PROPOSED ACTION AND ALTERNATIVES (Chapter 3)</p> <p>The 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.</p>
11	3

Code	Issue	Response
10 (cont.)		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). 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 proposed 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 proposed 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 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.
11	Alternatives, Purpose and Need	<p>The parameters for delineation of the Study Area are described in Chapter 1, <i>Purpose and Need</i>, 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).</p> <p>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. The Preferred Alternative was the outcome of the alternatives development and screening process. 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).</p>

Code	Comment Document
12	<p>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,⁴ which was clearly predecisional.</p> <p>In the DEIS, 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.</p> <p>Likewise, ADOT has failed to include and present the “best available scientific and technical information” in this DEIS as is required in the Council on Environmental Quality (CEQ) regulations at 40 CFR 1502.24. This is particularly true of the following resources and associated impact analyses.</p> <p>Much of data included relative to air quality and other resources is outdated or incomplete. For example, there is no discussion of the 2011 and 2012 ambient air quality monitoring data.⁵ Regarding the <i>Comparison of National Economic and Demographic Growth Indicators and Air Emissions, 1970-2005</i>, there is much more current data available through 2011 at the U.S. Environmental Protection Agency website.⁶</p> <p>A. DEIS does not address the full range of reasonable alternatives</p> <p>The DEIS fails to adequately analyze the full range of reasonable alternatives on the east end of the proposed freeway as it only considers and analyzes the Preferred Alternative – E1 – and the No Action Alternative rather than considering a more holistic alternative in the mix that included other parts of the Valley, other alignments, and mass transit. Only cursory mention of mass transit was provided, and the claim that mass transit will not meet the Purpose and Need is not supported by the brief discussion in the DEIS. There was no reference to any studies that indicate that it could not meet the Purpose and Need.</p> <p>B. No Action Alternative</p> <p>The CEQ regulations direct that the DEIS include a full description and analysis of impacts of the No Action Alternative (40 CFR 1502.14[d]). In its brief description of NEPA’s No Action Alternative requirement, ADOT fails to actually set forth any real analysis of the consequences of not allowing the South Mountain Freeway. ADOT reveals that it has decided without any real analysis that the No Action Alternative constitutes failure to meet a need.</p> <p>⁴ 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.”)</p> <p>⁵ MCAQD 2011 Air Monitoring Network Review can be obtained at http://www.maricopa.gov/airquality/monitoring/docs/pdf/2011_Network_Assessment.pdf, and most recent available ambient monitoring data from 2012 should be incorporated into the DEIS and is available at http://www.epa.gov/airdata.</p> <p>⁶ See http://www.epa.gov/airtrends/airtrends.html#comparison.</p>

Code	Issue	Response
12	Alternatives	<p>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). 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 proposed 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 proposed 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 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.</p> <p>In accordance with the National Environmental Policy Act, a range of reasonable action alternatives to carry forward for detailed study 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, <i>Alternatives</i>, of the Draft and Final Environmental Impact Statements. The criteria, in general terms, considered operations, design, ability to meet purpose and need, environmental considerations, cost, and acceptability. The Preferred Alternative was the outcome to this process, which was validated in the Final Environmental Impact Statement (see page 3-2). As described therein, a comprehensive set of modal transportation (such as light rail) and non-transportation alternatives (such as a land use based alternative) were subjected to the evaluation process. These alternatives included many of the specific alternatives referenced in the comment, such as walking, biking, etc. Reasons for elimination of those alternatives are summarized in Table 3-2 of the Final Environmental Impact Statement.</p>

Code	Comment Document
	<p>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,⁴ which was clearly predecisional.</p> <p>In the DEIS, 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.</p> <p>Likewise, ADOT has failed to include and present the “best available scientific and technical information” in this DEIS as is required in the Council on Environmental Quality (CEQ) regulations at 40 CFR 1502.24. This is particularly true of the following resources and associated impact analyses.</p> <p>Much of data included relative to air quality and other resources is outdated or incomplete. For example, there is no discussion of the 2011 and 2012 ambient air quality monitoring data.⁵ Regarding the <i>Comparison of National Economic and Demographic Growth Indicators and Air Emissions, 1970-2005</i>, there is much more current data available through 2011 at the U.S. Environmental Protection Agency website.⁶</p> <p>A. DEIS does not address the full range of reasonable alternatives</p> <p>The DEIS fails to adequately analyze the full range of reasonable alternatives on the east end of the proposed freeway as it only considers and analyzes the Preferred Alternative – E1 – and the No Action Alternative rather than considering a more holistic alternative in the mix that included other parts of the Valley, other alignments, and mass transit. Only cursory mention of mass transit was provided, and the claim that mass transit will not meet the Purpose and Need is not supported by the brief discussion in the DEIS. There was no reference to any studies that indicate that it could not meet the Purpose and Need.</p> <p>B. No Action Alternative</p> <p>The CEQ regulations direct that the DEIS include a full description and analysis of impacts of the No Action Alternative (40 CFR 1502.14[d]). In its brief description of NEPA’s No Action Alternative requirement, ADOT fails to actually set forth any real analysis of the consequences of not allowing the South Mountain Freeway. ADOT reveals that it has decided without any real analysis that the No Action Alternative constitutes failure to meet a need.</p> <p>⁴ 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.”)</p> <p>⁵ MCAQD 2011 Air Monitoring Network Review can be obtained at http://www.maricopa.gov/airquality/divisions/monitoring/docs/pdf/2011_Network_Assessment.pdf, and most recent available ambient monitoring data from 2012 should be incorporated into the DEIS and is available at http://www.epa.gov/airdata.</p> <p>⁶ See http://www.epa.gov/airtrends/aqtrends.html#comparison.</p>
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Code	Issue	Response
13	Air Quality	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 in the Final Environmental Impact Statement. See for example the discussion on particulate matter that begins on page 4-72.
14	Alternatives	<p>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 Draft 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 proposed action 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. 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 proposed action. Therefore, there is no prudent and feasible alternative to avoid use of the mountains, and the E1 Alternative is the only action alternative available.</p> <p>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 reconfirmed in the Final Environmental Impact Statement (see Chapter 3, <i>Alternatives</i>). Therefore, the Arizona Department of Transportation, with concurrence from the Federal Highway Administration, identified the E1 Alternative as the Eastern Section of the Preferred Alternative (which includes the W59 Alternative in the Western Section of the Study Area). In reaching its determination, the Arizona Department of Transportation sought to balance its responsibilities to address regional mobility needs while being fiscally responsible and sensitive to local communities.</p> <p>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). Two</p>

Code	Comment Document
	<p>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,⁴ which was clearly predecisional.</p> <p>In the DEIS, 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.</p> <p>Likewise, ADOT has failed to include and present the “best available scientific and technical information” in this DEIS as is required in the Council on Environmental Quality (CEQ) regulations at 40 CFR 1502.24. This is particularly true of the following resources and associated impact analyses.</p> <p>Much of data included relative to air quality and other resources is outdated or incomplete. For example, there is no discussion of the 2011 and 2012 ambient air quality monitoring data.⁵ Regarding the <i>Comparison of National Economic and Demographic Growth Indicators and Air Emissions, 1970-2005</i>, there is much more current data available through 2011 at the U.S. Environmental Protection Agency website.⁶</p> <p>A. DEIS does not address the full range of reasonable alternatives</p> <p>The DEIS fails to adequately analyze the full range of reasonable alternatives on the east end of the proposed freeway as it only considers and analyzes the Preferred Alternative – E1 – and the No Action Alternative rather than considering a more holistic alternative in the mix that included other parts of the Valley, other alignments, and mass transit. Only cursory mention of mass transit was provided, and the claim that mass transit will not meet the Purpose and Need is not supported by the brief discussion in the DEIS. There was no reference to any studies that indicate that it could not meet the Purpose and Need.</p> <p>B. No Action Alternative</p> <p>The CEQ regulations direct that the DEIS include a full description and analysis of impacts of the No Action Alternative (40 CFR 1502.14[d]). In its brief description of NEPA’s No Action Alternative requirement, ADOT fails to actually set forth any real analysis of the consequences of not allowing the South Mountain Freeway. ADOT reveals that it has decided without any real analysis that the No Action Alternative constitutes failure to meet a need.</p> <p>⁴ 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.”)</p> <p>⁵ MCAQD 2011 Air Monitoring Network Review can be obtained at http://www.maricopa.gov/aaq/divisions/monitoring/docs/pdf/2011_Network_Assessment.pdf, and most recent available ambient monitoring data from 2012 should be incorporated into the DEIS and is available at http://www.epa.gov/airdata.</p> <p>⁶ See http://www.epa.gov/airtrends/aqtrends.html#comparison.</p>

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Code	Issue	Response
14 (cont.)		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 proposed 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 proposed 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 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, which was validated in the Final Environmental Impact Statement (see page 3-1).
15	Alternatives	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-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, <i>Affected Environment, Environmental Consequences, and Mitigation</i> , 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.

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	<p>A full and accurate depiction of the status quo (without the South Mountain Freeway) is essential to any analysis of the No Action Alternative. The DEIS fails to do that. The public cannot be expected to effectively evaluate the impacts of various options available to ADOT with such a conclusory, non-substantive No Action Alternative discussion.</p> <p>C. Claims of congestion/traffic relief and reduced travel time</p> <p>16 The claim that the No Action Alternative would lead to “worsening traffic congestion” (DEIS, p. S-8) is not supported by facts or studies and is not adequately addressed in the DEIS. There is a strong argument to be made that the lands will not be developed as intensely without the freeway and that they are much more likely to stay in agriculture or low-density residential.</p> <p>Worse, the claim that the freeway will provide relief from traffic congestion is an exaggeration, at best, and is not consistent with the reality of city roadways. Information provided at the last South Mountain Citizen Advisory Team (SMCAT) meeting on June 11, 2013, indicated that surrounding roadways will remain congested, in that it was stated that “[f]uture daily traffic volumes on the action alternatives would be similar to those of other freeways in the region.”⁷</p> <p>IV. <u>AFFECTED ENVIRONMENT, ENVIRONMENTAL CONSEQUENCES, AND MITIGATION (Chapter 4)</u></p> <p>A. Land Use (DEIS, p. 4-3)</p> <p>17 The aggressive growth projections in this section drive the outcome. At a minimum, ADOT should have used a range of projections. The DEIS claims that the growth has driven the land use pattern and infrastructure needs (DEIS, p. 4-3), but it fails to acknowledge that the infrastructure, including roads, has driven the pattern to a great degree. It fails to acknowledge that the fact that a freeway was proposed for the general area has helped to drive the zoning and the development. The Phoenix area is a highly speculative real estate market.</p> <p>The DEIS is inappropriately biased against the No Action Alternative and pushes the idea that, without the South Mountain Freeway, other freeways’ conditions will be “substantially worse” in 2035 and that, without the proposed action, the region will suffer even greater congestion, travel delays, and limited options for moving people and goods safely through the Phoenix metropolitan area (DEIS, p. 4-10). The DEIS fails to recognize a significant interest by younger people to live in a more urban environment and further fails to even consider that increased investments in mass transit options could significantly improve conditions and mitigate impacts. Without the freeway, land use patterns that support mass transit are likely to be considered as well.</p> <p>As the DEIS notes on page 4-13, Phoenix first considered a six-lane freeway in this area in 1980, 33 years ago. A lot has changed since then. In 1980, the downtown area of Phoenix was not thriving, there was no light rail, there was limited high-density development, and the focus for transportation</p>
<p>⁷ Loop 202 South Mountain freeway Study, Citizens Advisory Team Meeting, Draft EIS Review Meeting, page 23, June 11, 2013.</p> <p>5</p>	

Code	Issue	Response
16	Purpose and Need	<p>As described in Chapter 1, <i>Purpose and Need</i>, of the Draft and Final Environmental Impact Statements, the Phoenix metropolitan area was subject to a conversion from natural desert landscape to an agricultural landscape well before any roadway existed in the area. As described in the section, <i>Land Use</i>, beginning on page 4-3, land use patterns are predominantly the result of local and regional land use planning activities. Growth projections for 2035 are not predicated on specific transportation improvements; rather, they are based on future land use plans, as envisioned by their respective jurisdictions. With few exceptions, land in the Study Area is privately owned; zoning requests to develop private land are typically based on these land use plans. In Phoenix in particular, development is occurring regardless of the proposed freeway. Not building the proposed freeway would not likely cause development to go elsewhere, and congestion on the arterial street network and existing freeways would continue to worsen with the No-Action Alternative.</p> <p>The analysis of capacity deficiency (unmet demand) in the region is presented in Figures 1-12 and 3-14 on pages 1-20 and 3-31, respectively, of the Final Environmental Impact Statement. The analysis shows that the unmet demand in 2010 is 19 percent; in 2035, without the proposed freeway, the unmet demand increases to 24 percent; in 2035, with the proposed freeway, the unmet demand would be only 18 percent. The cut-line analysis (see Figure 3-13 on page 3-30 of the Final Environmental Impact Statement) shows that with the proposed freeway there would be a substantial shift in regional travel from arterial streets to freeways.</p> <p>An assessment of existing traffic operational characteristics and future traffic operational characteristics without the proposed freeway is presented in the Final Environmental Impact Statement, beginning on page 1-13. This includes current and future traffic volumes and durations of level of service E or F conditions (congestion) along Interstate 10 between State Route 101L and Interstate 17.</p> <p>An assessment of future traffic conditions with and without the proposed freeway is presented in the Final Environmental Impact Statement, beginning on page 3-27. Observations from Figures 3-15 and 3-16 indicate that conditions would be similar or slightly better with the proposed freeway in place.</p>
17	Purpose and Need, Land Use	<p>As presented in Chapter 1, <i>Purpose and Need</i>, an objective and unbiased examination of the existing and planned future transportation network in the Study Area was undertaken to determine if the catalyst for the need for the environmental impact statement (being the proposed action) was still warranted. As explained in the chapter, the examination successfully attempted to provide an answer to whether or not a transportation problem(s) exist and would continue to exist in the foreseeable future. The analysis was undertaken in accordance with the National Environmental Policy Act and Federal Highway Administration guidance and policy for implementing the National Environmental Policy Act. The results confirmed the transportation problems as framed in the region’s adopted long-range transportation plans (both past and present) still exist and would continue to exist in the foreseeable future. The need for action was not to implement the long-range plan objectives but to correct a transportation problem in the region; a beneficial outcome in doing so was consistency with the region’s long-range transportation planning activities.</p>
<p>(Response 17 continues on next page)</p>		

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	<p>A full and accurate depiction of the status quo (without the South Mountain Freeway) is essential to any analysis of the No Action Alternative. The DEIS fails to do that. The public cannot be expected to effectively evaluate the impacts of various options available to ADOT with such a conclusory, non-substantive No Action Alternative discussion.</p> <p>C. Claims of congestion/traffic relief and reduced travel time</p> <p>The claim that the No Action Alternative would lead to “worsening traffic congestion” (DEIS, p. S-8) is not supported by facts or studies and is not adequately addressed in the DEIS. There is a strong argument to be made that the lands will not be developed as intensely without the freeway and that they are much more likely to stay in agriculture or low-density residential.</p> <p>Worse, the claim that the freeway will provide relief from traffic congestion is an exaggeration, at best, and is not consistent with the reality of city roadways. Information provided at the last South Mountain Citizen Advisory Team (SMCAT) meeting on June 11, 2013, indicated that surrounding roadways will remain congested, in that it was stated that “[f]uture daily traffic volumes on the action alternatives would be similar to those of other freeways in the region.”⁷</p> <p>IV. <u>AFFECTED ENVIRONMENT, ENVIRONMENTAL CONSEQUENCES, AND MITIGATION (Chapter 4)</u></p> <p>A. Land Use (DEIS, p. 4-3)</p> <p>The aggressive growth projections in this section drive the outcome. At a minimum, ADOT should have used a range of projections. The DEIS claims that the growth has driven the land use pattern and infrastructure needs (DEIS, p. 4-3), but it fails to acknowledge that the infrastructure, including roads, has driven the pattern to a great degree. It fails to acknowledge that the fact that a freeway was proposed for the general area has helped to drive the zoning and the development. The Phoenix area is a highly speculative real estate market.</p> <p>The DEIS is inappropriately biased against the No Action Alternative and pushes the idea that, without the South Mountain Freeway, other freeways’ conditions will be “substantially worse” in 2035 and that, without the proposed action, the region will suffer even greater congestion, travel delays, and limited options for moving people and goods safely through the Phoenix metropolitan area (DEIS, p. 4-10). The DEIS fails to recognize a significant interest by younger people to live in a more urban environment and further fails to even consider that increased investments in mass transit options could significantly improve conditions and mitigate impacts. Without the freeway, land use patterns that support mass transit are likely to be considered as well.</p> <p>As the DEIS notes on page 4-13, Phoenix first considered a six-lane freeway in this area in 1980, 33 years ago. A lot has changed since then. In 1980, the downtown area of Phoenix was not thriving, there was no light rail, there was limited high-density development, and the focus for transportation</p>
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⁷ Loop 202 South Mountain freeway Study, Citizens Advisory Team Meeting, Draft EIS Review Meeting, page 23, June 11, 2013.	
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Code	Issue	Response
17 (cont.)		<p>Growth projections for 2035 are not predicated on specific transportation improvements; rather, they are based on future land use plans, as envisioned by their respective jurisdictions. With few exceptions, land in the Study Area is privately owned; zoning requests to develop private land are typically based on these land use plans. In Phoenix in particular, development is occurring regardless of the proposed freeway. Not building the proposed freeway would not likely cause development to go elsewhere, and congestion on the arterial street network and existing freeways would continue to worsen with the No-Action Alternative.</p> <p>The Draft Environmental Impact Statement notes matters of uncertainty throughout the entire document. Examples include study findings in the sections, <i>Air Quality</i>, <i>Noise</i>, <i>Visual Resources</i>, <i>Land Use</i>, <i>Displacements and Relocations</i>, and <i>Cultural Resources</i> in Chapter 4. In Chapter 3, <i>Alternatives</i>, reference is made to continued monitoring of design and cost to account for needed updates. On page 4-1, in the text box, “<i>Can the Impacts Change and, If So, How?</i>”, text is presented on how such dynamics are tracked.</p>
18	Purpose and Need	<p>An assessment of existing traffic operational characteristics and future traffic operational characteristics without the proposed freeway is presented in the Final Environmental Impact Statement, beginning on page 1-13. This includes current and future traffic volumes and durations of level of service E or F conditions (congestion) along Interstate 10 between State Route 101L and Interstate 17.</p> <p>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 years 2012 and 2011).</p> <p>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). 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 proposed 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 proposed freeway would. Furthermore, the additional right-of-way needed for light rail (generally,</p>

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	<p>A full and accurate depiction of the status quo (without the South Mountain Freeway) is essential to any analysis of the No Action Alternative. The DEIS fails to do that. The public cannot be expected to effectively evaluate the impacts of various options available to ADOT with such a conclusory, non-substantive No Action Alternative discussion.</p> <p>C. Claims of congestion/traffic relief and reduced travel time</p> <p>The claim that the No Action Alternative would lead to “worsening traffic congestion” (DEIS, p. S-8) is not supported by facts or studies and is not adequately addressed in the DEIS. There is a strong argument to be made that the lands will not be developed as intensely without the freeway and that they are much more likely to stay in agriculture or low-density residential.</p> <p>Worse, the claim that the freeway will provide relief from traffic congestion is an exaggeration, at best, and is not consistent with the reality of city roadways. Information provided at the last South Mountain Citizen Advisory Team (SMCAT) meeting on June 11, 2013, indicated that surrounding roadways will remain congested, in that it was stated that “[f]uture daily traffic volumes on the action alternatives would be similar to those of other freeways in the region.”⁷</p> <p>IV. <u>AFFECTED ENVIRONMENT, ENVIRONMENTAL CONSEQUENCES, AND MITIGATION (Chapter 4)</u></p> <p>A. Land Use (DEIS, p. 4-3)</p> <p>The aggressive growth projections in this section drive the outcome. At a minimum, ADOT should have used a range of projections. The DEIS claims that the growth has driven the land use pattern and infrastructure needs (DEIS, p. 4-3), but it fails to acknowledge that the infrastructure, including roads, has driven the pattern to a great degree. It fails to acknowledge that the fact that a freeway was proposed for the general area has helped to drive the zoning and the development. The Phoenix area is a highly speculative real estate market.</p> <p>The DEIS is inappropriately biased against the No Action Alternative and pushes the idea that, without the South Mountain Freeway, other freeways’ conditions will be “substantially worse” in 2035 and that, without the proposed action, the region will suffer even greater congestion, travel delays, and limited options for moving people and goods safely through the Phoenix metropolitan area (DEIS, p. 4-10). The DEIS fails to recognize a significant interest by younger people to live in a more urban environment and further fails to even consider that increased investments in mass transit options could significantly improve conditions and mitigate impacts. Without the freeway, land use patterns that support mass transit are likely to be considered as well.</p> <p>As the DEIS notes on page 4-13, Phoenix first considered a six-lane freeway in this area in 1980, 33 years ago. A lot has changed since then. In 1980, the downtown area of Phoenix was not thriving, there was no light rail, there was limited high-density development, and the focus for transportation</p>
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<p>⁷ Loop 202 South Mountain freeway Study, Citizens Advisory Team Meeting, Draft EIS Review Meeting, page 23, June 11, 2013.</p>	
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Code	Issue	Response
18 (cont.)		<p>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.</p> <p>The information presented in Figure 1-4 and the complementary Figure 1-6 are based on historic Census data and Maricopa Association of Governments socioeconomic projections. The information is for Maricopa County, not Arizona and not the United States. The historical growth in the Maricopa Association of Governments region is discussed in the Draft Environmental Impact Statement, beginning on page 1-5. The critical factors such as available land, mild climate, affordable cost of living, and employment opportunities that led to the historical growth rates in the region remain unchanged.</p>
19	Purpose and Need	<p>At the beginning of the environmental impact statement process, the need for a major transportation facility was reexamined to determine whether such a facility is still needed. Validation of those findings occurred throughout the entire environmental impact statement process. Analysis of the purpose and need for the proposed action followed National Environmental Policy Act and Federal Highway Administration implementing guidance on the subject matter and used state-of-the-practice analytical tools, as pointed out in Table 1-3, “Traffic Analysis Tools,” on page 1-13 of the Final Environmental Impact Statement. The results of the analysis determined that a transportation problem does exist and that problem will continue in the foreseeable future (see section, <i>Conclusions</i>, on page 1-21). As noted on page 3-1 in the section, <i>Reconfirm the Purpose and Need for the Proposed Action</i>, a continuous validation process was undertaken throughout the environmental impact statement process to ensure past conclusions in the environmental impact statement process remained valid.</p> <p>Growth projections for 2035 are not predicated on specific transportation improvements; rather, they are based on future land use plans, as envisioned by their respective jurisdictions. With few exceptions, land in the Study Area is privately owned; zoning requests to develop private land are typically based on these land use plans. In Phoenix in particular, development is occurring regardless of the proposed freeway. Not building the proposed freeway would not likely cause development to go elsewhere, and congestion on the arterial street network and existing freeways would continue to worsen with the No-Action Alternative.</p>

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20	<p>was on roads and freeways. Today, Phoenix has a different focus and different development structure. The proposed South Mountain Freeway is a bygone artifact of a dated planning regime.</p> <p>The DEIS fails to adequately evaluate the impact of the project on the flood control and habitat restoration project, the Rio Salado Oeste, which is land leased under the Recreation and Public Purposes Act (43 U.S.C. 869 et. seq.). The DEIS downplays any impact as it states the funding for this project is lacking and that the freeway will precede the project (DEIS, p. 4-15). Because the freeway would have significant, negative, and unmitigable impacts on the restoration project, its impacts should have been evaluated in the DEIS. We also question whether this proposal and failure to mitigate would violate the Recreation and Public Purposes Act.</p> <p>This section of the DEIS merely mentions SMPP and says the impacts are addressed in another section (DEIS, p. 4-15). By not including analysis in this section, the DEIS fails to really consider some of the indirect impacts on the park and preserve, including on the purposes and goals of the park and its land uses. For example, the fact that the freeway is likely to encourage more intense uses near and within the park, including possible industrial uses, is not considered.</p> <p>We take issue with several statements in the Land Use Compatibility section (DEIS, p. 4-15, 4-16). The statement that open space uses “may or may not be compatible” with a transportation corridor is a giant leap. We would be hard-pressed to identify a freeway that was compatible with open space. In fact, there are several examples of large cities eliminating freeways in favor of parks. For example, more than 30 years ago, Portland, Oregon eliminated the Harbor Drive Freeway to construct a park along the riverfront.⁸ The Tom McCall Waterfront Park is a significant amenity and overall home values in the area have increased.⁹ Development of the park did not have substantial negative impact on traffic either, “Before and after comparisons found 9.6% fewer vehicle trips on nearby roads and formerly connecting bridges.”¹⁰ They also found that the crime rate in the waterfront area went down substantially.¹¹</p> <p>The noise, pollution, and development that go along with a freeway make it incompatible with open space, including one of the best urban parks in the country, SMPP. The statement that multifamily residential uses may be compatible with a transportation corridor because they “may require less mitigation from noise, air quality, and visual intrusion because of fewer exterior walls per dwelling unit” (DEIS, p. 4-16) is without foundation and raises some economic and environmental justice issues. People who live in multifamily housing have the same rights as those who live in single-family housing and should have the same opportunities to be protected from air pollution, excessive freeway noise, and visual blight.</p> <p>We agree that the E1 Preferred Alternative is “generally incompatible with the natural land and primarily residential areas immediately north of the alignment” (DEIS, p. 4-19). Based on this information, the No Action Alternative is the only viable and appropriate alternative presented in the</p> <p>⁸ 6 Case Studies in Urban Freeway Removal, City of Seattle, January 2008. Available on line at http://www.seattle.gov/transportation/docs/ump/06%20SEATTLE%20Case%20studies%20in%20urban%20freeway%20removal.pdf. Accessed on 24 July 2013.</p> <p>⁹ Ibid.</p> <p>¹⁰ Ibid.</p> <p>¹¹ Ibid.</p>

Code	Issue	Response
20	Biological Resources/Water Resources	<p>As noted on page 4-15 of the Draft Environmental Impact Statement, the City of Phoenix is aware of, has planned for, and has incorporated the proposed South Mountain Freeway in the City of Phoenix General Plan and in conceptual plans for the Rio Salado Oeste project (see Project Features Map in Appendix 4-8 of the Final Environmental Impact Statement). As noted on page 4-15 of the Draft Environmental Impact Statement and as agreed upon by the Bureau of Land Management, U.S. Army Corps of Engineers, and City of Phoenix, the project team would continue to consult with those entities to coordinate design efforts to minimize impacts on the proposed uses of the Rio Salado Oeste project (see Appendix 4-8 of the Final Environmental Impact Statement).</p> <p>As noted on page 4-14 of the Final Environmental Impact Statement, the W59 (Preferred) Alternative would cross the Salt River through the eastern half of a 192-acre Bureau of Land Management parcel. The City of Phoenix has a lease on this parcel under the provisions of the Recreation and Public Purposes Act for inclusion in the proposed Rio Salado Oeste project, a flood control and habitat restoration project cosponsored by the U.S. Army Corps of Engineers (see text box on page 4-137). The Arizona Department of Transportation, Federal Highway Administration, City of Phoenix, Bureau of Land Management, and U.S. Army Corps of Engineers would have to determine how to appropriate a portion of the land leased to the City of Phoenix for a federally funded transportation use.</p> <p>As discussed on page 4-125 of the Draft Environmental Impact Statement, the City of Phoenix and U.S. Army Corps of Engineers have anticipated a South Mountain Freeway crossing of the Rio Salado Oeste restoration project and view stormwater runoff from the proposed freeway as an opportunity to “irrigate” the river habitat. Also as discussed on page 4-137 of the Final Environmental Impact Statement, as planning would progress, the City of Phoenix and U.S. Army Corps of Engineers have agreed to coordinate with the Arizona Department of Transportation on enhancement opportunities for the proposed action (see Appendix 4-8 in the Final Environmental Impact Statement).</p> <p>As stated on page A-2 in the Section 4(f) and Section 6(f) Technical Report (December 2012), according to the U.S. Army Corps of Engineers, “the Feasibility Study for Rio Salado Oeste is to determine whether environmental restoration and flood damage reduction with incidental recreation in this reach of the Salt River in Phoenix, Arizona meets Federal Objectives.” Therefore, although plans for Rio Salado Oeste include a recreation element, this is neither the sole nor the primary use of the project.</p> <p>The Phoenix South Mountain Park/Preserve is included, as appropriate, in the assessment of potential land use impacts. The reference to another section is to Chapter 5, <i>Section 4(f) Evaluation</i>, which presents other aspects of the importance of the Phoenix South Mountain Park/Preserve beyond being open space. The Phoenix South Mountain Park/Preserve is also included in the assessment presented in the section, <i>Secondary and Cumulative Impacts</i> (see page 4-188 of the Final Environmental Impact Statement).</p>

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	<p>was on roads and freeways. Today, Phoenix has a different focus and different development structure. The proposed South Mountain Freeway is a bygone artifact of a dated planning regime.</p> <p>The DEIS fails to adequately evaluate the impact of the project on the flood control and habitat restoration project, the Rio Salado Oeste, which is land leased under the Recreation and Public Purposes Act (43 U.S.C. 869 et. seq.). The DEIS downplays any impact as it states the funding for this project is lacking and that the freeway will precede the project (DEIS, p. 4-15). Because the freeway would have significant, negative, and unmitigable impacts on the restoration project, its impacts should have been evaluated in the DEIS. We also question whether this proposal and failure to mitigate would violate the Recreation and Public Purposes Act.</p> <p>This section of the DEIS merely mentions SMPP and says the impacts are addressed in another section (DEIS, p. 4-15). By not including analysis in this section, the DEIS fails to really consider some of the indirect impacts on the park and preserve, including on the purposes and goals of the park and its land uses. For example, the fact that the freeway is likely to encourage more intense uses near and within the park, including possible industrial uses, is not considered.</p> <p>21 We take issue with several statements in the Land Use Compatibility section (DEIS, p. 4-15, 4-16). The statement that open space uses “may or may not be compatible” with a transportation corridor is a giant leap. We would be hard-pressed to identify a freeway that was compatible with open space. In fact, there are several examples of large cities eliminating freeways in favor of parks. For example, more than 30 years ago, Portland, Oregon eliminated the Harbor Drive Freeway to construct a park along the riverfront.⁸ The Tom McCall Waterfront Park is a significant amenity and overall home values in the area have increased.⁹ Development of the park did not have substantial negative impact on traffic either, “Before and after comparisons found 9.6% fewer vehicle trips on nearby roads and formerly connecting bridges.”¹⁰ They also found that the crime rate in the waterfront area went down substantially.¹¹</p> <p>21 The noise, pollution, and development that go along with a freeway make it incompatible with open space, including one of the best urban parks in the country, SMPP. The statement that multifamily residential uses may be compatible with a transportation corridor because they “may require less mitigation from noise, air quality, and visual intrusion because of fewer exterior walls per dwelling unit” (DEIS, p. 4-16) is without foundation and raises some economic and environmental justice issues. People who live in multifamily housing have the same rights as those who live in single-family housing and should have the same opportunities to be protected from air pollution, excessive freeway noise, and visual blight.</p> <p>22</p> <p>23 We agree that the E1 Preferred Alternative is “generally incompatible with the natural land and primarily residential areas immediately north of the alignment” (DEIS, p. 4-19). Based on this information, the No Action Alternative is the only viable and appropriate alternative presented in the</p> <p>⁸ 6 Case Studies in Urban Freeway Removal, City of Seattle, January 2008. Available on line at http://www.seattle.gov/transportation/docs/ump/06%20SEATTLE%20Case%20studies%20in%20urban%20freeway%20removal.pdf. Accessed on 24 July 2013.</p> <p>⁹ Ibid.</p> <p>¹⁰ Ibid.</p> <p>¹¹ Ibid.</p>

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21	Land Use	<p>As stated on page 4-16 of the Final Environmental Impact Statement, open space uses near a transportation corridor may or may not be compatible; the degree of compatibility depends on a number of factors, including the scale and purpose of the facility. Open space uses near a transportation corridor generally is perceived as compatible because the action alternatives:</p> <ul style="list-style-type: none">• would beneficially enhance access to a regional park• may be buffered from incompatible uses such as residential development by the open space• may effectively limit access to a sensitive open space area, to the area’s benefit <p>There are a number of examples along State Route 202L (Santan Freeway) in the cities of Chandler and Gilbert where drainage basins located directly adjacent to the freeway have been developed into city parks that provide recreational uses.</p> <p>While the City of Phoenix Police Department reported in 2005 that it did not have any statistics specific to crime adjacent to freeways, the Police Department did note that, based on its experience, there does not appear to be a correlation between crime rates and freeways. See Final Environmental Impact Statement sidebar on page 4-21.</p>
22	Land Use	<p>As stated on page 4-16 of the Final Environmental Impact Statement, a transportation corridor is generally not perceived as compatible with multifamily residential uses, but may be compatible because the action alternatives:</p> <ul style="list-style-type: none">• help to mitigate the effect of increased land use intensity and increased traffic generated (when compared with single-family residential uses) by facilitating access to the regional freeway system, thereby improving residents’ mobility and alleviating congestion on the local street network• may require less mitigation for noise, air quality, and visual intrusion because of fewer exterior walls per dwelling unit in a multifamily development than in a single-family residential development <p>The statement referring to less mitigation means that the mitigation per unit is less because the density of units or receivers is greater in a multifamily complex.</p> <p>Specific to air quality, the analyses conducted for the Final Environmental Impact Statement document that no violations of U.S. Environmental Protection Agency National Ambient Air Quality Standards would occur under the Preferred Alternative, and that mobile source air toxics emissions would decline significantly in the Study Area and subareas regardless of alternative, so no mitigation for air quality impacts would be needed.</p>
23	Land Use	<p>Like the action alternatives, the No-Action Alternative also has impacts. 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-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 impacts associated with the No-Action Alternative are discussed in each section of Chapter 4, <i>Affected Environment, Environmental Consequences, and Mitigation</i>, 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.</p>

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	<p>DEIS.</p> <p>B. Social Conditions (DEIS, p. 4-20)/Environmental Justice (DEIS, p. 4-29)</p> <p>24 <i>i. Impacts on South Mountain Park/Preserve</i></p> <p>The E1 Preferred Alternative would have a detrimental impact on SMPP. As noted on p. 4-28, “The E1 Alternative would introduce an intensive transportation use adjacent to a ‘serene’ setting in a remote, peripheral portion of SMPP. Visual and noise intrusion on SMPP would be more severe than those encountered by village residents because of the Park/Preserve’s passive, pleasant, and natural setting.” These are significant and unmitigable impacts to the park and further justify the No Action Alternative.</p> <p><i>ii. Impacts on minority and low-income residents – Environmental Justice</i></p> <p>There are significant Environmental Justice issues with the proposed freeway. First, the entire Study Area contains a disproportionate percentage of sensitive populations compared to the surrounding area, with the exceptions of disabled and elderly populations (DEIS, p. 4-30). Under the W59 Preferred Alternative, nine out of 12 of the census blocks that include residential displacement contain 50 percent or greater minority populations (DEIS, p. 4-36). This means that the freeway will displace a larger percentage of minority populations and that a larger percentage of minority residents will be affected by noise, air pollution, and visual blight from the freeway. Likewise, there is no discussion in the DEIS regarding the impact on schools or school children on the Gila River Indian Community land. This is a significant omission. There are at least two schools within one mile of the proposed alignment, E1.</p> <p>We agree that all action alternatives would have adverse effects on environmental justice populations but disagree that these impacts would be primarily during construction and that they would be temporary (DEIS, p. 4-38). The DEIS underestimates the impacts of displacement and how a freeway can fragment a community. Furthermore, it does not address the ongoing and more localized air and noise pollution issues relative to minority and low-income populations.</p> <p>Economic Impacts (DEIS, p. 4-46)</p> <p>The negative impacts on air quality and the non-attainment areas for both PM₁₀ and ozone are underestimated in the DEIS and are not addressed at all in the section on economic impacts. The economic impacts of displacing people and fragmenting communities are also not addressed.</p> <p>As noted above, the growth projections used in the DEIS overstate future growth and are based on the 2009 Maricopa Association of Governments (MAG) projections. At a minimum, ADOT should have used a range of projections, including the 2012 Arizona Department of Administration (ADOA) estimates.</p> <p>The DEIS assessments of real estate and home values are based on older data from 2006, prior to the recession and when home values were outrageously inflated. This provides a misleading picture of the economic impacts. ADOT should reassess impacts based on a more current and a more conservative range of data.</p>

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24	Section 4(f) and Section 6(f)	<p>The information regarding the context and attributes of the South Mountains is described in the Draft Environmental Impact Statement. The acreage of parkland to be converted to a transportation use is reported on page 5-14 in the section, <i>Direct Use</i>. It is reported that 31.3 acres or just less than 0.2 percent of the parkland would be converted (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, <i>Measures to Minimize Harm</i>, measures are presented to be undertaken to address the use impacts, including land replacement, on properties adjacent to the park. The section, <i>Cultural Resources</i>, beginning on page 4-128, also discloses the relation of the proposed action to the cultural resource attributes of the South Mountains. Visual analysis establishes that the proposed cuts would be in a remote portion of Phoenix South Mountain Park/Preserve, not near any trail, and would be barely visible from any of the more readily used trails. In this area, one can also see the development along 51st Avenue. The South Mountains provide views of urban Phoenix, including its freeways.</p> <p>Sensitive receivers for noise are already included in the noise analyses in accordance with State and federal guidance. The section, <i>Noise</i>, 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.</p> <p>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 Draft 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 Draft Environmental Impact Statement, starting on page 5-23).</p>

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	<p>DEIS.</p> <p>B. Social Conditions (DEIS, p. 4-20)/Environmental Justice (DEIS, p. 4-29)</p> <p><i>i. Impacts on South Mountain Park/Preserve</i></p> <p>The E1 Preferred Alternative would have a detrimental impact on SMPP. As noted on p. 4-28, “The E1 Alternative would introduce an intensive transportation use adjacent to a ‘serene’ setting in a remote, peripheral portion of SMPP. Visual and noise intrusion on SMPP would be more severe than those encountered by village residents because of the Park/Preserve’s passive, pleasant, and natural setting.” These are significant and unmitigable impacts to the park and further justify the No Action Alternative.</p> <p><i>ii. Impacts on minority and low-income residents – Environmental Justice</i></p> <p>There are significant Environmental Justice issues with the proposed freeway. First, the entire Study Area contains a disproportionate percentage of sensitive populations compared to the surrounding area, with the exceptions of disabled and elderly populations (DEIS, p. 4-30). Under the W59 Preferred Alternative, nine out of 12 of the census blocks that include residential displacement contain 50 percent or greater minority populations (DEIS, p. 4-36). This means that the freeway will displace a larger percentage of minority populations and that a larger percentage of minority residents will be affected by noise, air pollution, and visual blight from the freeway. Likewise, there is no discussion in the DEIS regarding the impact on schools or school children on the Gila River Indian Community land. This is a significant omission. There are at least two schools within one mile of the proposed alignment, E1.</p> <p>We agree that all action alternatives would have adverse effects on environmental justice populations but disagree that these impacts would be primarily during construction and that they would be temporary (DEIS, p. 4-38). The DEIS underestimates the impacts of displacement and how a freeway can fragment a community. Furthermore, it does not address the ongoing and more localized air and noise pollution issues relative to minority and low-income populations.</p> <p>Economic Impacts (DEIS, p. 4-46)</p> <p>The negative impacts on air quality and the non-attainment areas for both PM₁₀ and ozone are underestimated in the DEIS and are not addressed at all in the section on economic impacts. The economic impacts of displacing people and fragmenting communities are also not addressed.</p> <p>As noted above, the growth projections used in the DEIS overstate future growth and are based on the 2009 Maricopa Association of Governments (MAG) projections. At a minimum, ADOT should have used a range of projections, including the 2012 Arizona Department of Administration (ADOA) estimates.</p> <p>The DEIS assessments of real estate and home values are based on older data from 2006, prior to the recession and when home values were outrageously inflated. This provides a misleading picture of the economic impacts. ADOT should reassess impacts based on a more current and a more conservative range of data.</p>
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25	Environmental Justice	<p>The section entitled <i>Title VI and Environmental Justice</i>, beginning on page 4-29 in the Draft Environmental Impact Statement, presents acceptable methods, data, and assumptions to assess the potential for disproportionately high and adverse effects from the proposed action on environmental justice populations and disparate impacts to populations protected under Title VI. Based upon the content of the section, no such effects would result from the action alternatives. In light of comments received on the Draft Environmental Impact Statement, the above-referenced conclusions were confirmed in the preparation of the Final Environmental Impact Statement. To provide further clarity, the discussions of environmental justice and Title VI were separated and additional text explaining the relationship of environmental justice and Title VI to various environmental elements was added throughout Chapter 4, <i>Affected Environment, Environmental Consequences, and Mitigation</i>, as exemplified by the inserted text on page 4-29 of the Final Environmental Impact Statement. The potential impacts on environmental justice population in relation to fragmentation and alteration of community character and/or cohesion are addressed in Table 4-12 on page 4-39.</p> <p>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 on the Gila River Indian Community; therefore, these receivers would have higher noise levels than the schools farther from the proposed action. Analysis of noise impacts is conducted in accordance with Arizona Department of Transportation and Federal Highway Administration policy.</p> <p>Specific to air quality, the analyses conducted for the Final Environmental Impact Statement document that no violations of U.S. Environmental Protection Agency National Ambient Air Quality Standards would occur under the Preferred Alternative, and that mobile source air toxics emissions would decline significantly in the Study Area and subareas regardless of alternative, so no mitigation for air quality impacts would be needed.</p>
26	Air Quality	<p>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. In compliance with the transportation conformity requirements of the Clean Air Act and 40 Code of Federal Regulations § 93, the Preferred Alternative is included in the <i>Regional Transportation Plan</i> that has been determined by the U.S. Department of Transportation to conform to the State Implementation Plan on February 12, 2014.</p> <p>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 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. 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. For</p>

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26 (cont.)		<p>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 4-77 of the Final Environmental Impact Statement). Congestion relief resulting from the proposed freeway would 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.</p> <p>The project-level air quality conformity demonstration for carbon monoxide and particulate matter (PM₁₀) was conducted at the South Mountain Freeway and Interstate 10 (Papago Freeway) interchange. To ensure that the air quality analyses addressed public comments on the Draft Environmental Impact Statement, two additional interchanges were modeled for discussion in the Final Environmental Impact Statement: the 40th Street and E1 Alternative interchange and the Broadway Road and W59 Alternative interchange. The carbon monoxide and particulate matter (PM₁₀) results for these two interchange locations are shown in Tables 4-32 and 4-33 on pages 4-76 and 4-77, respectively, of the Final Environmental Impact Statement. Modeled carbon monoxide concentrations at all receptor locations in the vicinity of the two interchange locations were well below the 1-hour and 8-hour National Ambient Air Quality Standards of 35 and 9 parts per million, respectively. Likewise, the particulate matter (PM₁₀) design values with the Preferred Alternative did not exceed the 24-hour National Ambient Air Quality Standard of 150 micrograms per cubic meter. In summary, since the Final Environmental Impact Statement analyses identify no adverse air quality impacts, there are no adverse economic consequences related to air quality.</p> <p>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 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 <i>Right-of-way Procedures Manual</i>, 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.</p> <p>The economic impacts of right-of-way acquisition and displacements are discussed beginning on page 4-57 of the Final Environmental Impact Statement. The economic impacts of alteration of character and cohesion are discussed beginning on page 4-20 of the Final Environmental Impact Statement.</p>

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	<p>DEIS.</p> <p>B. Social Conditions (DEIS, p. 4-20)/Environmental Justice (DEIS, p. 4-29)</p> <p><i>i. Impacts on South Mountain Park/Preserve</i></p> <p>The E1 Preferred Alternative would have a detrimental impact on SMPP. As noted on p. 4-28, “The E1 Alternative would introduce an intensive transportation use adjacent to a ‘serene’ setting in a remote, peripheral portion of SMPP. Visual and noise intrusion on SMPP would be more severe than those encountered by village residents because of the Park/Preserve’s passive, pleasant, and natural setting.” These are significant and unmitigable impacts to the park and further justify the No Action Alternative.</p> <p><i>ii. Impacts on minority and low-income residents – Environmental Justice</i></p> <p>There are significant Environmental Justice issues with the proposed freeway. First, the entire Study Area contains a disproportionate percentage of sensitive populations compared to the surrounding area, with the exceptions of disabled and elderly populations (DEIS, p. 4-30). Under the W59 Preferred Alternative, nine out of 12 of the census blocks that include residential displacement contain 50 percent or greater minority populations (DEIS, p. 4-36). This means that the freeway will displace a larger percentage of minority populations and that a larger percentage of minority residents will be affected by noise, air pollution, and visual blight from the freeway. Likewise, there is no discussion in the DEIS regarding the impact on schools or school children on the Gila River Indian Community land. This is a significant omission. There are at least two schools within one mile of the proposed alignment, E1.</p> <p>We agree that all action alternatives would have adverse effects on environmental justice populations but disagree that these impacts would be primarily during construction and that they would be temporary (DEIS, p. 4-38). The DEIS underestimates the impacts of displacement and how a freeway can fragment a community. Furthermore, it does not address the ongoing and more localized air and noise pollution issues relative to minority and low-income populations.</p> <p>Economic Impacts (DEIS, p. 4-46)</p> <p>The negative impacts on air quality and the non-attainment areas for both PM₁₀ and ozone are underestimated in the DEIS and are not addressed at all in the section on economic impacts. The economic impacts of displacing people and fragmenting communities are also not addressed.</p> <p>As noted above, the growth projections used in the DEIS overstate future growth and are based on the 2009 Maricopa Association of Governments (MAG) projections. At a minimum, ADOT should have used a range of projections, including the 2012 Arizona Department of Administration (ADOA) estimates.</p> <p>The DEIS assessments of real estate and home values are based on older data from 2006, prior to the recession and when home values were outrageously inflated. This provides a misleading picture of the economic impacts. ADOT should reassess impacts based on a more current and a more conservative range of data.</p>

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27	Purpose and Need	<p>The study used state-of-the-practice, scientific community methods and similarly accepted methods, including the use of a standard input-output economic model and of assumptions based on traffic data and projections. The analysis is not required to project ranges, and the results are reasonably foreseeable based on what data are provided from the U.S. Environmental Protection Agency-approved Maricopa Association of Governments model as well as local plans. Further, methods, assumptions, and data were developed early in the environmental impact statement process and peer-reviewed by the Federal Highway Administration, the Arizona Department of Transportation, and other federal, state, and local agencies. Peer reviewers concluded that the methods, assumptions, and data are appropriate. Potential factors that could influence changes in the analysis and study findings are listed on page 4-1 of the Final Environmental Impact Statement.</p> <p>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 in the Final Environmental Impact Statement (see Chapter 3, <i>Alternatives</i>). The traffic analysis demonstrated that the proposed project is needed today and will continue to be needed into the future.</p> <p>The Maricopa Association of Governments’ control total for Maricopa County is consistent with the “ADOA—Medium Series.”</p>
28	Economics	<p>As stated on page xii of the Final Environmental Impact Statement, this section of the FEIS was updated with 2013 valuation rates, land uses, and value of time. Between 2009 and 2013, the average agricultural, vacant, and residential property valuation decreased by approximately 80 to 90 percent. Commercial property tax valuation increased slightly (approximately 5 to 10 percent), while industrial property values fell by approximately half. Property tax rates (combined primary and secondary) for the municipalities have increased in the same period. The tax revenue changes may result from increasing demand for fiscal resources, increasing budgetary requirements, and decreasing property valuations. The land use and property tax information updates resulted in a decrease (more than half) in property tax impacts for the Cities of Phoenix and Avondale. Property tax impacts to the City of Tolleson are similar to those reported for 2009. The value of time measure (the cost to the traveling public for time spent in congestion) increased by 4 percent between 2009 and 2013. This had an equal impact on all alternatives. These updates resulted in no substantive changes to the conclusions of the section.</p>

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29	<p>Use of these dated and/or inaccurate data gives a distorted picture of the economic and social conditions relative to this proposed freeway and makes it impossible for the public to evaluate and comment on the proposed project. Likewise, it biases the DEIS to promote the proposed freeway. The overly optimistic and exaggerated estimates of the benefits of the freeway relative to travel-time savings bias the analysis, as well. A savings of 15 million hours annually (DEIS, p. 4-56), resulting in travel-time savings between \$3 billion and \$3.3 billion, is unlikely based on past experience with freeways. According to a report on generated traffic,</p> <p>“Urban traffic congestion tends to maintain equilibrium. Congestion reaches a point at which it discourages additional peak-period trips. Increasing road capacity allows more vehicle travel to occur. In the short term this consists primarily of generated traffic: vehicle travel diverted from other times, modes, routes and destinations. Over the long run an increasing portion consists of induced vehicle travel, resulting in a total increase in regional VMT.”¹²</p> <p>In addition to the fact that this proposed freeway will soon become congested, it is likely to do so even more rapidly due to the fact that the freeway is anticipated to increase truck traffic through the Phoenix area, drawing in trucks that might otherwise bypass Phoenix via State Route 85. At a minimum, ADOT should have considered a range of estimates, including more conservative estimates.</p> <p>The negative impacts economically and environmentally (note that the true costs to environment were not included) far outweigh the benefits of the freeway. The cost estimate provided by ADOT for the Preferred Alternative is \$2.43 billion (DEIS, p. 4-57). This number does not indicate what factors were included and may not take into account the amount that has been spent on planning, consultation, public engagement, etc., in which case it would be an unfair representation of the true costs of this project. Alternatives with lower environmental impacts and costs are available and should have been considered, especially those that utilize and enhance existing infrastructure.</p> <p>C. Air Quality (DEIS, p. 4-58)</p> <p><i>i. Current conditions – Air Quality</i></p> <p>The Phoenix metropolitan area is a nonattainment area; it does not meet the federal health-based standards for both ozone and coarse particulates, referred to as PM₁₀ as they are 10 microns in size or smaller. Coarse particulates, PM₁₀, are generated by construction-related activities; vehicular travel, including brake and tire wear; driving on unpaved lots, road shoulders, and roads; as well as off-road vehicles, agriculture, leaf blowers, and other sources. Ozone is a problem and is at its worst during the hot summer months. Ozone is formed when sunlight reacts with volatile organic compounds (VOC) emitted from vehicles, industry, and other sources. Transportation is the number one contributor to ozone pollution and, as the DEIS notes, “. . . on-road vehicle emissions account for nearly one third of the VOC emissions and nearly 60 percent</p> <p><small>¹² Litman, T. 2012. Generated Traffic and Induced Travel: Implications for Transport Planning. Victoria Transport Policy Institute. Available online at http://www.vtpi.org/gentraf.pdf.</small></p>

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29	Purpose and Need	<p>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.</p> <p>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 in the Final Environmental Impact Statement (see Chapter 3, <i>Alternatives</i>). The traffic analysis demonstrated that the proposed project is needed today and will continue to be needed into the future. The traffic analysis supporting the travel time savings calculations were also updated and validated in the Final Environmental Impact Statement (see page 4-67).</p> <p>The Maricopa Association of Government’s regional travel demand model, which was used for this project, employs the equilibrium process attributed to Mr. Litman. The potential for induced travel is recognized and discussed beginning on page 4-179 of the Final Environmental Impact Statement.</p> <p>The information presented in Figure 1-4 (page 1-7) and the complementary Figure 1-6 (page 1-11) are based on historic Census data and Maricopa Association of Governments socioeconomic projections. The information is for Maricopa County, not Arizona and not the United States. The historical growth in the Maricopa Association of Governments region is discussed in the Draft Environmental Impact Statement, beginning on page 1-5. The critical factors such as available land, mild climate, affordable cost of living, and employment opportunities that led to the historical growth rates in the region remain unchanged.</p> <p>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 years 2012 and 2011).</p> <p>Creating a truck bypass is not a goal of the proposed freeway. The proposed freeway is part of a transportation system developed to improve mobility in the region by increasing capacity and allowing traffic—including truck traffic—to access a segment of the “loop” system (see pages 1-21, 1-22, 3-1, and 3-3 of the Final Environmental Impact Statement) in the Phoenix metropolitan area. 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. The Maricopa Association of Governments regional travel demand model projects that truck traffic would</p>

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	<p>Use of these dated and/or inaccurate data gives a distorted picture of the economic and social conditions relative to this proposed freeway and makes it impossible for the public to evaluate and comment on the proposed project. Likewise, it biases the DEIS to promote the proposed freeway. The overly optimistic and exaggerated estimates of the benefits of the freeway relative to travel-time savings bias the analysis, as well. A savings of 15 million hours annually (DEIS, p. 4-56), resulting in travel-time savings between \$3 billion and \$3.3 billion, is unlikely based on past experience with freeways. According to a report on generated traffic,</p> <p>“Urban traffic congestion tends to maintain equilibrium. Congestion reaches a point at which it discourages additional peak-period trips. Increasing road capacity allows more vehicle travel to occur. In the short term this consists primarily of generated traffic: vehicle travel diverted from other times, modes, routes and destinations. Over the long run an increasing portion consists of induced vehicle travel, resulting in a total increase in regional VMT.”¹²</p> <p>In addition to the fact that this proposed freeway will soon become congested, it is likely to do so even more rapidly due to the fact that the freeway is anticipated to increase truck traffic through the Phoenix area, drawing in trucks that might otherwise bypass Phoenix via State Route 85. At a minimum, ADOT should have considered a range of estimates, including more conservative estimates.</p> <p>The negative impacts economically and environmentally (note that the true costs to environment were not included) far outweigh the benefits of the freeway. The cost estimate provided by ADOT for the Preferred Alternative is \$2.43 billion (DEIS, p. 4-57). This number does not indicate what factors were included and may not take into account the amount that has been spent on planning, consultation, public engagement, etc., in which case it would be an unfair representation of the true costs of this project. Alternatives with lower environmental impacts and costs are available and should have been considered, especially those that utilize and enhance existing infrastructure.</p> <p>C. Air Quality (DEIS, p. 4-58)</p> <p><i>i. Current conditions – Air Quality</i></p> <p>The Phoenix metropolitan area is a nonattainment area; it does not meet the federal health-based standards for both ozone and coarse particulates, referred to as PM₁₀ as they are 10 microns in size or smaller. Coarse particulates, PM₁₀, are generated by construction-related activities; vehicular travel, including brake and tire wear; driving on unpaved lots, road shoulders, and roads; as well as off-road vehicles, agriculture, leaf blowers, and other sources. Ozone is a problem and is at its worst during the hot summer months. Ozone is formed when sunlight reacts with volatile organic compounds (VOC) emitted from vehicles, industry, and other sources. Transportation is the number one contributor to ozone pollution and, as the DEIS notes, “. . . on-road vehicle emissions account for nearly one third of the VOC emissions and nearly 60 percent</p> <p>¹² Litman, T. 2012. Generated Traffic and Induced Travel: Implications for Transport Planning. Victoria Transport Policy Institute. Available online at http://www.vtpi.org/gentraf.pdf.</p>

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29 (cont.)		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. As disclosed in the Final Environmental Impact Statement, it is expected that “true” through-truck traffic (not having to stop in the metropolitan area) would 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).
30	Alternatives	<p>A description of how planning –level cost estimates were derived is presented on page 3-59 of the Final Environmental Impact Statement. These estimates included construction, design, and right-of-way costs.</p> <p>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. The Preferred Alternative was the outcome of this process, which was validated in the Final Environmental Impact Statement (see page 3-2).</p> <p>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.</p>
31	Air Quality	<p>The Final Environmental Impact Statement addresses the history of air quality in the region (see text beginning on page 4-68 of the Final Environmental Impact Statement). The Clean Air Act § 109(b)(1) requires the U.S. Environmental Protection Agency to establish primary National Ambient Air Quality Standards at levels that allow an adequate margin of safety to protect the public health. Air quality in the Phoenix metropolitan area has improved over time; Phoenix was redesignated to attainment/maintenance for carbon monoxide in 2005, and the U.S. Environmental Protection Agency determined on May 30, 2014, that Phoenix is in attainment/maintenance for the particulate matter (PM₁₀) standard. These improvements are largely associated with cleaner fuels and lower-emission vehicles along with local controls on fugitive dust. Future emissions would also be reduced by the use of cleaner-burning fuels, technological advances in automotive design (including the greater use of alternative fuel vehicles), reformulated gasoline, gas can standards, stricter enforcement of emission standards during inspections, heavy-duty diesel engine and on-highway diesel sulfur control programs, dust control programs, and others.</p> <p>The Maricopa Association of Governments is responsible for developing plans to reduce emissions of ozone precursors in the Maricopa area. In compliance with the transportation conformity requirements of the Clean Air Act and 40 Code of Federal Regulations § 93, the Preferred Alternative is included in the <i>Regional Transportation Plan</i> that has been determined by the U.S. Department of Transportation to conform to the State Implementation Plan on February 12, 2014.</p>

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	<p>of the nitrogen oxides from the greater Phoenix area” (DEIS, p. 4-60). Fine particulates are a concern as well. Although still within the federal standards when averaged out over the entire year, the fine particulates (PM_{2.5}) exceeded federal health-based standards several times in the last few years. The monitoring network for these pollutants is much less extensive, however. These particulates come primarily from combustion, including from trucks and cars.</p>
32	<p>When coarse particulates (PM₁₀) are inhaled, they can affect the heart and lungs and increase respiratory symptoms, irritation of the airways, coughing, breathing difficulty, and more. The elderly, children, and those with respiratory or other health issues are at greatest risk relative to particulate pollution. According to research conducted by Arizona State University in 2008–2009, when levels of PM₁₀ in Central Phoenix were high, there was a significant increase in asthma incidents in children.¹³ Fine particulates (PM_{2.5}) contribute to significant respiratory problems, increased heart attacks, and increased mortality from respiratory and cardiovascular disease. Exposure to these particulates can worsen asthma and can cause coughing, wheezing, and respiratory irritation.</p> <p>Ozone damages lung tissue by reacting chemically with it and prematurely aging the lungs. Exposure to ozone increases the risk of asthma attacks and reduces lung function. It also causes pulmonary inflammation and risk of premature mortality. Metropolitan Phoenix is one of the top five U.S. cities for asthma-related mortality.¹⁴</p> <p><i>ii. The DEIS inadequately addresses air quality</i></p> <p>The DEIS is incomplete or lacking analysis in many areas relative to air quality. South Mountain Freeway will result in more vehicles traveling more miles, which means there will be more air pollution in an area that, as noted above, exceeds the health-based standards for several pollutants. The claims in the DEIS that this freeway will improve air quality are without merit and are unsubstantiated. There is huge potential for an increase in truck traffic relative to the freeway and the associated and significant pollution associated with that, yet that possibility is blatantly ignored and is therefore not analyzed in the DEIS. Likewise, the significant negative public health impacts from the increased traffic are not adequately analyzed or mitigated for in the DEIS.</p> <p>The DEIS fails to suitably analyze the impacts of increased truck traffic, induced travel for cars, and overall increase in VOCs, nitrogen oxides, and other pollutants relative to traffic associated with this freeway and its impact on the already unhealthful levels of ozone in this valley. The DEIS merely says that ADOT cannot provide a meaningful evaluation because ozone is a regional pollutant. We strongly question this statement and the failure of ADOT to evaluate the impacts of increased ozone pollution.</p>
33	<p>The DEIS is incomplete or lacking analysis in many areas relative to air quality. South Mountain Freeway will result in more vehicles traveling more miles, which means there will be more air pollution in an area that, as noted above, exceeds the health-based standards for several pollutants. The claims in the DEIS that this freeway will improve air quality are without merit and are unsubstantiated. There is huge potential for an increase in truck traffic relative to the freeway and the associated and significant pollution associated with that, yet that possibility is blatantly ignored and is therefore not analyzed in the DEIS. Likewise, the significant negative public health impacts from the increased traffic are not adequately analyzed or mitigated for in the DEIS.</p> <p>The DEIS fails to suitably analyze the impacts of increased truck traffic, induced travel for cars, and overall increase in VOCs, nitrogen oxides, and other pollutants relative to traffic associated with this freeway and its impact on the already unhealthful levels of ozone in this valley. The DEIS merely says that ADOT cannot provide a meaningful evaluation because ozone is a regional pollutant. We strongly question this statement and the failure of ADOT to evaluate the impacts of increased ozone pollution.</p>
	<p>¹³ Fernando, H.J.S., R. Dimitrova, G. Runger, N. Lurpongglukana, P. Hyde, B. Hedquist, and J. Anderson. 2009. Children’s Health Project: Linking Asthma to PM₁₀ in Central Phoenix – a report to the Arizona Department of Environmental Quality. Arizona State University. Available online at http://www.azdeq.gov/ceh/download/Health%20Project%20Report.pdf.</p> <p>¹⁴ Arizona State University. Social Vulnerability, Environmental Inequity, and Childhood Asthma. Available online at http://caplter.asu.edu/research/research-highlights/research-highlight-5. Accessed 24 July 2013.</p>

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32	Air Quality	The health implications and characteristics of the criteria pollutants are acknowledged beginning on page 4-69 of the Final Environmental Impact Statement.
33	Air Quality	<p>The U.S. Environmental Protection Agency issued the transportation conformity regulations (40 Code of Federal Regulations § 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 has complied with all requirements related to regional emissions required by the Clean Air Act and 40 Code of Federal Regulations § 93.</p> <p>Increases in traffic volumes attributable to a project do not necessarily result in an increase in emissions over time because the U.S. Environmental Protection Agency’s emissions control regulations and fleet turnover play an important role. In the U.S. Environmental Protection Agency’s MOVES model, emissions rates for mobile source air toxics drop by 80 to 90 percent between 2012 and 2025, and MOBILE6.2 estimated a similar reduction. The effects of this are apparent from the mobile source air toxic analysis conducted for the Final Environmental Impact Statement; in the mobile source air toxics study area, total mobile source air toxics emissions are estimated to decline by more than 80 percent even though traffic is expected to increase by 47 percent (Final Environmental Impact Statement Table 4-36 on page 4-81).</p> <p>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 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. 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. 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 4-77 of the Final Environmental Impact Statement). Congestion relief resulting from the proposed freeway would 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. All air quality analyses included projected truck traffic.</p>

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	<p>of the nitrogen oxides from the greater Phoenix area” (DEIS, p. 4-60). Fine particulates are a concern as well. Although still within the federal standards when averaged out over the entire year, the fine particulates (PM_{2.5}) exceeded federal health-based standards several times in the last few years. The monitoring network for these pollutants is much less extensive, however. These particulates come primarily from combustion, including from trucks and cars.</p> <p>When coarse particulates (PM₁₀) are inhaled, they can affect the heart and lungs and increase respiratory symptoms, irritation of the airways, coughing, breathing difficulty, and more. The elderly, children, and those with respiratory or other health issues are at greatest risk relative to particulate pollution. According to research conducted by Arizona State University in 2008–2009, when levels of PM₁₀ in Central Phoenix were high, there was a significant increase in asthma incidents in children.¹³ Fine particulates (PM_{2.5}) contribute to significant respiratory problems, increased heart attacks, and increased mortality from respiratory and cardiovascular disease. Exposure to these particulates can worsen asthma and can cause coughing, wheezing, and respiratory irritation.</p> <p>Ozone damages lung tissue by reacting chemically with it and prematurely aging the lungs. Exposure to ozone increases the risk of asthma attacks and reduces lung function. It also causes pulmonary inflammation and risk of premature mortality. Metropolitan Phoenix is one of the top five U.S. cities for asthma-related mortality.¹⁴</p> <p><i>ii. The DEIS inadequately addresses air quality</i></p> <p>The DEIS is incomplete or lacking analysis in many areas relative to air quality. South Mountain Freeway will result in more vehicles traveling more miles, which means there will be more air pollution in an area that, as noted above, exceeds the health-based standards for several pollutants. The claims in the DEIS that this freeway will improve air quality are without merit and are unsubstantiated. There is huge potential for an increase in truck traffic relative to the freeway and the associated and significant pollution associated with that, yet that possibility is blatantly ignored and is therefore not analyzed in the DEIS. Likewise, the significant negative public health impacts from the increased traffic are not adequately analyzed or mitigated for in the DEIS.</p> <p>The DEIS fails to suitably analyze the impacts of increased truck traffic, induced travel for cars, and overall increase in VOCs, nitrogen oxides, and other pollutants relative to traffic associated with this freeway and its impact on the already unhealthful levels of ozone in this valley. The DEIS merely says that ADOT cannot provide a meaningful evaluation because ozone is a regional pollutant. We strongly question this statement and the failure of ADOT to evaluate the impacts of increased ozone pollution.</p> <p>¹³ Fernando, H.J.S., R. Dimitrova, G. Runger, N. Lurponglikana, P. Hyde, B. Hedquist, and J. Anderson. 2009. Children’s Health Project: Linking Asthma to PM₁₀ in Central Phoenix – a report to the Arizona Department of Environmental Quality. Arizona State University. Available online at http://www.azdeq.gov/ceh/download/Health%20Project%20Report.pdf.</p> <p>¹⁴ Arizona State University. Social Vulnerability, Environmental Inequity, and Childhood Asthma. Available online at http://caplter.asu.edu/research/research-highlights/research-highlight-5. Accessed 24 July 2013.</p>

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33 (cont.)		<p>The project-level air quality conformity demonstration for carbon monoxide and particulate matter (PM₁₀) was conducted at the South Mountain Freeway and Interstate 10 (Papago Freeway) interchange. To ensure that the air quality analyses addressed public comments on the Draft Environmental Impact Statement, two additional interchanges were modeled for discussion in the Final Environmental Impact Statement: the 40th Street and E1 Alternative interchange and the Broadway Road and W59 Alternative interchange. The carbon monoxide and particulate matter (PM₁₀) results for these two interchange locations are shown in Tables 4-32 and 4-33 on pages 4-76 and 4-77, respectively, of the Final Environmental Impact Statement. Modeled carbon monoxide concentrations at all receptor locations in the vicinity of the two interchange locations were well below the 1-hour and 8-hour National Ambient Air Quality Standards of 35 and 9 parts per million, respectively. Likewise, the particulate matter (PM₁₀) design values with the Preferred Alternative did not exceed the 24-hour National Ambient Air Quality Standard of 150 micrograms per cubic meter.</p> <p>See response to comment code #39 for specific information related to health effects.</p>
34	Air Quality	<p>A discussion of criteria pollutants, including nitrogen dioxides and ozone, and other mobile source air toxics, including organic materials, are presented beginning on page 4-69 of the Final Environmental Impact Statement. The analysis presented in the Final Environmental Impact Statement is pursuant to the provisions set forth in the Clean Air Act, as amended, and related guidance. 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. In compliance with the transportation conformity requirements of the Clean Air Act and 40 Code of Federal Regulations § 93, the Preferred Alternative is included in the <i>Regional Transportation Plan</i> that has been determined by the U.S. Department of Transportation to conform to the State Implementation Plan on February 12, 2014.</p>

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35	<p>Significant air quality impacts and related public health implications can occur during the construction phase of the proposed freeway. The DEIS fails to address the relative impacts on air quality during construction among the various alternatives, including emissions from concrete batch and/or hot-mix asphalt plants, fugitive dust emissions, emissions from construction vehicles and other equipment, etc. Likewise, it does not adequately consider the lower emissions related to the No Action Alternative relative to construction.</p>
36	<p>Additionally, the DEIS does not address impacts of air pollution on other resources, including cultural and biological resources. For example, air pollution has been shown to have a severely negative impact on native plant species, whereas non-native and urban-exploiting plant species often have a high tolerance. This tolerance allows these species to outcompete natives and can drastically alter the landscape.¹⁵ ADOT must provide information and analysis of such impacts.</p>
37	<p>The width of the freeway at eight lanes takes up most of the right-of-way and thus precludes any significant mass transit to be paired with it. The DEIS mentions that the freeway will contain three general purpose lanes and one high occupancy vehicle (HOV) lane each way. Although the HOV lane alone is not really mass transit, the HOV lane coupled with possible bus use is the only opportunity for any kind of real mass transit that could be realized by this proposal.</p> <p>The cumulative impacts analysis relative to air quality is inadequate in that it does not include the increased development that is likely to occur relative to the freeway nor addresses increased traffic and congestion through this area. The assumption that there will be additional development under the No Action Alternative is erroneous and misleading. Freeways promote development. This has been demonstrated repeatedly.^{16,17}</p> <p>The analysis that indicates that air pollution will worsen in and around the project area reflects what has been observed relative to other projects, but the claim that this project will lessen pollution in the region is without basis. Transportation is a major factor in the region’s air pollution, and adding a freeway that will induce travel and will likely increase truck traffic from outside the non-attainment area will increase pollution both locally and regionally.</p> <p><i>iii. The DEIS does not provide adequate analysis of public health impacts</i></p> <p>The DEIS underestimates the negative impact of the proposed freeway on public health. The Los Angeles Public Health Department has developed a series of recommendations relating to freeways and location of residences, schools, and health care facilities, among others.¹⁸ It states the following:</p> <p>Given the association between traffic pollution and health, the California Air Resources Board recommends that freeways be sited at least 500 feet from residences, schools, and</p> <p>¹⁵ McKinney, M. 2002. Urbanization, biodiversity, and conservation. BioScience 52(10):883–890. ¹⁶ Lewis, T. 1999. Divided Highways: Building the Interstate Highways, Transforming American Life. Penguin Books, New York, New York. ¹⁷ Gutfreund, O.D. 2004. Twentieth-Century Sprawl: Highways and the Reshaping of the American Landscape. Oxford University Press, New York, New York. ¹⁸ Air Quality Recommendations For Local Jurisdictions, County of Los Angeles Public Health, Revised January 22, 2013.</p>

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35	Air Quality	<p>Fugitive dust and mobile source emissions from construction of the proposed freeway would be controlled by requiring the contractor to comply with the dust-control methods in the Arizona Department of Transportation’s <i>Standard Specifications for Road and Bridge Construction</i> (2008) and Maricopa County Rule 310, Fugitive Dust Ordinance. Disruption to traffic, especially during peak travel periods, would be minimized by a traffic control plan to help reduce impacts of traffic congestion and associated emissions during construction. These methods are discussed on page 4-85 of the Final Environmental Impact Statement. Additional information related to temporary construction impacts is presented beginning on page 4-173 of the Final Environmental Impact Statement. This section does note that the No-Action Alternative would not result in any construction related impacts.</p> <p>It is also important to note that the U.S. Environmental Protection Agency’s transportation conformity regulations do not require the Federal Highway Administration and Arizona Department of Transportation to quantify construction-related emissions impacts as long as construction activity does not last more than five years at individual locations. See U.S. Environmental Protection Agency comment response 9 of page B13 of Volume III of the Final Environmental Impact Statement for more information.</p>
36	Air Quality	<p>As noted on page 4-68 of the Final Environmental Impact Statement, secondary air quality standards are established for criteria pollutants to minimize environmental and property damage, including damage to plant life. Primary and secondary standards for particulate matter (PM₁₀) are identical; no threshold is established by the U.S. Environmental Protection Agency for carbon monoxide.</p> <p>The air quality assessment for the proposed freeway revealed no violations of either the carbon monoxide or particulate matter (PM₁₀), even at worst-case locations along the project corridor. Thus, 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.</p> <p>Because the secondary standard for particulate matter (PM₁₀) is identical to the primary, the proposed project would also not cause a violation of the secondary particulate matter (PM₁₀) standard.</p>
37	Air Quality	<p>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). 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</p>

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	<p>Significant air quality impacts and related public health implications can occur during the construction phase of the proposed freeway. The DEIS fails to address the relative impacts on air quality during construction among the various alternatives, including emissions from concrete batch and/or hot-mix asphalt plants, fugitive dust emissions, emissions from construction vehicles and other equipment, etc. Likewise, it does not adequately consider the lower emissions related to the No Action Alternative relative to construction.</p> <p>Additionally, the DEIS does not address impacts of air pollution on other resources, including cultural and biological resources. For example, air pollution has been shown to have a severely negative impact on native plant species, whereas non-native and urban-exploiting plant species often have a high tolerance. This tolerance allows these species to outcompete natives and can drastically alter the landscape.¹⁵ ADOT must provide information and analysis of such impacts.</p> <p>The width of the freeway at eight lanes takes up most of the right-of-way and thus precludes any significant mass transit to be paired with it. The DEIS mentions that the freeway will contain three general purpose lanes and one high occupancy vehicle (HOV) lane each way. Although the HOV lane alone is not really mass transit, the HOV lane coupled with possible bus use is the only opportunity for any kind of real mass transit that could be realized by this proposal.</p> <p>38 The cumulative impacts analysis relative to air quality is inadequate in that it does not include the increased development that is likely to occur relative to the freeway nor addresses increased traffic and congestion through this area. The assumption that there will be additional development under the No Action Alternative is erroneous and misleading. Freeways promote development. This has been demonstrated repeatedly.^{16,17}</p> <p>The analysis that indicates that air pollution will worsen in and around the project area reflects what has been observed relative to other projects, but the claim that this project will lessen pollution in the region is without basis. Transportation is a major factor in the region’s air pollution, and adding a freeway that will induce travel and will likely increase truck traffic from outside the non-attainment area will increase pollution both locally and regionally.</p> <p><i>iii. The DEIS does not provide adequate analysis of public health impacts</i></p> <p>The DEIS underestimates the negative impact of the proposed freeway on public health. The Los Angeles Public Health Department has developed a series of recommendations relating to freeways and location of residences, schools, and health care facilities, among others.¹⁸ It states the following:</p> <p>Given the association between traffic pollution and health, the California Air Resources Board recommends that freeways be sited at least 500 feet from residences, schools, and</p> <p>¹⁵ McKinney, M. 2002. Urbanization, biodiversity, and conservation. BioScience 52(10):883–890. ¹⁶ Lewis, T. 1999. Divided Highways: Building the Interstate Highways, Transforming American Life. Penguin Books, New York, New York. ¹⁷ Gutfreund, O.D. 2004. Twentieth-Century Sprawl: Highways and the Reshaping of the American Landscape. Oxford University Press, New York, New York. ¹⁸ Air Quality Recommendations For Local Jurisdictions, County of Los Angeles Public Health, Revised January 22, 2013.</p>

37 (cont.)		<p>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 proposed 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 proposed 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 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.</p> <p>The proposed project does not preclude future transit in the corridor; for example, the High Occupancy Vehicle lane will be available for high-capacity transit.</p>
38	Air Quality/ Induced Growth	<p>As described in Chapter 1, <i>Purpose and Need</i>, of the Draft and Final Environmental Impact Statements the Phoenix metropolitan area was subject to a conversion from natural desert landscape to an agricultural landscape well before any roadway existed in the valley. As described in the section, <i>Land Use</i>, beginning on page 4-3, land use patterns are predominantly the result of local and regional land use planning activities; further, the subject of induced growth and travel is addressed in text beginning on pages 4-167 and 4-179 of the Draft and Final Environmental Impact Statements, respectively.</p> <p>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 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. 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. For mobile source air toxics, the analysis conducted for the Draft Environmental Impact Statement did document that emissions in the overall project Study Area would decline slightly under the Preferred Alternative relative to the No-Action Alternative. The updated analysis in the Final Environmental Impact Statement showed that for the Study Area, constructing the freeway would generate a small increase in annual emissions in 2025 and 2035 (less than a 1 percent difference in total annual emissions between the Preferred Alternative and No-Action Alternative). However, regardless of alternative, modeled mobile source air toxics emissions in 2035 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).</p>

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	<p>Significant air quality impacts and related public health implications can occur during the construction phase of the proposed freeway. The DEIS fails to address the relative impacts on air quality during construction among the various alternatives, including emissions from concrete batch and/or hot-mix asphalt plants, fugitive dust emissions, emissions from construction vehicles and other equipment, etc. Likewise, it does not adequately consider the lower emissions related to the No Action Alternative relative to construction.</p> <p>Additionally, the DEIS does not address impacts of air pollution on other resources, including cultural and biological resources. For example, air pollution has been shown to have a severely negative impact on native plant species, whereas non-native and urban-exploiting plant species often have a high tolerance. This tolerance allows these species to outcompete natives and can drastically alter the landscape.¹⁵ ADOT must provide information and analysis of such impacts.</p> <p>The width of the freeway at eight lanes takes up most of the right-of-way and thus precludes any significant mass transit to be paired with it. The DEIS mentions that the freeway will contain three general purpose lanes and one high occupancy vehicle (HOV) lane each way. Although the HOV lane alone is not really mass transit, the HOV lane coupled with possible bus use is the only opportunity for any kind of real mass transit that could be realized by this proposal.</p> <p>The cumulative impacts analysis relative to air quality is inadequate in that it does not include the increased development that is likely to occur relative to the freeway nor addresses increased traffic and congestion through this area. The assumption that there will be additional development under the No Action Alternative is erroneous and misleading. Freeways promote development. This has been demonstrated repeatedly.^{16,17}</p> <p>The analysis that indicates that air pollution will worsen in and around the project area reflects what has been observed relative to other projects, but the claim that this project will lessen pollution in the region is without basis. Transportation is a major factor in the region’s air pollution, and adding a freeway that will induce travel and will likely increase truck traffic from outside the non-attainment area will increase pollution both locally and regionally.</p> <p>39 <i>iii. The DEIS does not provide adequate analysis of public health impacts</i></p> <p>The DEIS underestimates the negative impact of the proposed freeway on public health. The Los Angeles Public Health Department has developed a series of recommendations relating to freeways and location of residences, schools, and health care facilities, among others.¹⁸ It states the following:</p> <p>Given the association between traffic pollution and health, the California Air Resources Board recommends that freeways be sited at least 500 feet from residences, schools, and</p> <p>¹⁵ McKinney, M. 2002. Urbanization, biodiversity, and conservation. BioScience 52(10):883–890. ¹⁶ Lewis, T. 1999. Divided Highways: Building the Interstate Highways, Transforming American Life. Penguin Books, New York, New York. ¹⁷ Gutfreund, O.D. 2004. Twentieth-Century Sprawl: Highways and the Reshaping of the American Landscape. Oxford University Press, New York, New York. ¹⁸ Air Quality Recommendations For Local Jurisdictions, County of Los Angeles Public Health, Revised January 22, 2013.</p>

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38 (cont.)		Creating a truck bypass is not a goal of the proposed freeway. The proposed freeway is part of a transportation system developed to improve mobility in the region by increasing capacity and allowing traffic—including truck traffic—to access a segment of the “loop” system (see pages 1-21, 1-22, 3-1, and 3-3 of the Final Environmental Impact Statement) in the Phoenix metropolitan area. 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. 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. As disclosed in the Final Environmental Impact Statement, it is expected that “true” through-truck traffic (not having to stop in the metropolitan area) would 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).
39	Air Quality	<p>In response to comments on the Draft Environmental Impact Statement submitted by the U.S. Environmental Protection Agency and others, the Final Environmental Impact Statement includes an extensive discussion of air-related health risk, including a summary of health risk assessments that have been conducted for other transportation projects in the United States (see page 4-79 and 4-82). Additional detail is provided in the Air Quality Technical Report. The Final Environmental Impact Statement also summarizes research in this area conducted by the U.S. Environmental Protection Agency, the Health Effects Institute, and others.</p> <p>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. Health effects from air pollutants are based on the concentration of the pollutants and the duration of exposure. Concentrations vary with distance from a roadway based on many factors, including background (or ambient) levels of pollution from all sources; the number, speed, and type of vehicles on the roadway; wind speed and direction; topography; and other factors. For the proposed freeway, the Federal Highway Administration conducted modeling for carbon monoxide and particulate matter (PM₁₀) using worst-case (most congested or highest traffic) modeling locations at discrete receptor locations around each analysis location (primarily residences near the interchanges). 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.</p> <p>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.</p>

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39	<p>other sensitive land uses. Other reputable research entities such as the Health Effects Institute indicate that exposure to unhealthy traffic emissions may in fact occur up to 300 to 500 meters (984 to 1640 feet). The range reported by HEI reflects the variable influence of background pollution concentrations, meteorological conditions, and season.¹⁹</p> <p>Considering the significant number of schools in close proximity to the freeway, the impacts of the proposed freeway on school children and the air they breathe was underestimated in the DEIS. There are numerous studies that indicate that proximity to freeways results in various health problems, including a higher incidence of asthma in children. A study found “associations between current asthma and residential proximity to traffic.”²⁰ The study’s conclusion was that their “findings provide evidence that even in an area with good regional air quality, proximity to traffic is associated with adverse respiratory health effects in children.”</p> <p>At the SMCAT meeting on April 22, 2013, ADOT acknowledged that pollution from this freeway will result in some increased health problems and deaths, although the presenter attempted to minimize these impacts by stating that far fewer deaths will occur than do annually from car accidents and cancer.²¹ This statement provided by the presenter is outrageous; any additional health impacts or deaths as a result of this freeway are of great concern and should be recognized, rather than dismissed. Additionally, the solution proposed by experts presenting at this SMCAT meeting for impacts to nearby schools was to install high-quality filters in schools and to keep children inside with doors/windows closed. This is not an acceptable solution to a problem that can be avoided by choosing the No Action Alternative.</p> <p>We are concerned that the DEIS underestimates the impact of this freeway on hazardous air pollutants as it does not adequately address a potential increase in truck traffic to the non-attainment area. Although the DEIS states that the goal of this freeway is not to serve as a truck bypass (DEIS, p. S-42), ADOT must recognize and acknowledge that it will likely serve as such. This likelihood has been made clear by statements in previous planning documents²² for the freeway and by statements by ADOT and other transportation planning agencies. For example, at the June 11, 2013, SMCAT meeting, a representative admitted that this freeway will likely serve as a truck bypass. A representative with the Maricopa County Department of Transportation also posted that one of the goals of this project is to divert trucks around the city center.²³ Also, the proposed South Mountain Freeway has been mentioned and is included within the proposed Interstate 11 (I-11) corridor from Las Vegas to Phoenix.²⁴ ADOT should not mislead the public by stating that the South Mountain Freeway will not serve as a truck bypass, nor should it ignore potential impacts from this use in the DEIS. These impacts must be</p> <p>¹⁹ Ibid. ²⁰ Kim, J.J., K. Huen, S. Adams, S. Smorodinsky, A. Hoats, B. Malig, M. Lipsett, and B. Ostro. 2008. Residential Traffic and Children’s Respiratory Health. Environmental Health Perspective 116(9):1274–1279 ²¹ Per Loop 202 South Mountain Freeway Study, Citizens Advisory Team Air Quality Meeting, pages 1-10 of Federal Highway Administration Presentation, April 22, 2013. ²² E.g., Arizona Department of Transportation, South Mountain Corridor Team. 2001. South Mountain Corridor Study, Fall/Winter 2001–2002, Issue 1. (NOTE: This newsletter also states that ADOT will assess any truck traffic that would use the freeway and its potential impact on the surrounding community. Such assessment was not included in the DEIS.) ²³ Personal communication, anonymous MCDOT staff. ²⁴ See http://www.i11study.com for information about the project and maps showing the proposed corridor.</p>

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39 (cont.)		<p>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.</p> <p>Many studies have investigated the prevalence of adverse health effects in the near-road environment. Given concerns about the possibility of air pollution exposure in the near-road environment, the Health Effects Institute has dedicated a number of research efforts toward investigating this issue. In November 2007, the Health Effects Institute published Special Report #16: Mobile-Source Air Toxics: A Critical Review of the Literature on Exposure and Health Effects. This report concluded that the cancer health effects attributable to mobile sources are difficult to discern because the majority of quantitative assessments are derived from occupational cohorts with high concentration exposures and because some cancer potency estimates are derived from animal models. In January 2010, the Health Effects Institute released Special Report #17, investigating the health effects of traffic-related air pollution. The goal of the research was to synthesize available information on the effects of traffic on health. Researchers looked at linkages between: 1) traffic emissions (at the tailpipe) with ambient air pollution in general, 2) concentrations of ambient pollutants with human exposure to pollutants from traffic, 3) exposure to pollutants from traffic with human-health effects and toxicological data, and 4) toxicological data with epidemiological associations. Overall, researchers felt that there was “sufficient” evidence for causality for the exacerbation of asthma. Evidence was “suggestive but not sufficient” for health outcomes such as cardiovascular mortality and others. Study authors also noted that past epidemiological studies may not provide an appropriate assessment of future health associations because vehicle emissions are decreasing over time. Finally, in 2011 three studies were published by the Health Effects Institute evaluating the potential for mobile source air toxics “hot spots.” In general, the authors confirmed that while highways are a source of air toxics, they were unable to find that highways were the only source of these pollutants. They determined that near-road exposures were often no different or no higher than background (or ambient) levels of exposure and, hence, no true hot spots were identified. These reports are available from the Health Effects Institute’s Web site at <healtheffects.org>. The Federal Highway Administration and U.S. Environmental Protection Agency provide financial support to the Health Effects Institute’s research work.</p>

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39 (cont.)		<p>Another source of information is the U.S. Environmental Protection Agency’s recently released report on Children’s Health and the Environment:</p> <p><i>The level of knowledge regarding the relationship between environmental exposures and health outcomes varies widely among the topics [presented in this report], and the inclusion of an indicator in the report does not necessarily imply a known relationship between environmental exposure and children’s health effects. The report provides data for selected children’s health conditions that warrant further research because the causes, including possible contributing environmental factors, are complex and not well understood at this point.</i></p> <p><i>In the case of asthma, researchers do not fully understand why children develop the condition. However, substantial evidence shows exposure to certain air pollutants, including particulate matter and ozone, can trigger symptoms in children who already have asthma. Although the report found the percentage of children reported to currently have asthma increased from 8.7 percent in 2001 to 9.4 percent in 2010 and that minority populations are particularly affected by asthma, the severity of children’s asthma and respiratory symptoms has declined. The rate of emergency room visits for asthma decreased from 114 visits per 10,000 children in 1996 to 103 visits per 10,000 children in 2008. Between 1996 and 2008, hospitalizations for asthma and for all other respiratory causes decreased from 90 hospitalizations per 10,000 children to 56 hospitalizations per 10,000 children.</i></p> <p><i>The report also looks at trends in other health conditions, such as Attention-Deficit/Hyperactivity Disorder (ADHD) and preterm births, for which rates have increased. There is no conclusive information on the role of environmental contaminants in ADHD or preterm births, and additional research is ongoing.</i></p> <p>Finally, the Federal Highway Administration notes that while the incidence of some health effects (such as asthma, autism, and attention deficit/hyperactivity disorder) in the U.S. population appear to have been increasing, motor vehicle emissions have declined. This decline in mobile source air toxics emissions is documented in Figure 4-24 on page 4-78 of the Final Environmental Impact Statement and for other pollutants at <epa.gov/ttn/chief/trends/>. This negative correlation between emissions trends and health effects trends illustrates the complexity of the issues.</p>

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	<p>other sensitive land uses. Other reputable research entities such as the Health Effects Institute indicate that exposure to unhealthy traffic emissions may in fact occur up to 300 to 500 meters (984 to 1640 feet). The range reported by HEI reflects the variable influence of background pollution concentrations, meteorological conditions, and season.¹⁹</p> <p>Considering the significant number of schools in close proximity to the freeway, the impacts of the proposed freeway on school children and the air they breathe was underestimated in the DEIS. There are numerous studies that indicate that proximity to freeways results in various health problems, including a higher incidence of asthma in children. A study found “associations between current asthma and residential proximity to traffic.”²⁰ The study’s conclusion was that their “findings provide evidence that even in an area with good regional air quality, proximity to traffic is associated with adverse respiratory health effects in children.”</p> <p>40 At the SMCAT meeting on April 22, 2013, ADOT acknowledged that pollution from this freeway will result in some increased health problems and deaths, although the presenter attempted to minimize these impacts by stating that far fewer deaths will occur than do annually from car accidents and cancer.²¹ This statement provided by the presenter is outrageous; any additional health impacts or deaths as a result of this freeway are of great concern and should be recognized, rather than dismissed. Additionally, the solution proposed by experts presenting at this SMCAT meeting for impacts to nearby schools was to install high-quality filters in schools and to keep children inside with doors/windows closed. This is not an acceptable solution to a problem that can be avoided by choosing the No Action Alternative.</p> <p>41 We are concerned that the DEIS underestimates the impact of this freeway on hazardous air pollutants as it does not adequately address a potential increase in truck traffic to the non-attainment area. Although the DEIS states that the goal of this freeway is not to serve as a truck bypass (DEIS, p. S-42), ADOT must recognize and acknowledge that it will likely serve as such. This likelihood has been made clear by statements in previous planning documents²² for the freeway and by statements by ADOT and other transportation planning agencies. For example, at the June 11, 2013, SMCAT meeting, a representative admitted that this freeway will likely serve as a truck bypass. A representative with the Maricopa County Department of Transportation also posted that one of the goals of this project is to divert trucks around the city center.²³ Also, the proposed South Mountain Freeway has been mentioned and is included within the proposed Interstate 11 (I-11) corridor from Las Vegas to Phoenix.²⁴ ADOT should not mislead the public by stating that the South Mountain Freeway will not serve as a truck bypass, nor should it ignore potential impacts from this use in the DEIS. These impacts must be</p> <p>¹⁹ Ibid. ²⁰ Kim, J.J., K. Huen, S. Adams, S. Smorodinsky, A. Hoats, B. Malig, M. Lipsett, and B. Ostro. 2008. Residential Traffic and Children’s Respiratory Health. <i>Environmental Health Perspective</i> 116(9):1274–1279 ²¹ Per Loop 202 South Mountain Freeway Study, Citizens Advisory Team Air Quality Meeting, pages 1-10 of Federal Highway Administration Presentation, April 22, 2013. ²² E.g., Arizona Department of Transportation, South Mountain Corridor Team. 2001. South Mountain Corridor Study, Fall/Winter 2001–2002, Issue 1. (NOTE: This newsletter also states that ADOT will assess any truck traffic that would use the freeway and its potential impact on the surrounding community. Such assessment was not included in the DEIS.) ²³ Personal communication, anonymous MCDOT staff. ²⁴ See http://www.i11study.com for information about the project and maps showing the proposed corridor.</p>

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40	Air Quality	<p>The presentation at the South Mountain Citizens Advisory Team meeting on April 22, 2013, did not discuss specific impacts of the proposed freeway. The summary of the meeting, as provided in the comment, is misleading. The full meeting summary and presentation can be found at <azdot.gov/projects/phoenix-metro-area/loop-202-south-mountain-freeway/meetings-and-events>. The referenced portion of the presentation discussed the current rulemaking and regulations regarding the analysis of mobile source air toxics and the results of other projects that assessed the cancer risk attributable to mobile sources. From a cancer standpoint, any exposure to these pollutants can entail a cancer risk. However, as determined by the U.S. Environmental Protection Agency, the threshold for action is an amount greater than a 100 in one million risk. The results of the example projects showed less than a 10 in one million risk, well below the U.S. Environmental Protection Agency’s action threshold. A table was provided comparing the risk from these example projects to other risks such as lifetime injury accident risk and lifetime cancer risk (all causes), not to dismiss the risk from mobile source emissions, but to put the risk into perspective and to support the determination, based on the U.S. Environmental Protection Agency threshold, that they would not warrant action.</p> <p>The discussion of potential mitigation for nearby schools was specific to a project along U.S. Route 95 in Las Vegas, Nevada. As noted in the meeting summary, there are a number of elements that affect the potential impacts from mobile sources, including wind speed, proximity, and time of day. Additionally, it was found that the materials inside the classroom itself, such as the white board materials and carpet cleaning solutions, produced higher concentrations of some pollutants than those levels collected outdoors.</p>
41	Truck Traffic	<p>The mobile source air toxics analysis included projected truck traffic in the Study Area, as provided by the Maricopa Association of Governments.</p> <p>The statements made on June 11, 2013, as paraphrased in the comment that this freeway would likely serve as a truck bypass are misleading. The proposed freeway is part of a transportation system developed to improve mobility in the region by increasing capacity and allowing traffic—including truck traffic—to access a segment of the “loop” system (see pages 1-21, 1-22, 3-1, and 3-3 of the Final Environmental Impact Statement) in the Phoenix metropolitan area. 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. Recognition of the trucking contribution to traffic in the region is disclosed on page 3-64 of the Final Environmental Impact Statement.</p> <p>In the summer of 2014, the Arizona and Nevada Departments of Transportation completed the two-year Interstate 11 (I-11) and Intermountain West Corridor Study. The proposed freeway was not included in the “Universe of Corridor Alternatives” or the “Recommended Corridor Alternatives” for the study (see <i11study.com/wp/> for more information).</p>

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	considered, and, if suitable mitigation cannot be identified, the No Action Alternative must be selected.
42	The DEIS fails to evaluate the impact the increased air pollutants will have to those recreating in SMPP. During high pollution days, residents are advised to limit outdoor activity. This proposed freeway is likely to exacerbate this problem, increase the number and severity of high pollution days, and create an increased hazard to people who hike, bike, wildlife watch, and more in the park, particularly those who utilize the west end of the park. Increased activity results in an increased exposure to air pollutants.
43	<p>The DEIS fails to evaluate the impact of air pollutants on many native plants, including those in SMPP. Whether air-borne or in the soil (most particles fall to ground), there is a loss of photosynthetic ability and reduced plant health and vigor associated with those emissions.²⁵ Even those plants that can exist near highways have increased susceptibility to environmental stresses when compared to plants farther away from highways.^{26,27}</p> <p><i>iv. Air quality modeling and assumptions in the DEIS are unclear</i></p> <p>It is unclear what vehicle traffic mix was used for the emission estimates/modeling. That should be clarified in the FEIS. It is also unclear whether increases in heavy-duty diesel traffic from the CANAMEX project were included in this assessment (see above discussion regarding I-11).</p> <p><i>v. Conformity</i></p> <p>As noted in the DEIS, the 1990 Clean Air Act Amendments require that transportation projects conform to air quality implementation plans. The discussion in the DEIS regarding conformity makes it difficult to determine whether this requirement has been met, especially relative to particulate emissions and emission of VOCs and nitrogen oxides that contribute to ozone. As the Phoenix area is a nonattainment area for both of these, not only is further analysis and discussion required, but the public should be provided an opportunity to evaluate and comment on the analysis. ADOT cannot circumvent this requirement by including the analysis in the FEIS. Moreover, the DEIS fails to address the fact that EPA has withdrawn the adequacy determination for the PM₁₀ State Implementation Plan (SIP) for conformity purposes. As transportation is the major contributor to these pollutants and per our earlier comments, this freeway will increase congestion over time, we question the conformity analysis and findings.</p> <p><i>vi. Greenhouse gas emissions (climate change)</i></p>
<p>²⁵ U.S. Environmental Protection Agency. Secondary Ozone NAAQS Evaluation. Available online at http://www.epa.gov/ttnecas1/regdata/RIAs/s4-supplemental_analysis-secondary_standard11-5-09.pdf. Accessed 24 July 2013.</p> <p>²⁶ Heagle, A.S., D.E. Boday, and W.W. Heck. 1973. An open-top field chamber to assess the impact of air pollution on plants. Journal of Environmental Quality 2(3):365–368.</p> <p>²⁷ Novak, K., J.M. Skelly, M. Schaub, N. Kräuchi, C. Hug, W. Landolt, and P. Bleuler. 2003. Ozone air pollution and foliar injury development on native plants of Switzerland. Environmental Pollution 125(1):41–52.</p>	

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42	Air Quality	<p>The final Environmental Impact Statement documents that no violations of the National Ambient Air Quality Standards will occur adjacent to the project corridor, and that mobile source air toxics emissions will be much lower than current levels regardless of the alternative selected. Thus, the Federal Highway Administration does not anticipate adverse impacts related to air quality for those recreating in the South Mountain Park/Preserve. 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 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. 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. 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 4-77 of the Final Environmental Impact Statement). Congestion relief resulting from the proposed freeway would 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.</p> <p>The project-level air quality conformity demonstration for carbon monoxide and particulate matter (PM₁₀) was conducted at the South Mountain Freeway and Interstate 10 (Papago Freeway) interchange. To ensure that the air quality analyses addressed public comments on the Draft Environmental Impact Statement, two additional interchanges were modeled for discussion in the Final Environmental Impact Statement: the 40th Street and E1 Alternative interchange and the Broadway Road and W59 Alternative interchange. The carbon monoxide and particulate matter (PM₁₀) results for these two interchange locations are shown in Tables 4-32 and 4-33 on pages 4-76 and 4-77, respectively, of the Final Environmental Impact Statement. Modeled carbon monoxide concentrations at all receptor locations in the vicinity of the two interchange locations were well below the 1-hour and 8-hour National Ambient Air Quality Standards of 35 and 9 parts per million, respectively. Likewise, the particulate matter (PM₁₀) design values with the Preferred Alternative did not exceed the 24-hour National Ambient Air Quality Standard of 150 micrograms per cubic meter.</p>
43	Air Quality	<p>As noted on page 4-68 of the Final Environmental Impact Statement, secondary air quality standards are established for criteria pollutants to minimize environmental and property damage, including damage to plant life. Primary and secondary standards for particulate matter (PM₁₀) are identical; no secondary National Ambient Air Quality Standard has been established by the U.S. Environmental Protection Agency for carbon monoxide.</p> <p>The air quality assessment for the proposed freeway revealed no violations of either the carbon monoxide or particulate matter (PM₁₀), even at worst-case locations along the project corridor. Thus, the carbon monoxide and particulate</p>

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	<p>considered, and, if suitable mitigation cannot be identified, the No Action Alternative must be selected.</p> <p>The DEIS fails to evaluate the impact the increased air pollutants will have to those recreating in SMPP. During high pollution days, residents are advised to limit outdoor activity. This proposed freeway is likely to exacerbate this problem, increase the number and severity of high pollution days, and create an increased hazard to people who hike, bike, wildlife watch, and more in the park, particularly those who utilize the west end of the park. Increased activity results in an increased exposure to air pollutants.</p> <p>The DEIS fails to evaluate the impact of air pollutants on many native plants, including those in SMPP. Whether air-borne or in the soil (most particles fall to ground), there is a loss of photosynthetic ability and reduced plant health and vigor associated with those emissions.²⁵ Even those plants that can exist near highways have increased susceptibility to environmental stresses when compared to plants farther away from highways.^{26,27}</p> <p>44 <i>iv. Air quality modeling and assumptions in the DEIS are unclear</i></p> <p>It is unclear what vehicle traffic mix was used for the emission estimates/modeling. That should be clarified in the FEIS. It is also unclear whether increases in heavy-duty diesel traffic from the CANAMEX project were included in this assessment (see above discussion regarding I-11).</p> <p><i>v. Conformity</i></p> <p>As noted in the DEIS, the 1990 Clean Air Act Amendments require that transportation projects conform to air quality implementation plans. The discussion in the DEIS regarding conformity makes it difficult to determine whether this requirement has been met, especially relative to particulate emissions and emission of VOCs and nitrogen oxides that contribute to ozone. As the Phoenix area is a nonattainment area for both of these, not only is further analysis and discussion required, but the public should be provided an opportunity to evaluate and comment on the analysis. ADOT cannot circumvent this requirement by including the analysis in the FEIS. Moreover, the DEIS fails to address the fact that EPA has withdrawn the adequacy determination for the PM₁₀ State Implementation Plan (SIP) for conformity purposes. As transportation is the major contributor to these pollutants and per our earlier comments, this freeway will increase congestion over time, we question the conformity analysis and findings.</p> <p><i>vi. Greenhouse gas emissions (climate change)</i></p> <p>²⁵ U.S. Environmental Protection Agency. Secondary Ozone NAAQS Evaluation. Available online at http://www.epa.gov/ttnecas1/regdata/RIAs/s4-supplemental_analysis-secondary_standard11-5-09.pdf. Accessed 24 July 2013.</p> <p>²⁶ Heagle, A.S., D.E. Boday, and W.W. Heck. 1973. An open-top field chamber to assess the impact of air pollution on plants. Journal of Environmental Quality 2(3):365–368.</p> <p>²⁷ Novak, K., J.M. Skelly, M. Schaub, N. Kräuchi, C. Hug, W. Landolt, and P. Bleuler. 2003. Ozone air pollution and foliar injury development on native plants of Switzerland. Environmental Pollution 125(1):41–52.</p>

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43 (cont.)		<p>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.</p> <p>The Maricopa Association of Government’s regional transportation conformity analysis, incorporating the proposed project, meets all transportation conformity requirements related to the ozone National Ambient Air Quality Standards.</p> <p>Because the secondary and primary standards for particulate matter (PM₁₀) are identical, the proposed project would also not cause a violation of the secondary particulate matter (PM₁₀) standard.</p>
44	Air Quality	<p>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 the Draft Environmental Impact Statement and have been updated in the Final Environmental Impact Statement. The air quality analysis has been updated for the Final Environmental Impact Statement using most recent Federal Highway Administration and U.S. Environmental Protection Agency guidance and traffic projections provided by the Maricopa Association of Governments in August 2013. This updated analysis begins on page 4-68 of the Final Environmental Impact Statement. No substantial differences between the analyses presented in the Draft and the Final Environmental Impact Statements resulted. The U.S. Environmental Protection Agency also commented on the vehicle mix assumptions (see response 6 on page B12 of Volume III of the Final Environmental Impact Statement), and the U.S. Environmental Protection Agency reviewed the inputs for the air quality modeling for the Final Environmental Impact Statement.</p> <p>The truck bypass for the Phoenix metropolitan area would not include the proposed freeway. As with all other freeways in the Maricopa Association of Governments region, trucks would use the proposed freeway for the through-transport of freight, for transport to and from distribution centers, and for transport to support local commerce (see page 3-64 of the Final Environmental Impact Statement). The trucking industry depends on the efficient and fast movement of freight and on travel-time savings. Therefore, it is expected that “true” through-truck traffic (not having to stop in the metropolitan area) would continue to use the faster, designated, and posted bypass system of Interstate 8 and State Route 85. The comment offers no source or evidence.</p> <p>In April 2001, the Maricopa Association of Governments Regional Council formally adopted the route depicted in the map on page 3-64 as the CANAMEX Corridor within Maricopa County. As noted on page 3-64 of the Final Environmental Impact Statement, in the Maricopa County area the CANAMEX Corridor is to follow Interstate 10 from Tucson to Interstate 8 near Casa Grande, Interstate 8 west to State Route 85 near Gila Bend, State Route 85 north to Interstate 10 northwest of Buckeye, Interstate 10 west to Wickenburg Road, Wickenburg Road to Vulture Mine Road west of Wickenburg, and then connect with the planned U.S. Route 93/U.S. Route 60 Wickenburg Bypass.</p> <p>In the summer of 2014, the Arizona and Nevada Departments of Transportation completed the two-year Interstate 11 (I-11) and Intermountain West Corridor Study. The proposed freeway was not included in the “Universe of Corridor Alternatives” or the “Recommended Corridor Alternatives” for the study (see i11study.com/wp/ for more information).</p>

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	<p>considered, and, if suitable mitigation cannot be identified, the No Action Alternative must be selected.</p> <p>The DEIS fails to evaluate the impact the increased air pollutants will have to those recreating in SMPP. During high pollution days, residents are advised to limit outdoor activity. This proposed freeway is likely to exacerbate this problem, increase the number and severity of high pollution days, and create an increased hazard to people who hike, bike, wildlife watch, and more in the park, particularly those who utilize the west end of the park. Increased activity results in an increased exposure to air pollutants.</p> <p>The DEIS fails to evaluate the impact of air pollutants on many native plants, including those in SMPP. Whether air-borne or in the soil (most particles fall to ground), there is a loss of photosynthetic ability and reduced plant health and vigor associated with those emissions.²⁵ Even those plants that can exist near highways have increased susceptibility to environmental stresses when compared to plants farther away from highways.^{26,27}</p> <p><i>iv. Air quality modeling and assumptions in the DEIS are unclear</i></p> <p>It is unclear what vehicle traffic mix was used for the emission estimates/modeling. That should be clarified in the FEIS. It is also unclear whether increases in heavy-duty diesel traffic from the CANAMEX project were included in this assessment (see above discussion regarding I-11).</p> <p><i>v. Conformity</i></p> <p>As noted in the DEIS, the 1990 Clean Air Act Amendments require that transportation projects conform to air quality implementation plans. The discussion in the DEIS regarding conformity makes it difficult to determine whether this requirement has been met, especially relative to particulate emissions and emission of VOCs and nitrogen oxides that contribute to ozone. As the Phoenix area is a nonattainment area for both of these, not only is further analysis and discussion required, but the public should be provided an opportunity to evaluate and comment on the analysis. ADOT cannot circumvent this requirement by including the analysis in the FEIS. Moreover, the DEIS fails to address the fact that EPA has withdrawn the adequacy determination for the PM₁₀ State Implementation Plan (SIP) for conformity purposes. As transportation is the major contributor to these pollutants and per our earlier comments, this freeway will increase congestion over time, we question the conformity analysis and findings.</p> <p><i>vi. Greenhouse gas emissions (climate change)</i></p> <p>²⁵ U.S. Environmental Protection Agency. Secondary Ozone NAAQS Evaluation. Available online at http://www.epa.gov/tneacas1/regdata/RIAs/s4-supplemental_analysis-secondary_standard11-5-09.pdf. Accessed 24 July 2013.</p> <p>²⁶ Heagle, A.S., D.E. Boday, and W.W. Heck. 1973. An open-top field chamber to assess the impact of air pollution on plants. <i>Journal of Environmental Quality</i> 2(3):365–368.</p> <p>²⁷ Novak, K., J.M. Skelly, M. Schaub, N. Kräuchi, C. Hug, W. Landolt, and P. Bleuler. 2003. Ozone air pollution and foliar injury development on native plants of Switzerland. <i>Environmental Pollution</i> 125(1):41–52.</p>

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45	Air Quality	<p>The comment implies that the conformity determination must be addressed in the Draft Environmental Impact Statement and that it is insufficient to address conformity at a later time. Section 93.104(d) of the conformity regulations states that a project-level conformity determination is required before a project is adopted, accepted, approved, or funded. To clarify this point, the Federal Highway Administration in May 2003 issued guidance on Clarification of Transportation Conformity Requirements for FHWA/FTA Projects Requiring Environmental Impact Statements, stating that projects that are evaluated through an environmental impact statement process are encouraged to include a project-level conformity determination in the Final Environmental Impact Statement, but a final conformity determination is required before the record of decision is signed. (This guidance is posted on the U.S. Environmental Protection Agency’s Web site at <epa.gov/otaq/stateresources/transconf/policy/dot052003.pdf>.)</p> <p>In May 2012, the Arizona Department of Environmental Quality submitted a revised Maricopa Association of Governments 2012 Five Percent Plan for the region. On July 20, 2012, the U.S. Environmental Protection Agency made an official finding that the Maricopa Association of Governments 2012 Five Percent Plan was administratively complete. This decision ended the sanctions clocks associated with Arizona’s decision to withdraw the Maricopa Association of Governments 2007 Five Percent Plan. On February 6, 2014, the U.S. Environmental Protection Agency published a notice in the <i>Federal Register</i> proposing to approve the Maricopa Association of Governments 2012 <i>Five Percent Plan for Attainment of the PM-10 Standard</i> for the Maricopa County Nonattainment Area. In the same notice, the U.S. Environmental Protection Agency stated that it would concur with exceptional event (as a result of haboobs and dust storms) documentation prepared by the Arizona Department of Environmental Quality, which would give the region the 3 years of clean data needed for attainment of the particulate matter (PM₁₀) 24-hour standard. Finally on May 30, 2014, the U.S. Environmental Protection Agency 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 the years 2010 to 2012 (see page 4-72 of the Final Environmental Impact Statement for more information).</p> <p>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 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. 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 Final Environmental Impact Statement includes a conformity determination for carbon monoxide and particulate matter (PM₁₀), beginning on page 4-75, with additional discussion of the technical analyses in the Air Quality Technical Report.</p>

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46	<p>While it is clear that climate change is a global challenge and that there are many sources of carbon pollution and other greenhouse gases, transportation is a major factor and is up there with coal plants relative to greenhouse gas emissions in Arizona.²⁸ Because of that, the negative impacts relative to climate change should have been acknowledged in the DEIS. ADOT needs to analyze these impacts in the FEIS.</p> <p>D. Noise (DEIS, p. 4-80)</p> <p><i>i. The DEIS provides an inadequate analysis of noise impacts on South Mountain Park</i></p> <p>The analysis of the noise impacts from the freeway to the park is inadequate. The noise in the park would be more noticeable than in surrounding areas due to the natural quiet that is an amenity in the park and due to the way noise travels up and over the noise walls.</p> <p>Intrusive sounds are a matter of concern to park visitors. As was reported to the U.S. Congress in the Report on the Effects of Aircraft Overflights on the National Park System, a system-wide survey of park visitors revealed that nearly as many visitors come to national parks to enjoy the natural soundscape (91 percent) as come to view the scenery (93 percent).²⁹ Noise can also distract visitors from the resources and purposes of cultural areas – the tranquility of historic settings and sacred sites.³⁰ For many visitors the ability to hear clearly the delicate and quieter intermittent sounds of nature, the ability to experience interludes of extreme quiet for their own sake, and the opportunity to do so for extended periods of time are important reasons for visiting parks.³¹ It is not a leap to consider that visitors to parks such as SMPP would value some of these same attributes.</p> <p>The DEIS failed to include analysis on the impacts of the project on “Silent Sundays” at SMPP. The park’s website indicates, “For each monthly Silent Sunday event, (generally the fourth Sunday of each month), the park’s main access roadways are closed to motor vehicles, reserving them for the entire day for non-motorized uses.”³² Again, it is clear that park visitors value non-motorized and quiet recreation.</p> <p><i>ii. The DEIS includes an incomplete review of noise regulations</i></p> <p>The DEIS includes an incomplete review of noise regulations. It includes some analysis of the Federal Highway Administration Noise Abatement Criteria (23 CFR 772) and the ADOT Noise</p> <p><small>²⁸ Bailie, A., M. Lazarus, T. Peterson, K. Hausker, P. Kuch, E. Williams, K. Colburn, S. Roe. 2005. Final Arizona Greenhouse Gas Inventory and Reference Case Projections 1990-2020. The Center for Climate Strategies. Available online at http://azmemory.azlibrary.gov/cdm/singleitem/collection/statepubs/id/2347/rec/1.</small></p> <p><small>²⁹ National Park Service. 1995. Grand Canyon National Park General Management Plan. Available online at http://www.nps.gov/grca/parkmgmt/upload/GRCA_General_Management_Plan.pdf.</small></p> <p><small>³⁰ National Park Service. 2010. Soundscape Management Plan. Zion National Park, Utah. Available online at http://www.nps.gov/zion/parkmgmt/loader.cfm?csModule=security/getfile&PageID=508722.</small></p> <p><small>³¹ Ibid.</small></p> <p><small>³² City of Phoenix website for South Mountain Park, http://phoenix.gov/parks/trails/locations/south. Accessed 23 July 2013.</small></p>
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46	Climate Change	Text beginning on page 4-85 of the Final Environmental Impact Statement acknowledges that there is extensive scientific literature documenting the adverse effects of greenhouse gas emissions, and the Final Environmental Impact Statement discusses the relationship and the contribution of the proposed action to greenhouse gas emissions in the context of the affected environment (in this case, global emissions). In short, the Federal Highway Administration has concluded, based on the nature of greenhouse gas emissions and the exceedingly small potential greenhouse gas impacts of the proposed action that such emissions from the proposed action would not result in reasonably foreseeable substantial adverse impacts on the human environment. The Final Environmental Impact Statement also discusses mitigation activities underway at the Federal Highway Administration.
47	Noise	Sensitive receivers for noise are already included in the noise analyses in accordance with State and federal guidance. The section, <i>Noise</i> , 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 Federal Highway Administration Traffic Noise Model noise prediction model, which was used on this project, loses accuracy in predicting noise levels at great distances from the source, as the areas in the South Mountain Park/Preserve used on Silent Sundays are. The proposed freeway would not prevent the park from continuing to hold Silent Sundays.
48	Noise	The noise analysis has been updated for the Final Environmental Impact Statement using 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. 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. 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 U.S. Department of Transportation. The noise emissions of motor vehicles are used in the Federal Highway Administration’s Traffic Noise Model noise prediction model, which was used on this project (see Final Environmental Impact Statement beginning on page 4-89). 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 proposed action. 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 applied to the proposed action (see Final Environmental Impact Statement beginning on page 4-89). Local noise regulations are intended to address nuisance noise. They address emissions

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48	<p>Abatement Plan, dated 2007, which is not the most recent plan.³³ The following additional laws and guidelines should also be considered:</p> <ul style="list-style-type: none">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 programsU.S. Department of Transportation Federal Transit Administration (FTA) guidelines that specifically address 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))Cities’ noise ordinances. <p>E. Water Resources (DEIS, p. 4-93)/Floodplains (DEIS, p. 4-102)/Waters of the United States (DEIS, p. 4-108)</p> <p><i>i. Impacts on the Salt and Gila rivers</i></p> <p>The proposed freeway would increase run-off into the Salt and Gila rivers and would further impair an already impaired section of the Salt River (Section 303d of Clean Water Act). To contribute to further impairment of an impaired reach of water is contrary to the Clean Water Act.</p> <p>Likewise, the proposed action will degrade several ephemeral washes that drain into the Gila River from South Mountain, and the western section of the project would cross between 17 and 26 jurisdictional waters.</p> <p>The DEIS fails to address how negative impacts to these jurisdictional waters would be mitigated. ADOT must assess these potential impacts and identify suitable mitigation measures.</p> <p><i>ii. Impacts on groundwater</i></p> <p>Per the DEIS, all action alternatives have the potential to affect 118 existing wells located in the proposed right of way for the freeway. NEPA requires that the impacts analysis on groundwater include the “best available scientific and technical information,” that the indirect impacts be analyzed, and that the analysis is not arbitrary, among other things. The analysis of water availability makes use of outdated and/or erroneous information in at least a couple of instances. The reference for water levels is from 1992, even though there are clearly more recent sources of information available. ADOT should refer to the Arizona Department of Water Resources website and the most current data available.³⁴ Likewise, the DEIS contains erroneous information about effluent availability relative to replacement water for lost groundwater wells and includes information about an effluent plant that is no longer a viable source of replacement water.</p> <p>³³ See http://www.azdot.gov/highways/EPG/EPG_Common/Documents_Technical_Noise.asp for most recent plan. Accessed on 22 July 2013.</p> <p>³⁴ See https://gisweb.azwater.gov/waterresourcedata.</p>

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48 (cont.)		<p>from modified motor vehicle exhausts, loud performances, and night-time 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 night-time construction, if an action alternative is the Selected Alternative.</p> <p>The Occupational Safety and Health Administration Occupational Noise Exposure, Hearing Conservation Amendment applies to on-the-job worker exposure to noise. These exposure limits would apply to highway construction workers, if an action alternative is the Selected Alternative.</p>
49	Water Resources	<p>The specific water quality constituents that cause the impairment change every few years 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 water quality factor (dissolved solids) for the Salt and Gila rivers is discussed on page 4-101 of the Final 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 4-101 of the Final Environmental Impact Statement. The Arizona Department of Transportation has a municipal separate storm sewer systems permit that dictates its post-construction operation of freeways. It requires design considerations including retention basins and active treatment devices that would be implemented when stormwater is discharged from freeways in this type of scenario. During construction, the Arizona Department of Environmental Quality would require the monitoring of construction discharges through a sampling and analysis program. Discussion of Arizona Pollutant Discharge Elimination System requirements and the Arizona Department of Transportation’s permit requirements through individual permits begins on page 4-102 of the Final Environmental Impact Statement.</p> <p>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 4-118 of the Final Environmental Impact Statement, as design 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. The lack of prudent and feasible alternatives to the E1 Alternative means that avoidance of waters of the United States would not be practicable; therefore, in consultation with the U.S. Army Corps of Engineers during project design, 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 4-118 of the Final Environmental Impact Statement and the U.S. Army Corps of Engineers has concurred with this approach.</p>
50	Water Resources	<p>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.</p>

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	<p>ADOT must amend the information provided to include the most recent and correct information available.</p>
51	<p>G. Topography, Geology, and Soils (DEIS, p. 4-113)</p> <p>ADOT provided very little information in this section on which to comment. The soil analysis is minimal and inadequate and fails to address the potential impacts of the significant cuts into SMPP and the erosion associated with it. ADOT must analyze such impacts and suitable mitigation measures and must provide opportunity for the public to review and comment upon these.</p>
52	<p>H. Biological Resources (DEIS, p. 4-117)</p> <p>Unfortunately, it is difficult to provide substantive comments for this section as very little substantive information was provided in the DEIS. The DEIS does not adequately describe existing biological resources, nor does it provide suitable discussion or analysis of possible impacts to these resources. What little information is provided is done so in a very subjective manner and purposefully sways the language toward presumed benefits of the project, rather than objectively concentrating on both possible benefits and negative impacts. In addition, any potential effects on biological resources that are mentioned in the DEIS are not discussed in detail, and analyses of actual impacts to the resources are lacking.</p> <p>The purpose of an EIS is to provide a “full and fair discussion of significant environmental impacts and shall inform decisionmakers and the public of the reasonable alternatives which would avoid or minimize adverse impacts or enhance the quality of the human environment” (40 CFR 1502.1). Unfortunately, ADOT has failed to provide a full and fair discussion of potential impacts from this project, as well as what measures may be implemented to minimize or avoid these impacts. The DEIS greatly downplays potential impacts to biological resources, fails to address impacts to all biological resources in the area, does not provide adequate analysis or information for the public to understand these impacts, and does not give adequate information about mitigation measures.</p> <p><i>i. Plants and vegetation</i></p> <p>The DEIS gives short shrift to plants. Clearly, the construction of the freeway will kill many plants, including such iconic plants as ironwood, saguaro, Arizona Queen of the Night, elephant tree, and ocotillo. Even those that are removed to be replanted, such as saguaro and littleleaf paloverde, historically experience a very high mortality rate. However, ADOT does not analyze impacts to these plant species or to local vegetation as a whole, and the mitigation measures identified are not described in detail and may have little effect in minimizing impacts.</p> <p>Roads are highly correlated with changes in species composition and population sizes.³⁵ For example, populations of the more specialized species such as elephant tree, saguaro, and Arizona escheveria will respond negatively due to loss of habitat, including appropriate substrate and associated species such as nurse plants.³⁶</p> <p>³⁵ Trombulak, S.C., and C.A. Frissell. 2000. Review of ecological effects of roads on terrestrial and aquatic communities. <i>Conservation Biology</i> 14: 18-30.</p> <p>³⁶ Personal communication Wendy Hodgdon with Arizona Desert Botanical Garden.</p>

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50 (cont.)		<p>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 because groundwater levels are not a differentiating factor among alternatives.</p> <p>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 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.”</p>
51	Geology	<p>Information gained through geotechnical investigations would be used to design the slopes to be stable and to protect against stormwater flows and related erosion. Technical reports addressing rock cut slope designs would be prepared as part of the preliminary and final geotechnical investigations of the selected freeway alignment.</p> <p>Stormwater flows and related erosion from excavated areas would be addressed by implementation of a Stormwater Pollution Prevention Plan and related best practices. Stormwater Pollution Prevention Plans are required on Arizona Department of Transportation construction projects to control and mitigate erosion and loss of soil from the project and off-site movement of eroded sediments.</p> <p>During construction, off-site impacts to soil from erosion related to the freeway construction project are not expected. Implementation of the Stormwater Pollution Prevention Plan and related best practices would keep eroded sediments on site for collection and replacement as appropriate. After construction, grading and drainage and landscape design components of the freeway system would act to control and mitigate erosion.</p>
52	Biological Resources	<p>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, <i>General Impacts on Vegetation, Wildlife, and Wildlife Habitat</i>, 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 general effects that would also apply to most species that occur along the Action Alternative Corridors. Additional species with 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).</p>

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	<p>ADOT must amend the information provided to include the most recent and correct information available.</p> <p>G. Topography, Geology, and Soils (DEIS, p. 4-113)</p> <p>ADOT provided very little information in this section on which to comment. The soil analysis is minimal and inadequate and fails to address the potential impacts of the significant cuts into SMPP and the erosion associated with it. ADOT must analyze such impacts and suitable mitigation measures and must provide opportunity for the public to review and comment upon these.</p> <p>H. Biological Resources (DEIS, p. 4-117)</p> <p>Unfortunately, it is difficult to provide substantive comments for this section as very little substantive information was provided in the DEIS. The DEIS does not adequately describe existing biological resources, nor does it provide suitable discussion or analysis of possible impacts to these resources. What little information is provided is done so in a very subjective manner and purposefully sways the language toward presumed benefits of the project, rather than objectively concentrating on both possible benefits and negative impacts. In addition, any potential effects on biological resources that are mentioned in the DEIS are not discussed in detail, and analyses of actual impacts to the resources are lacking.</p> <p>The purpose of an EIS is to provide a “full and fair discussion of significant environmental impacts and shall inform decisionmakers and the public of the reasonable alternatives which would avoid or minimize adverse impacts or enhance the quality of the human environment” (40 CFR 1502.1). Unfortunately, ADOT has failed to provide a full and fair discussion of potential impacts from this project, as well as what measures may be implemented to minimize or avoid these impacts. The DEIS greatly downplays potential impacts to biological resources, fails to address impacts to all biological resources in the area, does not provide adequate analysis or information for the public to understand these impacts, and does not give adequate information about mitigation measures.</p> <p>i. Plants and vegetation</p> <p>The DEIS gives short shrift to plants. Clearly, the construction of the freeway will kill many plants, including such iconic plants as ironwood, saguaro, Arizona Queen of the Night, elephant tree, and ocotillo. Even those that are removed to be replanted, such as saguaro and littleleaf paloverde, historically experience a very high mortality rate. However, ADOT does not analyze impacts to these plant species or to local vegetation as a whole, and the mitigation measures identified are not described in detail and may have little effect in minimizing impacts.</p> <p>Roads are highly correlated with changes in species composition and population sizes.³⁵ For example, populations of the more specialized species such as elephant tree, saguaro, and Arizona escheveria will respond negatively due to loss of habitat, including appropriate substrate and associated species such as nurse plants.³⁶</p> <p>³⁵ Trombulak , S.C., and C.A. Frissell. 2000. Review of ecological effects of roads on terrestrial and aquatic communities. Conservation Biology 14: 18-30.</p> <p>³⁶ Personal communication Wendy Hodgdon with Arizona Desert Botanical Garden.</p>

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52 (cont.)		<p>Also, a Biological Evaluation was completed in 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, Arizona Game and Fish Department, and Gila River Indian Community Department of Environmental Quality prior to completion of the Final Environmental Impact Statement. Comments and suggestions from the U.S. Fish and Wildlife Service and the Gila River Indian Community Department of Environmental Quality were incorporated into the final Biological Evaluation and Final Environmental Impact Statement that were released on May 14, 2014 and September 26, 2014 respectively.</p> <p>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 potential implementation.</p>
53	Biological Resources, Section 4(f) and Section 6(f)	<p>The section, <i>General Impacts on Vegetation, Wildlife, and Wildlife Habitat</i>, beginning on page 4-125 of the Draft Environmental Impact Statement, discloses by what means the proposed action and its alternatives would affect vegetation, wildlife, and wildlife habitat. Mitigation measures for these effects are presented on page 4-138 of the Final Environmental Impact Statement.</p> <p>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>.</p> <p>Roads, development, or agricultural lands occur along all but less than 2 miles along 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.</p> <p>The project would not provide new public access points into the Phoenix South Mountain Park/Preserve. There are existing trails on the western end of the park, including the Maricopa Trail - Sun Circle Trail that intersects the E1 Alternative near Ray Road. The Maricopa Trail creates a loop connection to all Maricopa County Parks and South Mountain and the Sun Circle Trail connects South Mountain to various canal trails in the Valley. The paved San Juan Road within the Phoenix South Mountain Park/Preserve, allows vehicle access to trailheads within approximately 1 mile from the E1 Alternative.</p> <p>Portions of the habitat within the Preferred Alternative corridor on the western end of the South Mountains are currently impaired due to development and off-highway vehicle use. 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).</p>

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54	<p>Increased, unmonitored use by people in SMPP and in an area that had previously escaped heavy, often inappropriate use because of its greater isolation will result in a more impaired ecosystem overall. However, the DEIS does not even mention this fact, and impacts are not discussed.</p> <p><i>ii. Habitat loss</i></p> <p>The DEIS mentions that the project will result in permanent habitat loss but does not address projected impacts from this loss. Numerous studies have shown that roadways act as major threats to a variety of wildlife populations.^{37,38,39} In addition to direct habitat loss from the land developed into the roadway, indirect effects will extend outward from the roadway, resulting in indirect habitat loss. These impacts are not discussed in the DEIS.</p> <p>The DEIS also assumes that habitat loss will be negligible, considering that much of the area is slated for development, regardless of whether or not the freeway is built. However, this assumption completely disregards the fact that lands that have been set aside to be protected from development – SMPP – will be lost. SMPP represents critically important habitat for a variety of species as it provides relatively undisturbed natural areas in the heart of an otherwise highly-developed landscape. The plan that established SMPP states that the purpose of this park, in part, is to provide “wildlife relief from urban development patterns.”⁴⁰ This freeway negates that purpose.</p> <p>Similarly, the DEIS assumes that because much of the area is slated for development, impacts from the action alternatives would be negligible. However, as noted in Table 4-56 on p. 4-169, this project will accelerate the rate of land conversion in the area, which also accelerates that rate of habitat loss. The DEIS does not identify consequences to biological resources as a result of this accelerated loss of viable habitat.</p> <p>The cumulative impacts section of the DEIS also greatly disregards impacts of habitat loss. ADOT recognizes that urbanization has significantly reduced suitable habitat in the Study Area – for example, agricultural and undeveloped land has been reduced to 21 and 12 percent, respectively (DEIS, p. 4-167). However, the DEIS does not acknowledge the fact that this remaining landscape provides vitally important habitat for native species in the area. Our state and communities need to focus on maintaining remaining habitat to allow for viable wildlife and plant populations and a functioning ecosystem. If a significant portion of this remaining landscape is developed, local populations of many species in the Study Area will be extirpated. This information should have been included in the cumulative impacts analysis.</p> <p>ADOT needs to consider the full range of possible impacts to biological resources as a result of habitat loss due to this project, as well as cumulative and long-term impacts of this project coupled with others. These impacts need to be thoroughly analyzed for each species that may occur in the area. The DEIS falls far short of incorporating this information. Without this</p> <p>³⁷ Eigenbrod, F., S.J. Hecnar, and L. Fahrig. 2008. Accessible habitat: an improved measure of the effects of habitat loss and roads on wildlife populations. <i>Landscape Ecology</i> 23: 159-168.</p> <p>³⁸ Frair, J.L., E.H. Merrill, H.L. Beyer, and J.M. Morales. 2008. Thresholds in landscape connectivity and mortality risks in response to growing road networks. <i>Journal of Applied Ecology</i> 45: 1504-1513.</p> <p>³⁹ Fahrig, L. and T. Rytwinski. 2009. Effects of roads on animal abundance: an empirical review and synthesis. <i>Ecology and Society</i> 14:21.</p> <p>⁴⁰ Maricopa Association of Governments. Desert Spaces: An Open Space Plan for the Maricopa Association of Governments. Final Report. Available online at http://www.azmag.gov/Documents/IS_2010-07-22_Desert-Spaces_MAG-Open-Spaces-Plan_.pdf. Accessed 23 July 2013.</p>

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54	Biological Resources, Section 4(f) and Section 6(f)	<p>The section, <i>General Impacts on Vegetation, Wildlife, and Wildlife Habitat</i>, 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. This section explains that the project would result in a decrease of resources for species that occur in and adjacent to the project area. It also describes additional short term impacts related to construction. The analysis generally describes the effects on the species in most need of conservation that may occur in the project vicinity. The majority of the project area has a moderate-to-low value for these species based on HabiMap, including the western end of the South Mountains. The exception is the area along the Salt River corridor, where there are higher values for riparian species. The project is designed with a bridge over the Salt River to minimize effects on riparian habitat. A Biological Evaluation was submitted to the U.S. Fish and Wildlife Service, Arizona Game and Fish Department, and Gila River Indian Community Department of Environmental Quality that addressed threatened, endangered, and candidate species. Current information on threats and connectivity strategies was included in the Biological Evaluation.</p> <p>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. Wildlife-friendly design information would be considered during the design of drainage and crossing structures for the freeway (see <i>Mitigation</i>, beginning on page 4-138 of the Final Environmental Impact Statement).</p> <p>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 Final Environmental Impact Statement page 5-14). The project team examined alternatives to avoid the park, but did not identify any feasible and prudent alternatives to avoid impacts. The portion of the park that would be used for the proposed freeway would 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 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).</p> <p>If feasible, avoidance of Section 4(f) resources is always the Federal Highway Administration and Arizona Department of Transportation’s preferred 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, including the South Mountains Park/Preserve. The activities that make the park such a highly valued resource (recreational activities, interaction with Sonoran Desert habitat) would remain. As discussed on page 5-18 of the Final Environmental Impact Statement, many alternatives were</p>

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	<p>Increased, unmonitored use by people in SMPP and in an area that had previously escaped heavy, often inappropriate use because of its greater isolation will result in a more impaired ecosystem overall. However, the DEIS does not even mention this fact, and impacts are not discussed.</p> <p><i>ii. Habitat loss</i></p> <p>The DEIS mentions that the project will result in permanent habitat loss but does not address projected impacts from this loss. Numerous studies have shown that roadways act as major threats to a variety of wildlife populations.^{37,38,39} In addition to direct habitat loss from the land developed into the roadway, indirect effects will extend outward from the roadway, resulting in indirect habitat loss. These impacts are not discussed in the DEIS.</p> <p>The DEIS also assumes that habitat loss will be negligible, considering that much of the area is slated for development, regardless of whether or not the freeway is built. However, this assumption completely disregards the fact that lands that have been set aside to be protected from development – SMPP – will be lost. SMPP represents critically important habitat for a variety of species as it provides relatively undisturbed natural areas in the heart of an otherwise highly-developed landscape. The plan that established SMPP states that the purpose of this park, in part, is to provide “wildlife relief from urban development patterns.”⁴⁰ This freeway negates that purpose.</p> <p>55 Similarly, the DEIS assumes that because much of the area is slated for development, impacts from the action alternatives would be negligible. However, as noted in Table 4-56 on p. 4-169, this project will accelerate the rate of land conversion in the area, which also accelerates that rate of habitat loss. The DEIS does not identify consequences to biological resources as a result of this accelerated loss of viable habitat.</p> <p>56 The cumulative impacts section of the DEIS also greatly disregards impacts of habitat loss. ADOT recognizes that urbanization has significantly reduced suitable habitat in the Study Area – for example, agricultural and undeveloped land has been reduced to 21 and 12 percent, respectively (DEIS, p. 4-167). However, the DEIS does not acknowledge the fact that this remaining landscape provides vitally important habitat for native species in the area. Our state and communities need to focus on maintaining remaining habitat to allow for viable wildlife and plant populations and a functioning ecosystem. If a significant portion of this remaining landscape is developed, local populations of many species in the Study Area will be extirpated. This information should have been included in the cumulative impacts analysis.</p> <p>ADOT needs to consider the full range of possible impacts to biological resources as a result of habitat loss due to this project, as well as cumulative and long-term impacts of this project coupled with others. These impacts need to be thoroughly analyzed for each species that may occur in the area. The DEIS falls far short of incorporating this information. Without this</p> <p>³⁷ Eigenbrod, F., S.J. Hecnar, and L. Fahrig. 2008. Accessible habitat: an improved measure of the effects of habitat loss and roads on wildlife populations. <i>Landscape Ecology</i> 23: 159-168.</p> <p>³⁸ Frair, J.L., E.H. Merrill, H.L. Beyer, and J.M. Morales. 2008. Thresholds in landscape connectivity and mortality risks in response to growing road networks. <i>Journal of Applied Ecology</i> 45: 1504-1513.</p> <p>³⁹ Fahrig, L. and T. Rytwinski. 2009. Effects of roads on animal abundance: an empirical review and synthesis. <i>Ecology and Society</i> 14:21.</p> <p>⁴⁰ Maricopa Association of Governments. Desert Spaces: An Open Space Plan for the Maricopa Association of Governments. Final Report. Available online at http://www.azmag.gov/Documents/IS_2010-07-22_Desert-Spaces_MAG-Open-Spaces-Plan_.pdf. Accessed 23 July 2013.</p>

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54 (cont.)		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 Draft Environmental Impact Statement and commented, “Following our review of the Section 4(f) Evaluation, we concur that there is no feasible or prudent alternative to the Preferred Alternative selected in the document, and that all measures have been taken to minimize harm to these resources. Please note however, that this concurrence is contingent upon successful completion of the Programmatic Agreement among the consulting parties.” (See Appendix 1-1 of the Final Environmental Impact Statement.)
55	Land Use/ Biological Resources	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 proposed freeway do not induce growth in the region (see Final Environmental Impact Statement pages 4-179 through 4-183). The proposed action would 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 proposed freeway would abut public parkland, Native American land, and a near-fully developed area—therefore, any contribution to accelerated or induced growth would be constrained. The proposed freeway would be built in an area planned for urban growth as established in local jurisdictions’ land use plans for at least the last 25 years.
56	Land Use/ Biological Resources	<p>Habitat loss as a cumulative impact is addressed on page 4-183 of the Final Environmental Impact Statement. As stated in the analysis, the percentage of land in human-related use is constantly increasing. Ongoing planned and permitted residential, commercial, and transportation development would likely further this trend of habitat loss through direct conversion, habitat isolation, and native plant loss. The document also states that wildlife typically is displaced as a result of habitat loss which may lead to increased competition for resources and/ or population reduction (page 4-184). The majority of the project area has a moderate-to-low value for most of the sensitive species of greatest conservation need based on HabiMap, including the western end of the South Mountains. The exception is the area along the Salt River corridor, where there are higher values for riparian species. The project is designed with a bridge over the Salt River to minimize effects on riparian habitat.</p> <p>The potential for the project to impact species protected under the Endangered Species Act, the list of Arizona Wildlife of Special Concern and Species of Greatest Conservation Need was assessed in the Biological Evaluation and Final Environmental Impact Statement. The preservation of wildlife crossing opportunities incorporated into the design of the South Mountain Freeway will allow for genetic exchange to occur between wildlife populations in the Phoenix South Mountain Park/Preserve and areas located closer to or in the Sierra Estrella. This degree of connectivity would not likely be assured without the project. The likely result of selection of the No-Action alternative would be a smaller road without adequate funds to address substantial crossing structures. While a local road would have a smaller physical footprint, it would not necessarily include any structures designed to allow wildlife connectivity.</p>

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57	knowledge and understanding, ADOT cannot know the true impacts of the project and should select the No Action Alternative. We request that ADOT further study potential impacts to species in the Study Area and provide a thorough analysis in the FEIS.
	<i>iii. Habitat fragmentation and connectivity</i>
	The DEIS greatly downplays the impacts of the freeway on habitat connectivity. According to prominent conservation biologists, habitat fragmentation is the most serious threat to biological diversity and is the primary cause of diminishing populations for many species. ^{41,42,43} We appreciate that ADOT has recognized that this freeway will further fragment the landscape, but we believe that further analysis and study needs to be done to determine impacts to the species in the area. Similarly, the mitigation measure provided would need to be significantly altered, and additional mitigation would need to be evaluated and implemented.
	The only mitigation measure for connectivity loss that ADOT has identified is implementation of multi-functional crossings. The DEIS does not provide specifics about the number of proposed crossings, potential design(s), or possible locations, although these have presumably already been decided, according to language in the DEIS (i.e., pgs. 4-125, 4-126, and 4-127). If locations and the number of crossings have been identified, this information should have been provided in the DEIS, as well as discussion of the design to be used for each individual structure; a map of the location for each crossing area should have also been included. Regardless, it is highly unlikely that these multi-functional crossings will mitigate much, if any, of the impacts to habitat connectivity. Studies have shown that moderate to high human use of crossing structures discourage use by wildlife, thereby defeating the purpose of any presumed “wildlife crossing.” ⁴⁴ Examples can be found within Arizona on highways such as State Route 68 ⁴⁵ and U.S. Highway 93 near the Hoover Dam, ⁴⁶ which show that a variety of species are reluctant to or absolutely will not use crossings that also accommodate people. Based on this information, such multi-use crossings as proposed in the DEIS that accommodate hikers, bicyclists, equestrians, and more would be ineffective. If any of the action alternatives are selected, wildlife-only crossing structures would need to be incorporated.
	Appropriate fencing would also need to be installed to funnel species into the crossing structures and to prevent access to the roadway. This fencing is necessary not only for the wildlife but also for public safety. Different species require different types of fencing design (e.g., deer vs. tortoise fencing). What considerations have been given to funnel fencing, and how will this fencing be implemented?
	Related to the above, a significant amount of time, effort, and resources is necessary to determine the appropriate number, designs, and locations of crossing structures for this project. ADOT has
⁴¹ Aurambout, J.P., A. G. Endress, and B.M. Deal. 2005. A spatial model to estimate habitat fragmentation and its consequences on long-term persistence of animal populations. <i>Environmental Monitoring and Assessment</i> 109(1–3):199–225.	
⁴² Wilcox, B. A., and D.D. Murphy. 1985. Conservation Strategy: The Effects of Fragmentation on Extinction. <i>American Naturalist</i> 125: 879-887.	
⁴³ Meffe, G.K., and C.R. Carroll. 1997. <i>Principles of Conservation Biology</i> . Sunderland, Massachusetts: Sinauer Associates.	
⁴⁴ Van der Grift, E.A., F. Ottburg, R. Pouwels, and J. Dirksen. 2012. Multiuse overpasses: does human use impact the use by wildlife? In P.J. Wagner, D. Nelson, and E. Murray, eds. 2011 <i>Proceedings of the International Conference on Ecology and Transportation</i> . Center for Transportation and the Environment, North Carolina State University, Raleigh, USA.	
⁴⁵ Bristow, K., and M. Crabb. 2008. Trans-Highway Movement of Desert Bighorn Sheep: Arizona Highway 68. Arizona Department of Transportation, Final Report 588. Available online at http://www.azdot.gov/TPD/ATRC/publications/project_reports/PDF/AZ588.pdf .	
⁴⁶ Personal communication –Arizona Game and Fish Department Wildlife Connectivity Program staff.	

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57	Biological Resources	<p>It is important to recognize that such studies need to be conducted in areas exhibiting priority wildlife- related highway safety and connectivity issues. This area was not identified as a priority wildlife linkage during the multiagency statewide effort to identify wildlife linkages that was summarized in the 2006 Arizona Wildlife Working Group report. Also in 2006, Alicia Jontz, the Arizona Game and Fish Department Wildlife Manager for Central Phoenix, provided comments on this project which stated, “In this instance all involved parties may need to consider that due to expanding development in the Phoenix metropolitan area and the lack of long term sustainable corridors between South Mountain and the Estrella Mountains across Gila River Indian Community land, this project may not be the highest priority for wildlife crossings in the state. While some wildlife crossings may be appropriate, large expenditures of state funds may not be appropriate in this case. Any wildlife that migrates from the Estrella Mountains into the South Mountains will find themselves landlocked by development and may end up in the urban area causing conflicts with human populations” (see page A140 of Appendix 1-1 or pages 77-78 of the Biological Evaluation). The 2012 Maricopa County Wildlife Connectivity Assessment did identify a movement corridor at the southwest end of the South Mountains. The proposed multifunctional crossings for the roadway in this area would allow continued wildlife connectivity in this area as well as limited use for tribal members to access the South Mountains (see page 4-137 of the Final Environmental Impact Statement).</p> <p>The Arizona Department of Transportation and Federal Highway Administration completed a Biological Evaluation in 2014 following identification of the Preferred Alternative in the Draft Environmental Impact Statement. The Biological Evaluation and the section of the Final Environmental Impact Statement beginning on page 4-136, <i>General Impacts on Vegetation, Wildlife, and Wildlife Habitat</i>, disclose the potential effects of the proposed action and its alternatives on vegetation, wildlife, and wildlife habitat, including wildlife connectivity. The Biological Evaluation was provided to the U.S. Fish and Wildlife Service, Arizona Game and Fish Department, and Gila River Indian Community Department of Environmental Quality and is available as a supporting document with the Final Environmental Impact Statement.</p> <p>The Federal Highway Administration and Arizona Department of Transportation have committed to providing mitigation by including multifunctional crossing structures designed for wildlife and for limited human use as well as culverts designed for connectivity for smaller species. Wildlife-friendly design information would be considered during the design of drainage and crossing structures for the freeway (see <i>Mitigation</i>, beginning on page 4-138 of the Final Environmental Impact Statement). The Arizona Department of Transportation and Federal Highway Administration would continue to work with partners, including 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 design of multifunctional crossings that would allow wildlife passage across the proposed freeway alignment at natural drainages and that would allow Gila River Indian Community members to gain access to important traditional locations within the South Mountains.</p>

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	<p>knowledge and understanding, ADOT cannot know the true impacts of the project and should select the No Action Alternative. We request that ADOT further study potential impacts to species in the Study Area and provide a thorough analysis in the FEIS.</p> <p><i>iii. Habitat fragmentation and connectivity</i></p> <p>The DEIS greatly downplays the impacts of the freeway on habitat connectivity. According to prominent conservation biologists, habitat fragmentation is the most serious threat to biological diversity and is the primary cause of diminishing populations for many species.^{41,42,43} We appreciate that ADOT has recognized that this freeway will further fragment the landscape, but we believe that further analysis and study needs to be done to determine impacts to the species in the area. Similarly, the mitigation measure provided would need to be significantly altered, and additional mitigation would need to be evaluated and implemented.</p> <p>58 The only mitigation measure for connectivity loss that ADOT has identified is implementation of multi-functional crossings. The DEIS does not provide specifics about the number of proposed crossings, potential design(s), or possible locations, although these have presumably already been decided, according to language in the DEIS (i.e., pgs. 4-125, 4-126, and 4-127). If locations and the number of crossings have been identified, this information should have been provided in the DEIS, as well as discussion of the design to be used for each individual structure; a map of the location for each crossing area should have also been included. Regardless, it is highly unlikely that these multi-functional crossings will mitigate much, if any, of the impacts to habitat connectivity. Studies have shown that moderate to high human use of crossing structures discourage use by wildlife, thereby defeating the purpose of any presumed “wildlife crossing.”⁴⁴ Examples can be found within Arizona on highways such as State Route 68⁴⁵ and U.S. Highway 93 near the Hoover Dam,⁴⁶ which show that a variety of species are reluctant to or absolutely will not use crossings that also accommodate people. Based on this information, such multi-use crossings as proposed in the DEIS that accommodate hikers, bicyclists, equestrians, and more would be ineffective. If any of the action alternatives are selected, wildlife-only crossing structures would need to be incorporated.</p> <p>59 Appropriate fencing would also need to be installed to funnel species into the crossing structures and to prevent access to the roadway. This fencing is necessary not only for the wildlife but also for public safety. Different species require different types of fencing design (e.g., deer vs. tortoise fencing). What considerations have been given to funnel fencing, and how will this fencing be implemented?</p> <p>60 Related to the above, a significant amount of time, effort, and resources is necessary to determine the appropriate number, designs, and locations of crossing structures for this project. ADOT has</p> <p>⁴¹ Aurambout, J.P., A. G. Endress, and B.M. Deal. 2005. A spatial model to estimate habitat fragmentation and its consequences on long-term persistence of animal populations. <i>Environmental Monitoring and Assessment</i> 109(1–3):199–225.</p> <p>⁴² Wilcox, B. A., and D.D. Murphy. 1985. Conservation Strategy: The Effects of Fragmentation on Extinction. <i>American Naturalist</i> 125: 879-887.</p> <p>⁴³ Meffe, G.K., and C.R. Carroll. 1997. <i>Principles of Conservation Biology</i>. Sunderland, Massachusetts: Sinauer Associates.</p> <p>⁴⁴ Van der Grift, E.A., F. Ottburg, R. Pouwels, and J. Dirksen. 2012. Multiuse overpasses: does human use impact the use by wildlife? In P.J. Wagner, D. Nelson, and E. Murray, eds. 2011 <i>Proceedings of the International Conference on Ecology and Transportation</i>. Center for Transportation and the Environment, North Carolina State University, Raleigh, USA.</p> <p>⁴⁵ Bristow, K., and M. Crabb. 2008. <i>Trans-Highway Movement of Desert Bighorn Sheep: Arizona Highway 68</i>. Arizona Department of Transportation, Final Report 588. Available online at http://www.azdot.gov/TPD/ATRC/publications/project_reports/PDF/AZ588.pdf.</p> <p>⁴⁶ Personal communication –Arizona Game and Fish Department Wildlife Connectivity Program staff.</p>

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58	Biological Resources	<p>Coordination efforts with the U.S. Fish and Wildlife Service and Arizona Game and Fish Department are documented throughout the <i>Biological Resources</i> section of the Final Environmental Impact Statement. Connectivity is planned to allow wildlife movement beneath the freeway. This is described in the text box, “<i>Habitat Connectivity and the Proposed Action</i>”, on page 4-137 and in the section, <i>Habitat Connectivity</i>, on page 4-137 of the Final Environmental Impact Statement. Crossing structures are planned along major movement corridors (see Figure 4-38, on page 4-126, and the discussion on page 4-137 of the Final Environmental Impact Statement) and would provide connectivity between the South Mountains and the Sierra Estrella. The crossing structure locations were identified in Figure 3-25 on page 3-47 of the Draft Environmental Impact Statement.</p> <p>In Arizona, research by the Arizona Game and Fish Department along State Route 260 found highly compatible use of a dual-use (multifunctional) underpass that linked the communities of Christopher Creek and Hunter Creek. This particular underpass exhibited some of the most diverse and substantial wildlife use of the underpasses monitored in their long-term project (Dodd et al. 2012). Along State Route 77, a Wildlife Technical Advisory Committee closely scrutinized this issue for the two planned wildlife passages that will be built within a similar urban-influenced landscape in and adjacent to Oro Valley. The Wildlife Technical Advisory Committee evaluated all available information and determined that the temporal patterns of human (daytime) versus wildlife (crepuscular and nocturnal) use are not expected to result in a significant degree of incompatibility.</p> <p>Wildlife-friendly culvert design information would be considered during the design of the drainage and crossing structures for the freeway (see <i>Mitigation</i>, beginning on page 4-138 of the Final Environmental Impact Statement). The <i>Measures to Minimize Harm</i> section beginning on page 5-23 of the Final Environmental Impact Statement includes measures addressing concerns raised in the comment. The Arizona Department of Transportation and Federal Highway Administration would continue to work with partners including 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 to continue to develop these measures (including the provision of replacement lands and the design of multifunctional crossings that would allow wildlife passage across the proposed freeway alignment at natural drainages and that would allow Gila River Indian Community members to gain access to important traditional locations within the South Mountains).</p>
59	Biological Resources	<p>The Federal Highway Administration and Arizona Department of Transportation have committed to providing mitigation by including multifunctional crossing structures designed for wildlife and for limited human use, potential fencing to guide wildlife to the crossing structures, and culverts designed for connectivity for smaller species. Wildlife-friendly design information would be considered during the design of drainage and crossing structures for the freeway (see <i>Mitigation</i>, beginning on page 4-138 of the Final Environmental Impact Statement).</p>
60	Biological Resources	<p>The main connectivity concerns expressed in comments from the Arizona Game and Fish Department were related to connectivity opportunities for wildlife to move between South Mountain and the Sierra Estrella Mountains and a secondary concern with designing drainage features in the section of the E1 alternative that will follow the current Pecos Road, to allow smaller wildlife use. Wildlife connectivity across the proposed project corridor is a concern, and multifunctional</p>

(Response 60 continues on next page)

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	<p>not invested any of this. As evidenced by other road crossing projects, wildlife crossing structures are only effective when adequate site-specific research has been done to determine the target species’ movement patterns in the project area. Using the above Arizona highway examples of SR68 and US93, relatively few desert bighorn sheep – the target species for these highways – have utilized crossing structures on SR68, and none of the crossings on that roadway have been by ewes or lambs; a report to ADOT on this project concludes that inadequate research was done prior to placement of the structures, resulting in the limited and mostly ineffective use. Conversely, the crossing structures implemented on US93 have been tremendously successful with thousands of desert bighorn sheep of both genders and multiple age classes documented using the overpasses; adequate time and effort was spent prior to construction of these overpasses to determine appropriate locations, design, and number.^{47,48} The success of other state projects, such as SR260, is also due to the amount of research that has been conducted on target species in the area and proper design of crossings. These projects took years of research.⁴⁹ On p. 5-25, the DEIS states that ADOT will consult with external agencies and organization, including the Arizona Game and Fish Department (AGFD), during the design phase in order to finalize the multi-use crossings. Unfortunately, by this point in the timeframe, it will too late to implement effective crossing structures or other mitigation.</p> <p>In fact, we are quite concerned by the lack of communication and coordination with external agencies, including AGFD. Information provided by ADOT representatives at the SMCAT meeting on June 11, 2013, and confirmed by AGFD staff demonstrates that very little coordination has occurred. Biologists were not consulted to determine the appropriateness of multi-functional crossings nor to determine a suitable number and locations of crossing structures. This is a gross oversight and one that cannot be easily amended.</p> <p>ADOT also states that this project will help maintain connectivity between South Mountain and surrounding areas, whereas the No Action Alternative would not (e.g., p. 4-126). However, this statement is misleading. Although crossing structures, if properly implemented, would assist wildlife movement in the short-term, the surrounding landscape will likely be developed, as indicated in the DEIS. If landscape connectivity and movement corridors are not incorporated into the surrounding development, which is the most likely scenario, wildlife will not be able to use these crossing structures to access surrounding areas or necessary resources. We realize that maintaining connectivity throughout the entire landscape is not within the purview of ADOT as it would not oversee such development, but ADOT needs to be realistic in its discussion of impacts from the proposed action versus the No Action Alternative. It should also include a full analysis of reduced habitat connectivity in its cumulative impacts analysis.</p> <p><i>iv. Species occurrence</i></p> <p>ADOT’s representation of species that may be affected by this project is misleading and inaccurate. Most notably, ADOT has little understanding of what species actually occur in the Study Area. The information about species presence provided in the DEIS appears to rely on only incidental observations and on the Heritage Data Management System (HDMS). Neither of these provides a complete list of species present in the area. For example, the list of Arizona Species of Concern (DEIS, Table 4-44, pp. 4-120–4-121) was generated from the HDMS. However, the HDMS relies on incidental observations and data from surveys that have been</p> <p>⁴⁷ Bristow and Crabb (2008) ⁴⁸ AGFD staff, personal communication ⁴⁹ AGFD staff, personal communication</p>
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60 (cont.)		<p>crossing structures are planned at locations where natural movement corridors occur along major drainages. The U.S. Route 93 study area is not similar to the South Mountains in that the undeveloped land along U.S. Route 93 provided habitat for an existing population of large mammals. In the case of the South Mountains, communication from the Arizona Game and Fish Department in 2006 (see page A139 in Appendix 1-1 of the Final Environmental Impact Statement or pages 77-78 of the Biological Evaluation) states that mule deer are believed to have been extirpated from the area; bighorn sheep are not known to occur in Phoenix South Mountain Park/Preserve.</p> <p>In Arizona, research by the Arizona Game and Fish Department along State Route 260 found highly compatible use of a dual-use (multifunctional) underpass that linked the communities of Christopher Creek and Hunter Creek. This particular underpass exhibited some of the most diverse and substantial wildlife use of the underpasses monitored in their long-term project (Dodd et al. 2012). Along State Route 77, a Wildlife Technical Advisory Committee closely scrutinized this issue for the two planned wildlife passages that will be built within a similar urban-influenced landscape in and adjacent to Oro Valley. The Wildlife Technical Advisory Committee evaluated all available information and determined that the temporal patterns of human (daytime) versus wildlife (crepuscular and nocturnal) use are not expected to result in a significant degree of incompatibility. Furthermore, such dual-use, multifunctional structures situated within urban-influenced landscapes, in this instance adjacent to South Mountain with its extensive trail network, offer effective and efficient use of limited taxpayer funds.</p> <p>The Federal Highway Administration and Arizona Department of Transportation have committed to providing mitigation by including multifunctional crossing structures designed for wildlife such as mule deer and for limited human use, potential fencing to guide wildlife to the crossing structures, and culverts designed for connectivity for smaller species (see <i>Mitigation</i>, beginning on page 4-138 of the Final Environmental Impact Statement).</p> <p>Coordination efforts with the U.S. Fish and Wildlife Service and Arizona Game and Fish Department are documented throughout the <i>Biological Resources</i> section of the Final Environmental Impact Statement. Early coordination with the Arizona Game and Fish Department indicated that the movement corridor between the South Mountains and the Sierra Estrella is degraded by the 51st Avenue travel corridor as well as by planned development in that area (see page A139 in Appendix 1-1 of the Final Environmental Impact Statement or pages 77-78 of the Biological Evaluation). Data presented in the Draft and Final Environmental Impact Statements show a large percentage of the land in the Study Area is projected to be converted to nonagricultural uses in the foreseeable future (see the sidebar, “<i>Existing versus planned land use</i>,” on page 4-3 of both documents).</p> <p>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, potential fencing to guide wildlife to the crossing structures, and culverts designed for connectivity for smaller species. Wildlife-friendly design information would be considered during the design of drainage and crossing structures for the freeway (see <i>Mitigation</i>, beginning on page 4-138 of the Final Environmental Impact Statement).</p>

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	<p>not invested any of this. As evidenced by other road crossing projects, wildlife crossing structures are only effective when adequate site-specific research has been done to determine the target species’ movement patterns in the project area. Using the above Arizona highway examples of SR68 and US93, relatively few desert bighorn sheep – the target species for these highways – have utilized crossing structures on SR68, and none of the crossings on that roadway have been by ewes or lambs; a report to ADOT on this project concludes that inadequate research was done prior to placement of the structures, resulting in the limited and mostly ineffective use. Conversely, the crossing structures implemented on US93 have been tremendously successful with thousands of desert bighorn sheep of both genders and multiple age classes documented using the overpasses; adequate time and effort was spent prior to construction of these overpasses to determine appropriate locations, design, and number.^{47,48} The success of other state projects, such as SR260, is also due to the amount of research that has been conducted on target species in the area and proper design of crossings. These projects took years of research.⁴⁹ On p. 5-25, the DEIS states that ADOT will consult with external agencies and organization, including the Arizona Game and Fish Department (AGFD), during the design phase in order to finalize the multi-use crossings. Unfortunately, by this point in the timeframe, it will too late to implement effective crossing structures or other mitigation.</p> <p>In fact, we are quite concerned by the lack of communication and coordination with external agencies, including AGFD. Information provided by ADOT representatives at the SMCAT meeting on June 11, 2013, and confirmed by AGFD staff demonstrates that very little coordination has occurred. Biologists were not consulted to determine the appropriateness of multi-functional crossings nor to determine a suitable number and locations of crossing structures. This is a gross oversight and one that cannot be easily amended.</p> <p>ADOT also states that this project will help maintain connectivity between South Mountain and surrounding areas, whereas the No Action Alternative would not (e.g., p. 4-126). However, this statement is misleading. Although crossing structures, if properly implemented, would assist wildlife movement in the short-term, the surrounding landscape will likely be developed, as indicated in the DEIS. If landscape connectivity and movement corridors are not incorporated into the surrounding development, which is the most likely scenario, wildlife will not be able to use these crossing structures to access surrounding areas or necessary resources. We realize that maintaining connectivity throughout the entire landscape is not within the purview of ADOT as it would not oversee such development, but ADOT needs to be realistic in its discussion of impacts from the proposed action versus the No Action Alternative. It should also include a full analysis of reduced habitat connectivity in its cumulative impacts analysis.</p> <p><i>iv. Species occurrence</i></p> <p>ADOT’s representation of species that may be affected by this project is misleading and inaccurate. Most notably, ADOT has little understanding of what species actually occur in the Study Area. The information about species presence provided in the DEIS appears to rely on only incidental observations and on the Heritage Data Management System (HDMS). Neither of these provides a complete list of species present in the area. For example, the list of Arizona Species of Concern (DEIS, Table 4-44, pp. 4-120–4-121) was generated from the HDMS. However, the HDMS relies on incidental observations and data from surveys that have been</p> <p>⁴⁷ Bristow and Crabb (2008) ⁴⁸ AGFD staff, personal communication ⁴⁹ AGFD staff, personal communication</p>
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61	Biological Resources	<p>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 proposed freeway do not induce growth in the region (see Final Environmental Impact Statement pages 4-179 through 4-183). The proposed action would 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 proposed freeway would abut public parkland, Native American land, and a near-fully developed area—therefore, any contribution to accelerated or induced growth would be constrained. The proposed freeway would be built in an area planned for urban growth as established in local jurisdictions’ land use plans for at least the last 25 years.</p> <p>The Federal Highway Administration and Arizona Department of Transportation have committed to providing mitigation by including multifunctional crossing structures designed for wildlife such as mule deer and for limited human use, potential fencing to guide wildlife to the crossing structures, and culverts designed for connectivity for smaller species (see <i>Mitigation</i>, beginning on page 4-138 of the Final Environmental Impact Statement). The preservation of wildlife crossing opportunities incorporated into the design of the South Mountain Freeway will allow for genetic exchange to occur between wildlife populations in the Phoenix South Mountain Park/Preserve and areas located closer to or in the Sierra Estrella. This degree of connectivity would not likely be assured without the project. The likely result of selection of the No-Action alternative would be a smaller road without adequate funds to address substantial crossing structures. While a local road would have a smaller physical footprint, it would not necessarily include any structures designed to allow wildlife connectivity.</p>
62	Biological Resources	<p>The Arizona Department of Transportation and Federal Highway Administration completed a Biological Evaluation in 2014 following identification of the Preferred Alternative in the Draft Environmental Impact Statement. The Biological Evaluation and the section of the Final Environmental Impact Statement beginning on page 4-136, <i>General Impacts on Vegetation, Wildlife, and Wildlife Habitat</i>, disclose the potential effects of the proposed action and its alternatives on vegetation, wildlife, and wildlife habitat, including wildlife connectivity. The potential for the project to impact species protected under the Endangered Species Act, the list of Arizona Wildlife of Special Concern and Species of Greatest Conservation Need was also assessed in the Biological Evaluation and Final Environmental Impact Statement. Species of Greatest Conservation Need that have the potential to occur in the Study Area have been added to Table 4-43 that begins on page 4-129 of the Final Environmental Impact Statement. The Biological Evaluation was submitted 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 provided technical assistance with minimizing impacts to Candidate species and noted that “no effect” determinations by Federal action agencies (as were made for the Yuma clapper rail and yellow-billed cuckoo) do not require concurrence or further comments from the U.S. Fish and Wildlife Service (see pages 104 through 107 of the Biological Evaluation).</p>

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	<p>conducted in an area that have been reported to the HDMS managers; many observations and survey results are not reported and, therefore, are not included in the HDMS. Because of this, the HDMS does not provide a complete representation of species located in that area. This database can be a useful tool to determine presence of species, but it cannot be used to determine absence from an area. Other tools, such as HabiMap™, can help fill in gaps of what species may occur in an area based on habitat suitability, but this information should not be considered conclusive, either.</p>
63	<p>Has ADOT conducted any surveys in this area? This information was not discussed in the DEIS. In order to gain a better understanding of what species may be affected by this project, thorough surveys need to be conducted within the Study Area and surrounding landscape. Because some species may only be present or active during certain times of the day or year or may not be observed in a given year, it is important for these surveys to be conducted at different times of the day, in various seasons, and repeatedly through multiple years. For example, bats, most species of owls, and many small mammals are primarily nocturnal; many bird species are most active during early morning hours; and some species are crepuscular and are most active at dawn and dusk. Activity within these time periods also varies; for example, some bat species, such as the canyon bat (<i>Parastrellus hesperus</i>) is most active early in the evening, whereas other species emerge later in the night. Similarly, many migrating species are only present during certain times of the year, whereas others may not utilize the habitat every year.</p> <p>If any surveys have been conducted, what methods were used? Different methods are required to identify various species. For example, bats are best identified through mist-net and acoustic surveys, birds can be identified through point counts and playback surveys, small mammal surveys typically include live-trap methods, large mammal surveys can be conducted through trail cameras, etc. Incidental observations, although useful, are not a reliable survey method.</p>
64	<p>The DEIS does mention that “outside SMPP, few wildlife species were observed in the Study Area” (DEIS, p. 4-119). Were these incidental observations by project personnel or actual surveys? This statement underestimates the importance of areas outside of SMPP and the vital habitat they may provide. For example, GRIC lands provide relatively undisturbed areas, and agricultural fields support a large assemblage of wildlife species. ADOT should recognize the importance of all lands within the Study Area for wildlife habitat.</p> <p>The DEIS also does not discuss any sensitive plant species that may be present in the area. The DEIS indicates that two plant surveys occurred, one in 2003 and another in 2009 (DEIS, p. 4-117). How much of the area was surveyed? Also, ADOT notes that invasive species surveys have not been conducted due to the extent of the Study Area (DEIS, p. 4-119). We strongly recommend that surveys for sensitive plant species be conducted throughout the Study Area.</p> <p>Without a thorough understanding of what species occur in the Study Area and surrounding landscape, ADOT cannot predict possible impacts from this project. ADOT is instead acting on assumptions regarding species absence. Based on how little information is available to determine potential impacts to biological species, we recommend that the No Action Alternative be selected.</p> <p><i>v. Mitigation measures</i></p>

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63	Biological Resources	<p>General surveys in the Study Area have been conducted periodically beginning in 2003 and were referenced in the text of the <i>Biological Resources</i> section in both the Draft Environmental Impact Statement and the Final Environmental Impact Statement. Existing information on species occurrences in the Study Area was obtained from the Heritage Data Management System and through communication with Arizona Game and Fish Department, U.S. Fish and Wildlife Service, and City of Phoenix (see Section 8, Coordination section, page 29 in the Biological Evaluation and pages A124 through A140 in Appendix 1-1 of the Final Environmental Impact Statement). Incidental observations of species were noted during field studies; we agree that the lack of species observations during those general field surveys does not equate to absence of those species from the Study Area. Detailed surveys for particular species were not conducted prior to completion of the Final Environmental Impact Statement because the species and their locations may change in the period prior to initiation of construction of a selected action alternative; therefore, delaying the survey until closer to that time will provide a more effective and efficient use of limited taxpayer funds. Also, based on the habitat present and the species that are known to be associated with that habitat, the species that are of concern were identified and will be addressed during design.</p> <p>In addition, as noted on page 4-138 of the Final Environmental Impact Statement, during the design phase, the Arizona Department of Transportation Environmental Planning Group would coordinate with U.S. Fish and Wildlife Service, Arizona Game and Fish Department, and the Gila River Indian Community’s Department of Environmental Quality to determine the need for additional species-specific surveys and mitigation measures.</p> <p>A Biological Evaluation was completed in 2014 following identification of the Preferred Alternative in the Draft Environmental Impact Statement. The potential for the project to impact species protected under the Endangered Species Act, the list of Arizona Wildlife of Special Concern and HabiMap Species of Greatest Conservation Need was assessed in the Biological Evaluation and Final Environmental Impact Statement. The list of potentially present species was expanded in the Final Environmental Impact Statement and text was added to reflect that agricultural fields provide habitat for additional species (page 4-128 of the Final Environmental Impact Statement).</p>
64	Biological Resources	<p>As noted on page 4-136 of the Final Environmental Impact Statement, the magnitude of impacts associated with each of the action alternatives and options would be comparable because of their similar type and size of physical footprint on the land. In the Eastern Section of the Study Area, the E1 (Preferred) Alternative would have the greatest affect on plants because of the presence of undeveloped areas and open space land uses along the Phoenix South Mountain Park/Preserve and Gila River Indian Community boundaries—the areas with the most natural habitat.</p> <p>Page 4-127 of the Final Environmental Impact Statement discusses the Arizona Native Plant Act and protected plants species that might be affected. Construction of an action alternative would involve protected plant salvage in compliance with the Arizona Native Plant Act and development of an invasive species control plan to treat noxious and invasive plants occurring within the construction area.</p> <p>In addition, as noted on page 4-138 of the Final Environmental Impact Statement, during the design phase, the Arizona Department of Transportation Environmental Planning Group would coordinate with U.S. Fish and Wildlife Service, Arizona Game and Fish Department, and the Gila River Indian Community’s Department of Environmental Quality to determine the need for additional species-specific surveys and mitigation measures.</p>

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65	<p>Information provided in the DEIS about mitigation measures is insufficient. Very few details are provided, and it is difficult to understand how these measures will help minimize or avoid impacts to biological resources.</p> <p>As noted above, part of the purpose of an EIS is to provide full disclosure of potential impacts to resources as well as what and how mitigation measures will minimize or avoid these impacts. The mitigation measures mentioned on pages 4-126–4-127 do not provide this full disclosure. Instead, the limited information provided indicates that proposed measures will do little to mitigate negative impacts to biological resources.</p>
66	<p>ADOT mentions that “BMPs would be followed to serve as mitigation” (DEIS, p. 4-127). These BMPs are not explained in any further detail. Please provide detailed discussion about these BMPs and how they will be used to mitigate impacts to biological resources; ideally, discussion on mitigation of impacts for each key resource (e.g., individual species) should be provided. Also, please note that best management practices (BMPs) often do not qualify as mitigation without further enhancement and modification.</p>
67	<p>The DEIS states that impacts during operation of the proposed freeway would primarily be limited to wildlife-vehicle collisions and traffic noise (DEIS, p. 4-127). How was this determined? Further information about this is not provided in the DEIS, yet this claim should not be made without information to support it. Mitigation measures for this continued impact were not identified and discussed in the DEIS.</p>
68	<p>ADOT says that “mitigation measures presented throughout the chapter would be effective in avoiding, reducing, or otherwise mitigating impacts from action alternatives” (DEIS, p. 4-178). This is both presumptuous statement and erroneous. There is no guarantee that proposed measures will be effective. Given how little information has been provided in the DEIS about proposed mitigation, it is impossible to determine if measures will provide any mitigation. This statement needs to be revised.</p> <p>ADOT needs to reassess its proposed mitigation efforts and provide a detailed description of each as well as how these measures will affect biological resources as a whole and individually.</p> <p><i>vi. Threatened, Endangered, and Candidate species</i></p>
69	<p>A number of federally-listed species inhabit the Study Area and surrounding areas. The DEIS provides cursory discussion of some of these species and impacts from this project. We recommend that ADOT include all listed species that may occur in this area and further analyze potential impacts to each of these species. Suitable mitigation measures for each should then be identified.</p> <p>Has the USFWS been consulted regarding any of the listed species in the Study Area? ADOT should coordinate with USFWS to determine possible impacts and suitable mitigation measures.</p> <p>ADOT must also include impacts to listed species in the cumulative impacts analysis. Very little information is provided in this section regarding biological resources, much less threatened species. Effects of this freeway as well as surrounding development, climate change, and other past, present, and future activities must be analyzed. Without this information, the full impacts of this project cannot be understood.</p>

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65	Biological Resources	As noted on page 4-138 of the Final Environmental Impact Statement, during the design phase, the Arizona Department of Transportation Environmental Planning Group would coordinate with U.S. Fish and Wildlife Service, Arizona Game and Fish Department, and the Gila River Indian Community’s Department of Environmental Quality to determine the need for additional species-specific surveys and mitigation measures. The general level of potential impacts to biological resources and specific determinations of effect of the Preferred Alternative on species listed under the Endangered Species Act are disclosed in the Final Environmental Impact Statement.
66	Biological Resources	The discussion of best management practices was determined to be inappropriate for this section and was removed from the Final Environmental Impact Statement.
67	Biological Resources	Additional information regarding impacts related to operation of the proposed freeway may be found on pages 4-136 and 4-139 of the Final Environmental Impact Statement. This statement was revised on page 4-139 of the Final Environmental Impact Statement to read “During freeway operation the increase in traffic noise would be a long-term impact on wildlife that would vary in intensity depending on factors such as time of day and day of week. The long-term increase in traffic noise may affect the ability of some animals to avoid predators, communicate, and find food when near the proposed action. Impacts on biological resources during operation of the proposed freeway would also include vehicle-wildlife collisions and an increase in the effects of habitat fragmentation attributable to wildlife avoidance of activity associated with the freeway.”
68	Biological Resources	<p>The measures developed are reasonable approaches to addressing anticipated impacts. Mitigation measures are developed to document actions to avoid, reduce or mitigate impacts that are potentially substantial or to address regulatory requirements. A Biological Evaluation was completed in 2014 following identification of the Preferred Alternative in the Draft Environmental Impact Statement. The potential for the project to impact species protected under the Endangered Species Act, the list of Arizona Wildlife of Special Concern and Species of Greatest Conservation Need was assessed in the Biological Evaluation and Final Environmental Impact Statement. The U.S. Fish and Wildlife Service provided technical assistance with minimizing impacts to Candidate species and declined to comment on the “no effect” findings for the Yuma clapper rail and yellow-billed cuckoo (see pages 104 through 107 of the Biological Evaluation).</p> <p>As noted on page 4-138 of the Final Environmental Impact Statement, during the design phase, the Arizona Department of Transportation Environmental Planning Group would coordinate with U.S. Fish and Wildlife Service, Arizona Game and Fish Department, and the Gila River Indian Community’s Department of Environmental Quality to determine the need for additional species-specific surveys and mitigation measures.</p>
69	Biological Resources	<p>All listed threatened and endangered species and candidate species potentially occurring in Maricopa County are listed in Table 4-44 of the Final Environmental Impact Statement. The threatened, endangered, or candidate species that have been documented within a 3-mile radius of the action alternatives are discussed. A Biological Evaluation was completed in 2014 following identification of the Preferred Alternative in the Draft Environmental Impact Statement. The potential for the project to impact species protected under the Endangered Species Act, the</p>

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70	<p><i>a. Sonoran desert tortoise (Gopherus morafkai)</i></p> <p>We would first like to point out that the DEIS inaccurately represents this species. In June 2011, the Sonoran desert tortoise was listed as a separate species from the Mojave desert tortoise (<i>Gopherus agassizii</i>).⁵⁰ This distinct species is listed as a candidate under the Endangered Species Act. However, ADOT still categorizes this animal as a population rather than a distinct species. Please correct this mistake and reassess potential impacts with this information.</p> <p>Discussion of impacts to and proposed mitigation for the Sonoran desert tortoise is woefully lacking. HabiMap indicates that habitat for this species extends through much of the Study Area, yet ADOT assumes that impacts will only occur in the eastern section because this is where the species has been observed (e.g., p. 4-122). As noted above, absence of a species from an area cannot be easily determined, and ADOT should not rely only on the HDMS, limited-area surveys, or incidental sightings to determine specifically where species are present, especially considering that desert tortoises can be extremely difficult to locate due to their habits and the terrain in which they reside. ADOT needs to reassess the area in which this species could occur to include the full range of suitable habitat and needs to reanalyze potential impacts to the species throughout that area.</p> <p>Roads are a significant threat to desert tortoises. Their behaviors, including low mobility, low reproductive rates, and generally low density in an area make them extremely susceptible to road-induced effects. Numerous studies document the effects of roads on tortoise populations, which extend well beyond the width of the road and may extend beyond the Study Area, as defined in the DEIS.^{51,52}</p> <p>The DEIS significantly downplays potential impacts to this species. Some of the key threats to this species include urban development, roads and highways, non-native plant species, off-highway vehicles, barriers to dispersal and genetic exchange, illegal collection, predation from dogs, and human depredation and vandalism.⁵³ This project has the potential to exacerbate each of these threats, yet only a few of these threats are mentioned in the DEIS. For example, increased access to the tortoise’s habitat, including in SMPP, can be severely detrimental to this species. Increased human-tortoise interaction will result in illegal collection, intentional or accidental harm, vandalism and destruction of habitat, and increased risk of disease. Regarding the latter, Upper Respiratory Tract Disease is a key threat to desert tortoise species. It is one of the primary causes of decline for the Mojave desert tortoise and has also found to be prevalent in the Sonoran desert tortoise; human interaction is thought to be the primary way that this disease enters a wild population.⁵⁴ However, the DEIS does not mention disease, nor does it discuss impacts from increased human access to tortoise habitat.</p> <p>⁵⁰ Landis, B., and P. Laustsen. 2011. Genetic analysis splits desert tortoise into two species. U.S. Geological Survey. Available online at http://www.usgs.gov/newsroom/article.asp?ID=2842&from=rss_home#Ue2_9knn-M8.</p> <p>⁵¹ Boarman, W.I., and M. Sazaki. 2006. A highway’s road-effect zone for desert tortoises (<i>Gopherus agassizii</i>). <i>Journal of Arid Environments</i> 65 (2006):94–101.</p> <p>⁵² Nicholson, L. 1979. The effects of roads on desert tortoise populations. <i>Proceedings of the Desert Tortoise Council Symposium</i> 1978:127–129. <i>Conservation Biology</i> 16:1647–1652.</p> <p>⁵³ U.S. Fish and Wildlife Service. 2012 Sonoran desert tortoise (<i>Gopherus morafkai</i>) fact sheet. Available online at http://www.fws.gov/southwest/es/arizona/Documents/Redbook/Sonoran%20Tortoise%20RB.pdf.</p> <p>⁵⁴ Endangered and Threatened Wildlife and Plants; 12-Month Finding on a Petition to List the Sonoran Population of the Desert Tortoise as Endangered or Threatened; Proposed Rule. <i>Federal Register</i>, Vol. 75, No. 239. 14 December 2010. Pp. 78093–78146.</p>

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69 (cont.)		<p>list of Arizona Wildlife of Special Concern and Species of Greatest Conservation Need was assessed in the Biological Evaluation and Final Environmental Impact Statement. The U.S. Fish and Wildlife Service provided technical assistance with minimizing impacts on two Candidate species and declined to comment on the “no effect” findings for the Yuma clapper rail and yellow-billed cuckoo (see pages 104 through 107 of the Biological Evaluation). The recommendations from U.S. Fish and Wildlife Service have been incorporated into the mitigation measures in the Final Environmental Impact Statement and would be implemented in development of detailed mitigation measures during the project design phase. As noted on page 4-138 of the Final Environmental Impact Statement, during the design phase, the Arizona Department of Transportation Environmental Planning Group would coordinate with U.S. Fish and Wildlife Service, Arizona Game and Fish Department, and the Gila River Indian Community’s Department of Environmental Quality to determine the need for additional species-specific surveys and mitigation measures.</p> <p>The Biological Evaluation also discusses the cumulative impacts to protected species. Cumulative impacts on biological resources are discussed beginning on page 4-183 of the Final Environmental Impact Statement.</p>
70	Biological Resources	<p>The taxonomic nomenclature for the Sonoran desert tortoise (<i>Gopherus morafkai</i>, was updated in the Final Environmental Impact Statement and the Biological Evaluation that was submitted to the U.S. Fish and Wildlife Service in 2014.</p> <p>The Biological Evaluation for the preferred action alternative included an assessment of the potential for impacts to the Sonoran desert tortoise, including use of the modeled suitable habitat within the preferred action alternative footprint based on HabiMap (see Figures 2 and 3, pages 4 and 5 in the Biological Evaluation). HabiMap indicates that there is potential habitat within the E1 Alternative corridor, both along the existing Pecos Road portion and at the southwest end of the South Mountains. The majority of the Study Area does not contain the elements of suitable habitat for this species. Direct coordination with Arizona Game and Fish Department personnel and tortoise biologists in 2011 and 2014, respectively, confirm that tortoises have been observed in the Phoenix South Mountain Park/Preserve, as noted on page 18 of the Biological Evaluation. As noted on page 4-138 of the Final Environmental Impact Statement and page 28 of the Biological Evaluation, during the design phase, surveys for Sonoran desert tortoises would be conducted and mitigation to avoid and minimize impacts to the Sonoran desert tortoise would be developed in coordination with the Arizona Game and Fish Department, Gila River Indian Community Department of Environmental Quality, and U.S. Fish and Wildlife Service. As noted in earlier responses, wildlife crossing opportunities will also be developed in conjunction with these partners during the design phase of the project. In response to the Biological Evaluation, the U.S. Fish and Wildlife Service provided technical assistance for minimizing impacts to the Sonoran Desert Tortoise which were incorporated into the Biological Evaluation and the Final Environmental Impact Statement (see pages 104 through 107 of the Biological Evaluation).</p> <p>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’s potential implementation.</p>

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71	<p>Additionally, mortality from vehicle collisions is a serious threat. The above referenced studies indicate that tortoise populations within 400m of a roadway are depressed, likely due in large part to collisions with vehicles.⁵⁵ Intentional collisions have also been documented and researched between vehicles and reptiles, including desert tortoises.⁵⁶ The DEIS mentions this threat but does not adequately analyze it, nor does ADOT identify any suitable mitigation efforts.</p> <p>This project, as a result of habitat loss and fragmentation, increased human access, and the other threats listed above, jeopardizes the population of tortoises within and surrounding the Study Area. ADOT must reassess potential impacts to this species.</p> <p>Suitable mitigation measures to minimize threats to this species were not identified. In fact, the only mitigation measure identified in the DEIS is to properly handle a tortoise if one is encountered during construction. This measure will do very little to mitigate negative impacts to this species as a result of this project. It may only help prevent some individuals from being crushed during construction. Additional mitigation measures should include surveys to identify suitable tortoise habitat and areas to avoid, pre-construction surveys to identify any tortoises within the path that construction will occur that day, having a qualified biologist on site during construction (in all areas where construction occurs, enforcement of speed limits on project routes during construction, appropriate crossing structures for tortoise movement and habitat connectivity, and tortoise-specific fencing to funnel tortoises into the crossing structures. Please refer to the <i>Recommended Standard Mitigation Measures for Projects in Sonoran Desert Tortoise Habitat</i>⁵⁷ for further information about these and additional measures. ADOT should also coordinate with AGFD to determine what crossing structures are suitable for tortoises, the recommended locations and spacing for these structures, and suitable funnel-fencing.</p> <p>b. Yuma clapper rail (<i>Rallus longirostris yumanensis</i>)</p> <p>The Yuma clapper rail is listed as endangered under the Endangered Species Act. As such, any projects or activities that have the potential to adversely affect this species should be avoided or should be properly mitigated. ADOT has not properly addressed potential impacts to this species, nor has it proposed suitable mitigation efforts.</p> <p>Has the USFWS been consulted regarding this species? Has a Biological Opinion been written? If so, this information should have been included in the DEIS. If not, this consultation should have occurred prior to drafting the DEIS in order to incorporate accurate and useful information.</p> <p>Key threats to the Yuma clapper rail include habitat loss, reduction in connectivity between core habitat areas, land use changes in floodplains and riparian areas, environmental contaminants, and human activities.⁵⁸ This project has the potential to exacerbate each of</p> <p>⁵⁵ Boarman and Sazaki (2006) and Nicholson (1979) ⁵⁶ Ashley, E.P., A. Kosloski, and S.A. Petrie. 2007. Incidence of intentional vehicle-reptile collision. <i>Human Dimensions of Wildlife</i> 12:137–143. ⁵⁷ Arizona Interagency Desert Tortoise Team. 2008. Recommended Standard Mitigation Measures for Projects in Sonoran Desert Tortoise Habitat. Available online at http://www.azgfd.gov/pdfs/w_c/tortoise/MitigationMeasures.pdf. ⁵⁸ U.S. Fish and Wildlife Service. 2009. Yuma Clapper Rail (<i>Rallus longirostris yumanensis</i>) Recovery Plan. Draft First Revision. U.S. Fish and Wildlife Service, Southwest Region, Albuquerque, New Mexico.</p>

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71	Biological Resources	<p>The Yuma clapper rail is addressed in both the Draft and Final Environmental Impact Statement as an endangered species (see page 4-133 of the Final Environmental Impact Statement).</p> <p>A Biological Evaluation was completed in 2014 following identification of the Preferred Alternative in the Draft Environmental Impact Statement. The potential for the project to impact species protected under the Endangered Species Act, the list of Arizona Wildlife of Special Concern, and Species of Greatest Conservation Need was assessed in the Biological Evaluation and Final Environmental Impact Statement. In the Biological Evaluation, the determination was made that the project would have no effect on the Yuma clapper rail. The U.S. Fish and Wildlife Service declined to comment on the “no effect” findings in the report (see pages 104 through 107 of the Biological Evaluation).</p> <p>While there is suitable habitat for the Yuma clapper rail in the Study Area, no suitable habitat was identified within or adjacent to the anticipated right-of-way for any of the action alternatives. This discrepancy was corrected in the Final Environmental Impact Statement on page 4-137.</p> <p>As noted on page 4-138 of the Final Environmental Impact Statement, during the design phase, the Arizona Department of Transportation Environmental Planning Group would coordinate with U.S. Fish and Wildlife Service, Arizona Game and Fish Department, and the Gila River Indian Community’s Department of Environmental Quality to determine the need for additional species-specific surveys and mitigation measures.</p> <p>If conditions change over time and suitable habitat for the Yuma clapper rail were to become established within the right-of-way of or immediately adjacent to a Preferred Alternative—should it be an action alternative—surveys would be completed and, if appropriate, consultation with the U.S. Fish and Wildlife Service would occur, per the mitigation measure on page 4-138 of the Final Environmental Impact Statement. That measure states that within 90 days of each phase of construction of the project, there would be a review to determine if the potential effects of the project on species or critical habitat have changed, and if so, an update to the Biological Evaluation would be prepared and any required consultation with U.S. Fish and Wildlife Service would be completed.</p>

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	<p>these threats, yet no discussion about these is provided in the DEIS. This is a serious oversight and should be amended.</p> <p>The DEIS states that breeding pairs have been documented at the 91st Ave. Wastewater Treatment Plant, which is within the Study Area. However, within the same paragraph, it then goes on to say that suitable habitat for foraging and nesting does not occur (p. 4-122). This is a direct contradiction and needs to be amended. If breeding pairs have been located within the Study Area, then, obviously, suitable habitat occurs, and impacts to this habitat and to the species must be addressed. Similarly, the DEIS states that the future of the gravel mining pits, which provide habitat for this species, is uncertain. Regardless of whether or not the future of these gravel pits is certain, ADOT must assess impacts to this habitat and associated impacts to the species.</p> <p>HabiMap shows that suitable habitat for the Yuma clapper rail exists through much of the western portion of the Study Area, including on the Salt and Gila rivers. . ADOT should assess impacts to this species based on potential habitat, rather than on known presence. As noted above, absence of a species from an area is not easily determined. Just because Yuma clapper rails have not been identified in the Study Area outside of the 91st Ave. WWTP does not mean that they do not occur in additional areas. Additionally, the Rio Salado Oeste project might create suitable habitat for this species within the Study Area that would be crossed by alternatives in the western section. ADOT must reassess impacts to this species utilizing the whole range of suitable habitat within the Study Area and operating under the assumption that the Rio Salado Oeste project will create suitable habitat. It should also conduct surveys to better determine presence of the species within the Study Area. Any areas in which the rail is found should be avoided.</p> <p>The DEIS states that this species “would not be affected by construction activities or freeway operations” (p. 4-124). However, no information is provided as to how this determination was reached. Based on the fact that rails have been observed in the Study Area and that suitable habitat exists, the opposite could be assumed. Similarly, the statement that “the proposed project would not affect the Yuma clapper rail or its habitat because no suitable habitat exists in the Study Area” is clearly erroneous. ADOT must correct these statements and must analyze impacts to this species. If suitable mitigation measures cannot be identified to avoid impacts to this species, the No Action Alternative should be selected.</p> <p><i>c. Yellow-billed cuckoo (Coccyzus americanus)</i></p> <p>The yellow-billed cuckoo is listed as a candidate species under the Endangered Species Act. As with the Yuma clapper rail, suitable habitat for this species exists in portions of the western section of the Study Area along the Salt and Gila rivers, according to HabiMap. In addition, this species has been observed along the Salt River. Earlier this year, one was observed in the Rio Salado Habitat Restoration Area,⁵⁹ although outside of the Study Area, this indicates that the species may be expanding its occupancy within the available habitat or that individuals have occurred in areas where they were not previously detected.</p> <p>⁵⁹ Personal communication, Audubon staff.</p>

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72	Biological Resources	<p>The yellow-billed cuckoo is addressed in both the Draft and Final Environmental Impact Statement as a candidate species (see page 4-133 of the Final Environmental Impact Statement). Although HabiMap is a useful tool and was accessed during the study, species habitat layers are based on modeling and indicates potential, not verified habitat, as much of the Study Area does not contain the elements of suitable habitat for this species.</p> <p>A Biological Evaluation was completed in 2014 following identification of the Preferred Alternative in the Draft Environmental Impact Statement. The potential for the project to impact species protected under the Endangered Species Act, the list of Arizona Wildlife of Special Concern and Species of Greatest Conservation Need was assessed in the Biological Evaluation and Final Environmental Impact Statement. In the Biological Evaluation, the determination was made that the project would have no effect on the yellow-billed cuckoo. The U.S. Fish and Wildlife Service declined to comment on the “no effect” finding for the yellow-billed cuckoo since “no effect” determinations by Federal action agencies do not require concurrence or further comments from the U.S. Fish and Wildlife Service (see pages 104 through 107 of the Biological Evaluation).</p> <p>While there may be suitable habitat for the yellow-billed cuckoo in the Study Area no suitable habitat was identified within or immediately adjacent to any action alternative alignment at the time the study was completed. This discrepancy was corrected in the Final Environmental Impact Statement on page 4-137.</p> <p>As noted on page 4-138 of the Final Environmental Impact Statement, during the design phase, the Arizona Department of Transportation Environmental Planning Group would coordinate with U.S. Fish and Wildlife Service, Arizona Game and Fish Department, and the Gila River Indian Community’s Department of Environmental Quality to determine the need for additional species-specific surveys and mitigation measures.</p> <p>If conditions change over time and suitable habitat for the yellow-billed cuckoo were to become established within the right-of-way of or immediately adjacent to a Preferred Alternative—should it be an action alternative—surveys would be completed and, if appropriate, consultation with the U.S. Fish and Wildlife Service would occur, per the mitigation measure on page 4-138 of the Final Environmental Impact Statement., That measure states that within 90 days of each phase of construction of the project, there would be a review to determine if the potential effects of the project on species or critical habitat have changed, and if so, an update to the Biological Evaluation would be prepared and any required consultation with U.S. Fish and Wildlife Service would be completed.</p>

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73	<p>Threats to this species are similar to those of the Yuma clapper rail and include loss, degradation, and fragmentation of habitat.⁶⁰ This project will further degrade and fragment suitable habitat for the species, yet these impacts are not discussed in the DEIS. Instead, the DEIS states that “the proposed action would not affect the yellow-billed cuckoo or its habitat because insufficient suitable habitat exists in or adjacent to the Study Area” (p. 4-126). However, based on the information provided above, this statement is incorrect. Suitable habitat occurs not only within the Study Area but also adjacent to it. The DEIS also states that this species “would not be affected by construction activities or freeway operations” (p. 4-124). As with the Yuma clapper rail, no further information is provided to support this statement.</p> <p>ADOT should re-evaluate impacts to this species based on potential and known habitat both within and adjacent to the Study Area. If suitable mitigation measures cannot be identified to avoid impacts to this species, the No Action Alternative should be selected.</p> <p>d. Tucson shovel-nosed snake (<i>Chionactis occipitalis klauberi</i>)</p> <p>The Tucson shovel-nosed snake is listed as a candidate species under the Endangered Species Act. The DEIS states that suitable habitat for this species does not occur within the Study Area. However, this statement is clearly inaccurate. Not only does HabiMap show suitable habitat throughout significant portions of the Study Area, but the species has been documented in areas surrounding SMPP and the Study Area.^{61,62}</p> <p>Key threats to this species include habitat loss and fragmentation due to development and road construction, use, and maintenance.⁶³ The proposed project would clearly exacerbate these threats and could jeopardize populations of this species. Also, as discussed with the Sonoran desert tortoise above, vehicle-snake collisions, both intentional and accidental, are a significant concern.</p> <p>ADOT must assess impacts to the Tucson shovel-nosed snake and identify suitable mitigation measures to avoid these impacts. Surveys should also be conducted to determine presence of the species throughout suitable habitat within and adjacent to the Study Area. If suitable mitigation is not determined, the No Action Alternative should be selected.</p> <p>e. Sprague’s pipit (<i>Anthus spragueii</i>)</p> <p>Sprague’s pipit is listed as a candidate species under the Endangered Species Act. The DEIS states that wintering individuals have been observed near Phoenix, and HabiMap indicates that patches of suitable habitat occur in the western portion of the Study Area. However, impacts to this species were not discussed. Although breeding birds have not been located in the Study Area, impacts to wintering birds could affect the species and local populations. ADOT should not only focus on species that are known to breed here.</p> <p>⁶⁰ U.S. Fish and Wildlife Service. 2001. Yellow-billed cuckoo (<i>Coccyzus americanus</i>) fact sheet. Available online at http://www.fws.gov/southwest/es/arizona/Documents/Redbook/Yellow-Billed%20Cuckoo%20RB.pdf</p> <p>⁶¹ U.S. Fish and Wildlife Service. 2010. Tucson shovel-nosed snake (<i>Chionactis occipitalis klauberi</i>) fact sheet. Available online at http://www.fws.gov/southwest/es/arizona/Documents/Redbook/Tucson%20ShovelNosed%20Snake%20RB.pdf.</p> <p>⁶² AGFD staff, personal communication.</p> <p>⁶³ USFWS (2010)</p>
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73	Biological Resources	<p>The Tucson shovel-nosed snake was included in the Final Environmental Impact Statement as a Candidate species (see page 4-135 of the Final Environmental Impact Statement).</p> <p>A Biological Evaluation was completed in 2014 following identification of the Preferred Alternative in the Draft Environmental Impact Statement. The potential for the project to impact species protected under the Endangered Species Act, the list of Arizona Wildlife of Special Concern and Species of Greatest Conservation Need was assessed in the Biological Evaluation and Final Environmental Impact Statement. In response to the Biological Evaluation, the U.S. Fish and Wildlife Service provided technical assistance for minimizing impacts to the Tucson shovel-nosed snake (see pages 104 through 107 of the Biological Evaluation).</p> <p>Wildlife-friendly design information would be considered during the design of the drainage and crossing structures for the freeway (see <i>Mitigation</i>, beginning on page 4-138 of the Final Environmental Impact Statement). Also, noted on page 4-138 of the Final Environmental Impact Statement, during the design phase, the Arizona Department of Transportation Environmental Planning Group would coordinate with U.S. Fish and Wildlife Service, Arizona Game and Fish Department, and the Gila River Indian Community’s Department of Environmental Quality to determine the need for additional species-specific surveys and mitigation measures.</p>
74	Biological Resources	<p>Although Habimap is a useful tool and was accessed to address the Sprague’s pipit, the habitat information is based on modeling and indicates potential, not verified habitat. The vast majority of the habitat shown on Habimap for this species, relative to the project, is currently developed. Wintering habitat can include any agricultural field that attracts the species. Agricultural practices often change from year to year and the particular use of those fields for farming cannot be predicted nor can the use of those fields by the Sprague’s pipit. According to the U.S. Fish and Wildlife Service species abstract, the main wintering areas for Sprague’s pipits are grasslands in San Rafael, Sonoita, and Sulphur Springs Valley in southeastern Arizona; a few individuals have been found in grass and alfalfa fields near Phoenix and Sierra Vista. The majority of the remaining private agricultural fields in the western portion of the Study Area are already planned for development whether or not the project is constructed (see Figure 4-4, page 4-8 and Figure 4-8, page 4-10 of the Final Environmental Impact Statement). Based on an assessment of the very limited species’ occurrence in Maricopa County, the changing use of agricultural fields, and the constantly diminishing habitat in the Study Area, detailed analysis of this species is not warranted. The project is not expected to affect the species.</p>

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	<p>Development, introduced plant species, and habitat fragmentation are key threats to this species.⁶⁴ This project has the potential to exacerbate each of these threats. ADOT must assess impacts to this species and identify suitable mitigation measures to avoid these impacts. Surveys should also be conducted to determine presence of the species throughout suitable habitat within and adjacent to the Study Area. If suitable mitigation is not determined, the No Action Alternative should be selected.</p> <p>vii. Other Species of Concern</p> <p>75 We are disappointed that ADOT only chose to provide information about a small assemblage of species found in the area and did not include adequate or any information about other federally-listed species (e.g., Bureau of Land Management’s sensitive species) or state-listed species (i.e., Arizona’s Species of Greatest Conservation Need). A large diversity of such species occurs in the Study Area; lists can be obtained from each agency. These species have been identified as having declining populations or in need of special consideration and conservation efforts. We recommend that ADOT consider and analyze impacts to these species as a result of this project. Without this information, it cannot determine impacts to biological resources and should select the No Action Alternative.</p> <p>76 a. Burrowing owl (<i>Athene cunicularia hypugea</i>)</p> <p>We appreciate that ADOT provided some mitigation measures to minimize negative impacts to the burrowing owl. We are curious why detailed mitigation efforts are described in the DEIS for this species but not for others. Similar mitigation efforts should be proposed for all species known or with the potential to occur in the Study Area.</p> <p>77 b. Bald and golden eagles (<i>Haliaeetus leucocephalus</i> and <i>Aquila chrysaetos</i>)</p> <p>Bald eagles are known to occur within and adjacent to the Study Area. As the DEIS states, both wintering and breeding individuals have been observed, and nests have been located within the Study Area. HabiMap indicates that suitable habitat for this species occurs through much of the western portion of the project as well as adjacent to the eastern portion. The DEIS indicates that the project may affect foraging behaviors of this species (pp. 4-124–4-125), yet no mitigation measures are offered. Instead, ADOT assumes that the project will not affect this species (p. 4-126) as a known nest will not be affected. However, impacts to foraging habitat could adversely affect this species and the success of nearby nests. Any removal or disturbance of riparian habitat could threaten local populations of this species. ADOT needs to further analyze potential impacts to bald eagles and determine suitable mitigation measures.</p> <p>We would like clarification on a statement in the DEIS: On p. 4-124, it’s noted that the Salt River provides foraging habitat for the bald eagle; however, the river is typically dry upstream from the action alternatives, according to a June 8, 2012, aerial photo. How can it be determined that the Salt River is typically dry based on one photo? One point in time does not translate into “typical.” We would appreciate more information about this statement or for it to be amended or removed.</p> <p>⁶⁴ Jones, S.L. 2010. Sprague’s pipit (<i>Anthus spragueii</i>) conservation plan. U.S. Department of Interior, Fish and Wildlife Service, Washington, D.C.</p>

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75	Biological Resources	Wildlife of Special Concern and Species of Greatest Conservation Need that have the potential to occur in the Study Area have been added to Table 4-43 that begins on page 4-129 of the Final Environmental Impact Statement. These species were also addressed in the Biological Evaluation that was submitted to the U.S. Fish and Wildlife Service, Arizona Game and Fish Department, and Gila River Indian Community Department of Environmental Quality which has been released as a supporting technical document to the Final Environmental Impact Statement).
76	Biological Resources	The burrowing owl is a species protected species under the Migratory Bird Treat Act that commonly occurs near roadsides and agricultural land in urban, suburban and rural areas. As such, the state has developed a general protocol for avoiding or minimizing impacts to burrowing owls during construction projects. The burrowing owl measures are broad enough to apply to most construction situations and have been generally agreed upon by the U.S. Fish and Wildlife Service, Arizona Game and Fish Department, and Gila River Indian Community Department of Environmental Quality. Measures to avoid and minimize impacts to other species will be developed in concert with the project design and construction approach to be both protective of the species and efficient in terms of cost and resources. As noted on page 4-138 of the Final Environmental Impact Statement, during the design phase, the Arizona Department of Transportation Environmental Planning Group would coordinate with U.S. Fish and Wildlife Service, Arizona Game and Fish Department, and the Gila River Indian Community’s Department of Environmental Quality to determine the need for additional species-specific surveys and mitigation measures.
77	Biological Resources	Additional information characterizing the riparian habitat present within the Study Area was added to the Final Environmental Impact Statement and can be found on pages 4-126 through 4-128. The golden eagle was added to Table 4-43 on page 4-129 and a brief assessment appears on page 4-136 of the Final Environmental Impact Statement. It is considered an unlikely visitor to the Study Area, although it is known to be more frequently present south of the Study Area. The bald eagle information has been updated based on comments received on the Draft Environmental Impact Statement and may be found on page 4-136 of the Final Environmental Impact Statement; however, the discussion of impacts resulting from the action alternatives is largely unchanged from page 4-124 of the Draft Environmental Impact Statement. Namely, although the action alternatives are not expected to affect the nesting activities of these eagles because of the project’s distance from the nest, the project may affect their foraging behavior along the Salt River when foraging opportunities exist near action alternatives. No mitigation measures are proposed for bald and golden eagles because we have determined that the project would not result in take of either type of eagle as defined under the Bald and Golden Eagle Protection Act, as stated on page 4-136 in the Final Environmental Impact Statement. While small areas of intermittently available foraging habitat for the bald eagle may be impacted during construction, the main foraging locations for the local bald eagles are located in more developed riparian areas outside of the Study Area. The impact from the project on bald and golden eagle foraging opportunities would be negligible and there would be no impact to nesting areas (see Biological Evaluation).

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78	<p>We are curious why golden eagles were not mentioned in the DEIS. HabiMap shows that a significant portion of the Study Area is suitable for golden eagles. No documented nests for this species have been observed in the Study Area, but this is likely due to the fact that targeted surveys have not been completed.⁶⁵ Golden eagles are listed on the Rio Salado Habitat Restoration Area’s bird list;⁶⁶ although outside the Study Area, this indicates that they can be found nearby. Incidental observations within SMPP and adjacent areas have been reported by the public on various blogs and trip reports; although these have not been confirmed, ADOT should consider the possibility that this species occurs in the Study Area. Impacts to this species should be assessed.</p> <p><i>c. Bat species</i></p> <p>The DEIS indicates that three bat species listed on Arizona’s Wildlife of Special Concern may occur in the Study Area: the California leaf-nosed bat (<i>Macrotus californicus</i>), Western red bat (<i>Lasiurus blossevillii</i>), and Western yellow bat (<i>Lasiurus xanthinus</i>). However, impacts to these species are not discussed, and no mitigation measures are provided.</p> <p>ADOT should determine potential impacts to these species as well as to other bat species that may occur in and adjacent to the Study Area. SMPP likely provides suitable habitat for various bat species in caves, rock crevices, and vegetation, and areas external to the park could also provide roosting and foraging habitat. Surveys should be completed to determine presence of species in the area and to better understand possible effects from the freeway.</p> <p>ADOT should also identify suitable mitigation measures for bat species, including incorporation of appropriate roosting structures on all bridges.</p> <p><i>d. Other sensitive species</i></p> <p>Very little consideration was given to other sensitive species in the DEIS. For example, only one species from Table 4-44 (pp. 4-120–4-121), which only includes Arizona Wildlife of Special Concern, as determined by AGFD, is discussed within the text of the document. Other species on this list that are known to or could occur in the project area are not discussed, nor are species from other sensitive-species lists included. This greatly underestimates potential impacts to biological resources. ADOT should consider impacts to all sensitive and special-status species.</p> <p>An example of the above is the Bendire’s thrasher (<i>Toxostoma bendirei</i>). This species is on a number of lists identifying it as a species of interest and conservation need (e.g., USFWS Birds of Management Concern⁶⁷). This species has been observed in SMPP, GRIC lands, and other areas adjacent to the Study Area and may be found within the Study Area.⁶⁸</p> <p>⁶⁵ AGFD staff, personal communication. ⁶⁶ City of Phoenix Parks and Recreation. Birds of Rio Salado Checklist. Available online at http://phoenix.gov/webcms/groups/internt/@inter/@dept/@parks/documents/web_content/d_031715.pdf. Accessed 22 July 2013. ⁶⁷ U.S. Fish and Wildlife Service. Birds of Management Concern. Available online at http://www.fws.gov/migratorybirds/NewReportsPublications/SpecialTopics/BirdsofManagementConcern09%5B1%5D.pdf. Accessed 22 July 2013. ⁶⁸ AGFD staff, personal communication.</p>
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78	Biological Resources	<p>Table 4-44 of the Draft Environmental Impact Statement indicates that these bat species may occur throughout the Study Area; this was updated to “likely” to occur in the Final Environmental Impact Statement (see Table 4-43 on pages 4-129 to 4-132). Surveys of the project area for Sonoran desert tortoise and other sensitive species would be conducted during the design phase if an action alternative is selected. If there are indications of bat roosting, appropriate methods for additional characterization of the species present and measures to avoid or minimize impacts will be developed in coordination with Arizona Game and Fish Department, Gila River Indian Community Department of Environmental Quality and the U.S. Fish and Wildlife Service (see <i>Mitigation</i>, beginning on page 4-138 of the Final Environmental Impact Statement).</p> <p>Designing bridges specifically to provide bat habitat is not a standard accommodation that the Arizona Department of Transportation currently provides as the challenges and costs of managing future bridge maintenance activities that have the potential to disturb roosting bats have not been resolved.</p>
79	Biological Resources	<p>Although Wildlife of Special Concern and Species of Greatest Conservation Need that have the potential to occur in the Study Area have been addressed in Table 4-43 which begins on page 4-129 of the Final Environmental Impact Statement, Bendire’s thrasher does not appear on either list. Species such as the Bendire’s thrasher, although uncommon but not rare, is listed as “apparently secure” in the state. The section <i>General Impacts on Vegetation, Wildlife, and Wildlife Habitat</i>, beginning on page 4-136, discusses the potential effects of the proposed action and its alternatives on vegetation, wildlife, and wildlife habitat. These species were also addressed in a Biological Evaluation that was submitted to the U.S. Fish and Wildlife Service, Arizona Game and Fish Department, and Gila River Indian Community Department of Environmental Quality and made available as a supporting document to the Final Environmental Impact Statement.</p> <p>The mitigation measures for nesting birds, that would include Bendire’s thrasher, have been changed in the Final Environmental Impact Statement. As noted on page 4-139 of the Final Environmental Impact Statement, if clearing, grubbing, or pruning of trees, shrubs, or cacti would occur between March 1 and August 31, a qualified biologist would conduct a bird nest search of all vegetation that would be cleared or pruned within 5 calendar days prior to vegetation clearing/pruning. If an active nest or nest cavity/hole of birds protected by the Migratory Bird Treaty Act were observed, the vegetation clearing/ pruning would be delayed in the immediate vicinity until the nest is no longer active or a relocation permit would be obtained from U.S. Fish and Wildlife Service by the contractor. The intent of this wording is to encourage vegetation removal to occur outside of the nesting season while allowing enough flexibility that there is a method to allow vegetation removal in compliance with the Migratory Bird Treaty Act if an unanticipated need to remove vegetation arises during the breeding season.</p>

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	<p>The DEIS states that nesting birds may be impacted by noise and other activity during construction (p. 4-125). However, it also indicates that construction would be scheduled and performed in order to avoid breeding seasons of migratory birds, if necessary (p. 4-127). Avoidance of the breeding season is critical and should be a mandatory mitigation measure. Removing nests should not be considered a viable mitigation measure, nor should permits from USFWS be considered suitable mitigation (p. 4-127).</p> <p>ADOT should conduct surveys for other sensitive species within and adjacent to the Study area and analyze potential impacts to these species. Without this information, the full impacts of this project cannot be understood.</p> <p>viii. Rio Salado Oeste project</p> <p>The Rio Salado Oeste project has the potential to significantly restore riparian habitat that is important for a diversity of species. Based on the success of the Rio Salado Habitat Restoration Area along the Salt River south of downtown Phoenix, the restored landscape has the potential to attract and support numerous wildlife species, including sensitive and listed species such as Yuma clapper rail and yellow-billed cuckoos (discussed in the DEIS) and Southwestern willow flycatchers (<i>Empidonax traillii extimus</i>; not addressed in DEIS).</p> <p>ADOT did not adequately represent the importance of the Rio Salado Oeste project to wildlife, nor did it evaluate potential impacts to this area and the species it could support as a result of the proposed freeway. Additionally, as this area is BLM land, impacts to BLM sensitive species should be determined and suitable mitigation identified.</p> <p>ix. Invasive Plant Species</p> <p>Invasive plant species pose a serious threat to biological resources. Non-native invasive species compete with and choke out native vegetation, alter habitat required for wildlife and other resources, increase prevalence of non-native animal species, escalate fire incidence and severity, and more. Studies have found that approximately 42% of federally-listed species are at risk primarily because of non-native plant invasion. Additionally, non-native and invasive species are extremely costly to society.^{69,70,71}</p> <p>Very little information is provided about invasive plant species in the Study Area. Surveys for these species have not been conducted (DEIS, p. 4-119), so ADOT has little understanding of what species are already present and how this project could affect their dispersal. Mitigation is offered in the form of an invasive species management plan (DEIS, p. 4-119), but little information about this plan is provided. This plan should have been included in the DEIS for public review.</p> <p>x. Climate Change</p>
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<p>⁶⁹ Mooney, H.A., and E.E. Cleland. 2001. The evolutionary impact of native species. Proceedings of the National Academy of Sciences of the United States of America 98(10):5446–5451.</p> <p>⁷⁰ Pimentel, D., R. Zuniga, and D. Morrison. 2005. Update on the environmental and economic costs associated with alien-invasive species in the United States. Ecological Economics 52(3):273–288.</p> <p>⁷¹ Vilà, M., and J. Weiner. 2004. Are invasive plant species better competitors than native plant species? – evidence from pair-wise experiments. Oikos 105(2):229–238.</p>	

Code	Issue	Response
80	Biological Resources	<p>As noted on page 4-15 of the Draft Environmental Impact Statement, the City of Phoenix is aware of, has planned for, and has incorporated the proposed South Mountain Freeway in the City of Phoenix General Plan and in conceptual plans for the Rio Salado Oeste project (see concurrence letters with attached Project Features Maps in Appendix 4-8, pages A697 through A701, of the Final Environmental Impact Statement). As noted on page 4-15 of the Draft Environmental Impact Statement and as agreed upon by the Bureau of Land Management, U.S. Army Corps of Engineers, and City of Phoenix, the project team would continue to consult with those entities to coordinate design efforts to minimize impacts on the proposed uses of the Rio Salado Oeste project (see Appendix 4-8 beginning on pages A695 of the Final Environmental Impact Statement).</p> <p>The Bureau of Land Management was included in the agency scoping process and did not request analysis of any additional special status species. The Bureau of Land Management species that were included in the Final Environmental Impact Statement (see pages 4-130 and 4-135) and the Biological Evaluation includes the western burrowing owl, bald eagle, and Sonoran desert tortoise.</p>
81	Biological Resources	<p>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 would be conducted during the design phase if an action alternative is selected. 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 of the species and locations of invasive plants is likely to change in the period prior to initiation of construction of a selected Action Alternative, 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.</p>

Code	Comment Document
82	<p>ADOT did not provide any consideration for climate change within the DEIS, including in the cumulative impacts section. Climate change and cumulative impacts are closely related.⁷² Because climate change is reasonably foreseeable and may have very significant impacts on the resources discussed in the DEIS, discussion of its potential impacts should have been included.</p> <p>Although changes to the ecosystem and the implications for the resources these areas support are not well understood, it is imperative to incorporate climate change in planning decisions.⁷³ By excluding factors such as climate change from the cumulative impacts analysis, ADOT has significantly underestimated the potential impacts of this project on biological resources.</p> <p>I. Cultural Resources (DEIS, p. 4-128)</p> <p>As noted in the DEIS, the South Mountains (<i>Muhadagi Doag</i>) are significant to numerous Native American communities, including the Akimel O’odam and Pee Posh tribes. In addition to the value of the area as a park and recreation area, it has been recognized as a Traditional Cultural Property (TCP) under Section 4(f) of the National Historic Preservation Act (16 U.S.C. §470). Siting a freeway through the South Mountains will have an irreversible impact on the TCP and the archaeological and historic resources of the park. The DEIS does not provide suitable acknowledgement of this fact.</p> <p>J. Hazardous Materials (DEIS, p. 4-152)</p> <p>As noted in the DEIS, all action alternatives on the west side would have implications relative to hazardous materials and the Preferred Alternative would have the biggest impact. One thing not adequately addressed in the DEIS was the potential for trucks carrying hazardous materials through this area and its implications and impacts on residents. Considering that the Deck Park Tunnel is closed to hazardous material transport, the proposed South Mountain Freeway could become a hazardous material transport bypass. What are the costs of additional emergency response plans, first responders, etc. relative to this potential? What are the public health issues with this and would there be a disparate impact on minority populations? What about the proximity to schools and the potential impacts to school children?</p> <p>K. Visual Resources (DEIS, p. 4-155)</p> <p>As noted in the DEIS, the Study Area for the proposed freeway contains high- to moderately-high-quality views of the region’s mountains (DEIS, p. 4-155). The proposed freeway will have a significant, harmful, and unmitigable impact these views. The main visual impact is to and from South Mountain and the park/preserve itself, although the impacts to residential areas, including to minority populations, is also significant. Looking west in the park and even from a distance outside</p>
<p>⁷² Reid, L., and T. Lisle. 2008. Cumulative effects and climate change. U.S. Department of Agriculture, Forest Service. Available online at http://www.fs.fed.us/ccrc/topics/cumulative-effects.shtml. Accessed 14 August 2012.</p> <p>⁷³ Fagre, D.B., C.W. Charles, C.D. Allen, C. Birkeland, F.S. Chapin III, P.M. Groffman, G.R. Guntenspergen, A.K. Knapp, A.D. McGuire, P.J. Mulholland, D.P.C. Peters, D.D. Roby, and G. Sugihara. 2009. Thresholds of Climate Change in Ecosystems. A report by the U.S. Climate Change Science Program and the Subcommittee on Global Change Research. U.S. Geological Survey, Reston, VA.</p>	

Code	Issue	Response
82	Climate Change	<p>The Draft Environmental Impact Statement and Final Environmental Impact Statement both include a discussion of climate change as part of the air quality discussion (see page 4-85 in the Final Environmental Impact Statement). This discussion is focused on the likely greenhouse gas emissions impacts of the proposed project in the context of the affected environment, which, in the case of greenhouse gas emissions, is the global atmosphere.</p> <p>The Federal Highway Administration and Arizona Department of Transportation acknowledge that climate change has the potential to exacerbate several of the ecosystem stressors identified in the cumulative effects discussion in the Final Environmental Impact Statement (beginning on page 4-183). Changes in temperature, precipitation, and extreme weather have the potential to accelerate habitat loss, impact the abundance of native plants and invasive species, and impact the reproductive and survival rates of endangered species. Research has been conducted such as the Arizona Department of Transportation 2013 report “Preliminary Study of Climate Adaptation for the Statewide Transportation System in Arizona” (http://www.aazdot.gov/adotlibrary/publications/project_Reports/PDF/AZ696.PDF). However, it is not currently possible to quantify the extent of these impacts, due to uncertainties in the timing and extent of climate change impacts. The timing and extent of climate change impacts are driven by the rate of growth in global greenhouse gas emissions, for which there is a wide range of projected trends; while the likelihood of potential impacts of climate change on study area ecosystems is reasonably foreseeable, the magnitude of those impacts currently is not clear. The Federal Highway Administration and Arizona Department of Transportation have concluded, based on the nature of greenhouse gas emissions and the exceedingly small potential greenhouse gas impacts of the proposed action (as presented in Table 4-37 of the Final Environmental Impact Statement), that greenhouse gas emissions from the proposed action would not result in “reasonably foreseeable significant adverse impacts on the human environment” [40 C.F.R. § 1502.22(b)]. The greenhouse gas emissions from the action alternatives would be insignificant and would not play a meaningful role in a determination of the environmentally preferable alternative or identification of the Preferred Alternative.</p>
83	Cultural Resources	<p>The cultural and religious places of importance, like the South Mountains, are acknowledged in the Draft Environmental Impact Statement in several locations, notably on pages 4-132 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 proposed freeway. Such places are 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 has identified traditional cultural properties that are eligible for listing in the National Register of Historic Places and that could be affected by construction of the proposed freeway. In certain cases, listing these properties on the National Register of Historic Places may offer them protection under Section 4(f) of the Department of Transportation Act. The traditional cultural properties identified are culturally important to other Native American tribes as well. For more discussion of traditional cultural properties, see</p>

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84	<p>ADOT did not provide any consideration for climate change within the DEIS, including in the cumulative impacts section. Climate change and cumulative impacts are closely related.⁷² Because climate change is reasonably foreseeable and may have very significant impacts on the resources discussed in the DEIS, discussion of its potential impacts should have been included.</p> <p>Although changes to the ecosystem and the implications for the resources these areas support are not well understood, it is imperative to incorporate climate change in planning decisions.⁷³ By excluding factors such as climate change from the cumulative impacts analysis, ADOT has significantly underestimated the potential impacts of this project on biological resources.</p> <p>I. Cultural Resources (DEIS, p. 4-128)</p> <p>As noted in the DEIS, the South Mountains (<i>Muhadagi Doag</i>) are significant to numerous Native American communities, including the Akimel O’odam and Pee Posh tribes. In addition to the value of the area as a park and recreation area, it has been recognized as a Traditional Cultural Property (TCP) under Section 4(f) of the National Historic Preservation Act (16 U.S.C. §470). Siting a freeway through the South Mountains will have an irreversible impact on the TCP and the archaeological and historic resources of the park. The DEIS does not provide suitable acknowledgement of this fact.</p> <p>J. Hazardous Materials (DEIS, p. 4-152)</p> <p>As noted in the DEIS, all action alternatives on the west side would have implications relative to hazardous materials and the Preferred Alternative would have the biggest impact. One thing not adequately addressed in the DEIS was the potential for trucks carrying hazardous materials through this area and its implications and impacts on residents. Considering that the Deck Park Tunnel is closed to hazardous material transport, the proposed South Mountain Freeway could become a hazardous material transport bypass. What are the costs of additional emergency response plans, first responders, etc. relative to this potential? What are the public health issues with this and would there be a disparate impact on minority populations? What about the proximity to schools and the potential impacts to school children?</p> <p>K. Visual Resources (DEIS, p. 4-155)</p> <p>As noted in the DEIS, the Study Area for the proposed freeway contains high- to moderately-high-quality views of the region’s mountains (DEIS, p. 4-155). The proposed freeway will have a significant, harmful, and unmitigable impact these views. The main visual impact is to and from South Mountain and the park/preserve itself, although the impacts to residential areas, including to minority populations, is also significant. Looking west in the park and even from a distance outside</p>
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Code	Issue	Response
83 (cont.)		<p>the section, <i>Cultural Resources</i>, beginning on page 4-140 of the Final Environmental Impact Statement and pages 5-26 through 5-28.</p> <p>While impacts on the South Mountains Traditional Cultural Property would be substantial and unique in context, they would not prohibit ongoing access and the cultural and religious practices by Native American tribes. Mitigation measures and measures to minimize harm as the result of extensive consultation, avoidance alternatives analyses, and efforts in developing mitigation strategies would accommodate and preserve (to the fullest extent possible from the available alternatives) access to the South Mountains for religious purposes. Text relating to this mitigation can be found on pages 4-38, 4-42, and 4-44 of the Final Environmental Impact Statement. Additionally, the section, <i>Mitigation</i>, beginning on page 4-158, presents several measures (e.g., multifunctional crossings, contributing element avoidance) to mitigate effects on cultural resources. The section, <i>Measures to Minimize Harm</i>, beginning on page 5-27, presents several measures to reduce effects on the South Mountains Traditional Cultural Property and other cultural resources.</p> <p>A thorough feasible and prudent avoidance analysis of the South Mountains was conducted as presented in Chapter 5 of the Draft and Final Environmental Impact Statements and concluded that avoidance of the direct use of the resource was not feasible and prudent. In support of this response and given the concerns about the South Mountains, consider the following review from the U.S. Department of the Interior on the Draft Environmental Impact Statement: “Following our review of the Section 4(f) Evaluation, we concur that there is no feasible or prudent alternative to the Preferred Alternative selected in the document, and that all measures have been taken to minimize harm to these resources.” The complete letter can be found in Appendix 7, Volume III, on page B4 of the Final Environmental Impact Statement.</p>
84	Hazardous Materials	<p>Arizona highways, like 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, if implemented, is expected to operate under the same rules as other similar facilities in the state; transport of hazardous cargo would be expected to be permissible (see text box on page 4-166 of the Final Environmental Impact Statement).</p> <p>The Arizona Department of Public Safety (which includes the State Highway Patrol) has primary responsibility for enforcing traffic laws. The Department of Public Safety also has primacy when calling in support for traffic accidents, including hazardous materials accidents (see text box on page 4-166 of the Final Environmental Impact Statement). The Arizona Department of Transportation maintains a list of contractors who provide emergency response services, as well as local municipalities whose fire and police departments operate in cooperation with the Department of Public Safety on incidents within their jurisdiction. Requirements for shippers are maintained by the Arizona Department of Transportation’s Enforcement Compliance Division.</p>

(Response 84 continues on next page)

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85	<p>ADOT did not provide any consideration for climate change within the DEIS, including in the cumulative impacts section. Climate change and cumulative impacts are closely related.⁷² Because climate change is reasonably foreseeable and may have very significant impacts on the resources discussed in the DEIS, discussion of its potential impacts should have been included.</p> <p>Although changes to the ecosystem and the implications for the resources these areas support are not well understood, it is imperative to incorporate climate change in planning decisions.⁷³ By excluding factors such as climate change from the cumulative impacts analysis, ADOT has significantly underestimated the potential impacts of this project on biological resources.</p> <p>I. Cultural Resources (DEIS, p. 4-128)</p> <p>As noted in the DEIS, the South Mountains (<i>Muhadagi Doag</i>) are significant to numerous Native American communities, including the Akimel O’odam and Pee Posh tribes. In addition to the value of the area as a park and recreation area, it has been recognized as a Traditional Cultural Property (TCP) under Section 4(f) of the National Historic Preservation Act (16 U.S.C. §470). Siting a freeway through the South Mountains will have an irreversible impact on the TCP and the archaeological and historic resources of the park. The DEIS does not provide suitable acknowledgement of this fact.</p> <p>J. Hazardous Materials (DEIS, p. 4-152)</p> <p>As noted in the DEIS, all action alternatives on the west side would have implications relative to hazardous materials and the Preferred Alternative would have the biggest impact. One thing not adequately addressed in the DEIS was the potential for trucks carrying hazardous materials through this area and its implications and impacts on residents. Considering that the Deck Park Tunnel is closed to hazardous material transport, the proposed South Mountain Freeway could become a hazardous material transport bypass. What are the costs of additional emergency response plans, first responders, etc. relative to this potential? What are the public health issues with this and would there be a disparate impact on minority populations? What about the proximity to schools and the potential impacts to school children?</p> <p>K. Visual Resources (DEIS, p. 4-155)</p> <p>As noted in the DEIS, the Study Area for the proposed freeway contains high- to moderately-high-quality views of the region’s mountains (DEIS, p. 4-155). The proposed freeway will have a significant, harmful, and unmitigable impact these views. The main visual impact is to and from South Mountain and the park/preserve itself, although the impacts to residential areas, including to minority populations, is also significant. Looking west in the park and even from a distance outside</p>
	<p>⁷² Reid, L., and T. Lisle. 2008. Cumulative effects and climate change. U.S. Department of Agriculture, Forest Service. Available online at http://www.fs.fed.us/ccrc/topics/cumulative-effects.shtml. Accessed 14 August 2012.</p> <p>⁷³ Fagre, D.B., C.W. Charles, C.D. Allen, C. Birkeland, F.S. Chapin III, P.M. Groffman, G.R. Guntenspergen, A.K. Knapp, A.D. McGuire, P.J. Mulholland, D.P.C. Peters, D.D. Roby, and G. Sugihara. 2009. Thresholds of Climate Change in Ecosystems. A report by the U.S. Climate Change Science Program and the Subcommittee on Global Change Research. U.S. Geological Survey, Reston, VA.</p>
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Code	Issue	Response
84 (cont.)		<p>Studies such as Hazardous Materials Commodity Flow Studies are used by emergency response planners (such as the Arizona State Emergency Response Commission statewide and the Maricopa County Local Emergency Planning Commission for Maricopa County) as one of the elements considered when developing Emergency Response Plans. If the plan is amended, it is made available to the Arizona Department of Transportation.</p> <p>In the event of an incident with a hazardous materials issue on a State or federal highway, the emergency responders contact the Arizona Department of Transportation’s Traffic Operations Center to report the incident. The Traffic Operations Center then contacts the Arizona Department of Transportation’s Safety and Risk Management group, who responds to the accident scene and assesses needs in concert with the Incident Commander from the responding agency with jurisdiction. If requested, the Arizona Department of Transportation can assist cleanup activities by engaging specialty subcontractors with whom the Arizona Department of Environmental Quality has contracts for such support. The Arizona Department of Transportation’s Safety and Risk Management group’s charge is primarily public health protection, with cleanup support being secondary. These costs are a normal part of operating a transportation system.</p> <p>The section entitled <i>Title VI and Environmental Justice</i>, beginning on page 4-29 in the Draft Environmental Impact Statement, presents acceptable methods, data, and assumptions to assess the potential for disproportionately high and adverse effects from the proposed action on environmental justice populations and disparate impacts to populations protected under Title VI. Based upon the content of the section, no such effects would result from the action alternatives.</p> <p>A common theme in public comments on the proposed project has been the potential impacts of the project on children’s health, primarily through vehicle emissions and noise. Many commenters raised concerns about the proximity of the project to schools or other aspects of the project that may affect children.</p> <p>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 proposed project on all populations, including children. The Final Environmental Impact Statement addresses potential impacts of the project on children in the Chapter 4 environmental consequences analyses.</p>
85	Visual Resources	<p>Visual analysis establishes that the proposed cuts would be in a remote portion of Phoenix South Mountain Park/Preserve, not near any trail, and would be barely visible from any of the more readily used trails. In this area, one can also see the development along 51st Avenue. The South Mountains provide views of urban Phoenix, including its freeways.</p>

Code	Comment Document
	<p>the park, people will be confronted with a view of the freeway cutting through three ridgelines and snaking around the park boundary.</p> <p>L. Energy (DEIS, p. 4-160)</p> <p>We question the assertion in the DEIS that the No Action Alternative would involve the most energy consumption of all of the alternatives as well as the assumptions about fuel savings associated with the action alternatives. Should the No Action Alternative be selected and, instead, transportation needs are addressed via mass transit, improving existing infrastructure, and seeking ways to promote transit-oriented development, as well as walkable and bikable communities, the No Action Alternative would give the greatest fuel savings. Likewise, we question the congestion assertions made earlier in the DEIS, which again call into question the vehicle miles traveled and associated fuel consumption.</p> <p>M. Temporary Construction Impacts (DEIS, p. 4-161)</p> <p>As noted above, significant air quality impacts and related public health implications can occur during the construction phase of the proposed freeway. Because there is a larger minority community within the Study Area, there will also be a disparate impact on minorities from construction. The particulates generated by construction are of particulate concern relative to residential areas and schools during construction.</p> <p>Also, as noted previously, the DEIS fails to address the relative impacts on air quality during construction among the various alternatives, including emissions from concrete batch and/or hot-mix asphalt plants, fugitive dust emissions, emissions from construction vehicles and other equipment, etc. (DEIS, p. 4-161, 4-162, and 4-163). Likewise, it does not adequately consider the lower emissions related to the No Action Alternative relative to construction, but merely notes that there will be no construction-related impacts (DEIS, p. 4-163).</p> <p>N. Material Sources and Waste Material (DEIS, p. 4-164)</p> <p>This section also fails to adequately analyze the No Action Alternative, in that it merely says the No Action Alternative will require no borrow material. It should, at a minimum, indicate that there will be no detrimental impacts to the environment relative to source or waste material with the No Action Alternative.</p> <p>O. Irreversible and Irretrievable Commitment of Resources (DEIS, p. 4-165)</p> <p>The DEIS fails to adequately analyze or attempt to mitigate the impacts on SMPP, although clearly the impacts to the park are unmitigable. SMPP is the largest municipal park in the country.⁷⁴ The park covers more than 16,000 acres and includes more than 51 miles of trails for non-motorized</p>
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<p>⁷⁴ City of Phoenix website, South Mountain Park, http://phoenix.gov/parks/trails/locations/south. Accessed 21 July 2013.</p>	

Code	Issue	Response
86	Energy	<p>As noted on page 4-172 of the Final Environmental Impact Statement, although the No-Action Alternative shows the smallest vehicle miles traveled of all the alternatives, substantially more fuel use is projected because of the higher vehicle hours traveled. Lower speeds and, therefore, lower fuel economy are associated with the No-Action Alternative. If the No-Action Alternative were to become the Selected Alternative, energy use attributable to project construction would not occur; operational energy use, however, would be higher because of higher levels of traffic congestion.</p> <p>The proposed freeway is part of the <i>Regional Transportation Plan</i> for the Maricopa Association of Governments region. The <i>Regional Transportation Plan</i>, 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 proposed 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. Congestion and the resulting higher energy consumption would remain.</p>
87	Temporary Construction Impacts	<p>To reduce the amount of construction dust generated, particulate control measures related to construction activities would be followed. The following mitigation measure would be followed, when applicable, in accordance with the most recently accepted version of the Arizona Department of Transportation <i>Standard Specifications for Road and Bridge Construction</i> (2008). Prior to construction and in accordance with Maricopa County Rule 310, Fugitive Dust Ordinance, the contractor shall obtain an approved dust permit from the Maricopa County Air Quality Department for all phases of the proposed action. The permit describes measures to be taken to control and regulate air pollutant emissions during construction (see page 4-173 of the Final Environmental Impact Statement).</p> <p>The section entitled <i>Title VI and Environmental Justice</i>, beginning on page 4-29 in the Draft Environmental Impact Statement, presents acceptable methods, data, and assumptions to assess the potential for disproportionately high and adverse effects from the proposed action on environmental justice populations and disparate impacts to populations protected under Title VI. Based upon the content of the section, no such effects would result from the action alternatives.</p> <p>The Draft Environmental Impact Statement does not address the relative impacts on air quality during construction among the various alternatives, including emissions from concrete batch and/or hot-mix asphalt plants, fugitive dust emissions, emissions from construction vehicles and other equipment, etc. because these emissions would not be substantially different among the active alternatives. The No-Action Alternative is discussed relative to the action alternatives by stating that there would be no roadway construction-related impacts. Also, as noted in previous responses, the U.S. Environmental Protection Agency’s transportation conformity regulations do not require analysis to address temporary construction-related emissions.</p>

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	<p>the park, people will be confronted with a view of the freeway cutting through three ridgelines and snaking around the park boundary.</p> <p>L. Energy (DEIS, p. 4-160)</p> <p>We question the assertion in the DEIS that the No Action Alternative would involve the most energy consumption of all of the alternatives as well as the assumptions about fuel savings associated with the action alternatives. Should the No Action Alternative be selected and, instead, transportation needs are addressed via mass transit, improving existing infrastructure, and seeking ways to promote transit-oriented development, as well as walkable and bikable communities, the No Action Alternative would give the greatest fuel savings. Likewise, we question the congestion assertions made earlier in the DEIS, which again call into question the vehicle miles traveled and associated fuel consumption.</p> <p>M. Temporary Construction Impacts (DEIS, p. 4-161)</p> <p>As noted above, significant air quality impacts and related public health implications can occur during the construction phase of the proposed freeway. Because there is a larger minority community within the Study Area, there will also be a disparate impact on minorities from construction. The particulates generated by construction are of particulate concern relative to residential areas and schools during construction.</p> <p>Also, as noted previously, the DEIS fails to address the relative impacts on air quality during construction among the various alternatives, including emissions from concrete batch and/or hot-mix asphalt plants, fugitive dust emissions, emissions from construction vehicles and other equipment, etc. (DEIS, p. 4-161, 4-162, and 4-163). Likewise, it does not adequately consider the lower emissions related to the No Action Alternative relative to construction, but merely notes that there will be no construction-related impacts (DEIS, p. 4-163).</p> <p>N. Material Sources and Waste Material (DEIS, p. 4-164)</p> <p>This section also fails to adequately analyze the No Action Alternative, in that it merely says the No Action Alternative will require no borrow material. It should, at a minimum, indicate that there will be no detrimental impacts to the environment relative to source or waste material with the No Action Alternative.</p> <p>O. Irreversible and Irretrievable Commitment of Resources (DEIS, p. 4-165)</p> <p>The DEIS fails to adequately analyze or attempt to mitigate the impacts on SMPP, although clearly the impacts to the park are unmitigable. SMPP is the largest municipal park in the country.⁷⁴ The park covers more than 16,000 acres and includes more than 51 miles of trails for non-motorized</p>
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Code	Issue	Response
88	Material Sources and Waste Material	The section analyzes the amount of fill associated with each of the action alternatives and the No-Action Alternative. No detrimental impacts are noted in this section.
89	Irreversible and Irretrievable Commitment of Resources	<p>The proposed freeway would pass through the park’s southwestern edge. Section 4(f) of the Department of Transportation Act 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, <i>Section 4(f) Evaluation</i>]. Use of a portion of the mountains for the purposes of the proposed 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 S-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 the provision of highway crossings, are outlined in text beginning on page S-23 of the Final Environmental Impact Statement. Phoenix South Mountain Park/Preserve would 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) would remain. Nine-tenths of a mile of the proposed freeway would pass through the park’s southwestern edge (see Final Environmental Impact Statement page S-13).</p> <p>A thorough feasible and prudent avoidance analysis of the South Mountains was conducted as presented in Chapter 5 of the Draft and Final Environmental Impact Statements and concluded that avoidance of the direct use of the resource was not feasible and prudent. In support of this response and given the concerns about the South Mountains, consider the following review from the U.S. Department of the Interior on the Draft Environmental Impact Statement: “Following our review of the Section 4(f) Evaluation, we concur that there is no feasible or prudent alternative to the Preferred Alternative selected in the document, and that all measures have been taken to minimize harm to these resources.’ The complete letter can be found in Appendix 7, Volume III, on page B4 of the Final Environmental Impact Statement.</p> <p>As noted on page 4-177 of the Final Environmental Impact Statement the construction and operation of the proposed action would involve a commitment of a range of resources, including construction materials, fuels, land, labor, and financial assets.</p>

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	<p>recreation, including hiking, biking, and horseback riding.⁷⁵ An estimated three million people visit the park each year, and it is one of the Phoenix Points of Pride:⁷⁶</p> <p>Serving as the “exclamation point” of pride, South Mountain is the largest municipal park in the world. The 16,500-acre park is home to more than 300 specimens of plant life and a wide variety of fauna, including rabbits, foxes, coyotes, snakes, lizards and birds. The park features picnic areas and ramadas, hiking trails and spectacular lookouts. South Mountain Park is the home of the 10,907-square-foot South Mountain Environmental Education Center”</p> <p>The fact that this section of the DEIS fails to even mention SMPP highlights the inadequacy of the DEIS and its analysis. Chopping through the corner of the park, taking more 30 acres, cutting more than 200 feet into the ridges, and making this section of the park more of industrial landscape with its associated noise and air pollution is an irreversible and irretrievable commitment of resources, as well unmitigable. That being said, the DEIS did not even consider mitigation for this enormous impact on one our points of pride in Phoenix.</p> <p>P. Relationship Between Short-Term Uses of the Environment and Long-Term Productivity (DEIS, p. 4-166)</p> <p>90 The assertion that the long-term impacts of the proposed South Mountain Freeway would occur over the life of the proposed action and “would have a positive effect” is erroneous and unfounded. While the impacts would occur over the life of the project, the statement that the impacts would have a positive effect is unfounded, unsubstantiated in the DEIS, and contrary to experiences with other freeways, let alone a freeway that will cut through one of Phoenix’s greatest parks.</p> <p>There is no real consideration of the long-term productivity of the landscape in this section of the document either. ,</p> <p>Q. Secondary and Cumulative Impacts (DEIS, p. 4-167)</p> <p>91 The proposed freeway will further fragment the Sonoran Desert landscape. That overall fragmentation and the fact that this desert was listed as one of the 12 most threatened landscapes in the U.S. in 2011 should be part of the cumulative impacts analysis and consideration.⁷⁷</p> <p>92 The DEIS notes that the proposed freeway would contribute to “induced travel” (DEIS, p. 4-167 through 4-170) but then proceeds to dismiss this as a significant impact. It does not consider the potential induced travel by trucks that might be travelling through Phoenix and the impacts on congestion, air quality, and noise that would have. This is a major omission in the DEIS. Likewise,</p> <p>⁷⁵ Ibid. ⁷⁶City of Phoenix website, http://phoenix.gov/visitors/cityattractions/pride/index.html, http://phoenix.gov/parks/trails/locations/south. Accessed 21 July 2013. ⁷⁷ Cultural Landscapes Foundation. 2011. Information available at http://travel.usatoday.com/destinations/dispatches/post/2011/09/cultural-landscapefoundation-most-threatened-landscapes/548464/1. Accessed on 22 July 2013.</p>

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90	Relationship Between Short-Term Uses of the Environment and Long-Term Productivity	<p>Although the region’s freeways are now congested during the peak travel period, conditions in 2035 without the proposed freeway would be substantially worse with more congested areas and congested conditions for longer periods of time (see Final Environmental Impact Statement pages 1-21 and 1-22).</p> <p>Congestion relief resulting from the proposed freeway would provide localized reductions on arterial streets and at interchanges. Reduced travel times would result in lower exposure to elevated concentrations of mobile source air toxics occurring in traffic. Other benefits of the proposed freeway in comparison to the No-Action Alternative are presented in Table 3-9 on page 3-38 of the Final Environmental Impact Statement.</p> <p>Completion and operation of the proposed action would serve future economic development in the area. The new development would create additional jobs and generate a substantial increase in sales and property taxes. On balance, the use of resources and the associated short-term impacts would lead to long-term benefits in the area. These benefits would accrue in both the Study Area and in the greater Phoenix metropolitan area.</p>
91	Secondary and Cumulative Impacts	<p>These cumulative impacts are discussed under the topics of <i>Biological Resources</i>, <i>Water Resources</i>, <i>Land Use</i>, <i>Visual Resources</i>, and <i>Recreational Land</i> beginning on page 4-183 of the Final Environmental Impact Statement.</p>
92	Secondary and Cumulative Impacts	<p>Page 4-180 of the Final Environmental Impact Statement states that some induced travel would represent new trips. Most of the increase in traffic caused by induced travel, however, is expected to come from trips already being made before the proposed action would be put into operation (predictable traveler behavior accounted for in the travel demand forecasts conducted for the proposed action). The Federal Highway Administration’s position relative to induced travel is consistent with the consensus of the transportation planning and travel behavior research community: induced travel is neither more nor less than the cumulative result of individual traveler choices and land development decisions made in response to an improved level of transportation service. Many of the travel choice decisions are accounted for in current travel forecasting models or land use-transportation interaction models. Also, the Maricopa Association of Government’s regional travel demand model uses the equilibrium process attributed to Mr. Litman (see response #29).</p> <p>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 proposed freeway do not induce growth in the region (see Final Environmental Impact Statement pages 4-179 through 4-183). The proposed action would 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 proposed freeway would abut public parkland, Native American land, and a near-fully developed area—therefore, any contribution to accelerated or induced growth would be constrained. The proposed freeway would be built in an area planned for urban growth as established in local jurisdictions’ land use plans for at least the last 25 years.</p> <p>As noted on page 4-3, impacts on the Community from the proposed action as presented in Final Environmental Impact Statement, are based on data available to the general public and on field observation as appropriate. Any proposed development of Community lands is unknown.</p>


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	the DEIS mentions and then dismisses the “induced growth” associated with the project by failing to recognize that freeways basically insure low-density sprawl type development. ⁷⁸
93	Additionally, the cumulative impacts include increase in and spread of invasive plant species and the associated increase risk of destructive fire. This impact was not addressed in the DEIS.
94	The cumulative impacts relative to air quality were not adequately addressed as there was no real regional analysis of air quality relative to the proposed freeway.
	V. SECTION 4(F) EVALUATION (Chapter 5)
95	<p>Section 4(f) of the U.S. Department of Transportation Act requires that the Secretary of Transportation only allow taking of a “public park, 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” if there is no feasible alternative and if everything has been done to minimize harm to the park, historic site, etc. In considering this relative to South Mountain (<i>Muhadagi Doag</i>) and SMPP, it is clear that this proposed freeway would violate Section 4(f).</p> <p>The people of Phoenix were so concerned about the potential loss of their park and preserve lands that they passed an ordinance to prohibit the selling of parkland without specific approval of the voters. This measure was ratified by the Arizona Legislature in 1990. ADOT argues that the proposed action does not require voter approval, however, due to a provision in the act that provided an exemption for anything in the State Highway System prior to August 15, 1990. Clearly, the proposed freeway is inconsistent with the voter intent and, as is evidenced by past and recent opposition to the freeway, many Phoenix voters object to taking a portion of the park. ADOT further gets around this provision by using the condemnation process (DEIS, p. 5-24).</p> <p>ADOT proposes that replacement land for taking a portion of the park would be done at 1:1 ratio, unless both the City of Phoenix and ADOT determine more is needed (DEIS, p. 5-24), but even a 3:1 or 5:1 ratio could not mitigate for the significant impact of this freeway on SMPP. It is not merely the direct taking of land that will harm the park, but the overall impact of having a major freeway through and along the park boundary.</p> <p>Direct use of the park is not prudent, and no build alternatives are feasible, so this proposed action violates Section 4(f). Some statements about the direct use are erroneous and unsubstantiated. For example, the DEIS states that “the Sonoran Desert features that make the park unique because of its major urban metropolitan area location would remain unchanged” (DEIS, p. 5-26). While clearly the park would still be part of a major urban area, its Sonoran Desert features would be compromised and its connections to larger desert lands would be cut off, making the park more of an island. This will have a cumulative negative impact on the landscape, on recreational uses of the land, and on the wildlife that inhabit the park.</p> <p>As noted previously, South Mountain and the park are significant to people throughout the Phoenix area and to numerous Native American communities, including the Akimel O’odam and Pee Posh tribes, among others. It has been recognized as a Traditional Cultural Property (TCP) under Section 4(f) of the</p>

⁷⁸ Lewis (1999) and Gutfreund (2004).


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92 (cont.)		Air quality and noise modeling for the Draft and Final Environmental Impact Statements used forecast truck traffic (see Final Environmental Impact Statement pages 4-68 and 4-88, respectively).
93	Secondary and Cumulative Impacts	Cumulative effects related to invasive species are addressed on page 4-185 of the Final Environmental Impact Statement.
94	Secondary and Cumulative Impacts	As stated on page 4-188 of the Final Environmental Impact Statement, air quality may be a local, regional, or global issue depending on the particular pollutants or issue. All of these levels were addressed in the cumulative impacts analysis of air quality.
95	Section 4(f) and Section 6(f)	<p>The proposed freeway would pass through the park’s southwestern edge. Section 4(f) of the Department of Transportation Act 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, <i>Section 4(f) Evaluation</i>]. Use of a portion of the mountains for the purposes of the proposed 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 the provision of highway crossings would help minimize the impacts on the Phoenix South Mountain Park/Preserve with respect to landscape alteration, habitat connectivity, and loss of connection to larger desert lands (see text beginning on page 5-23 of the Final Environmental Impact Statement). Phoenix South Mountain Park/Preserve would 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) would remain. Nine-tenths of a mile of the proposed freeway would pass through the park’s southwestern edge (see Final Environmental Impact Statement page 5-13).</p> <p>A thorough feasible and prudent avoidance analysis of the South Mountains was conducted as presented in Chapter 5 of the Draft and Final Environmental Impact Statements and concluded that avoidance of the direct use of the resource was not feasible and prudent. In support of this response and given the concerns about the South Mountains, consider the following review from the U.S. Department of the Interior on the Draft Environmental Impact Statement: comment: “Following our review of the Section 4(f) Evaluation, we concur that there is no feasible or prudent alternative to the Preferred Alternative selected in the document, and that all measures have been taken to minimize harm to these resources.” The complete letter can be found in Appendix 7, Volume III, on page B4 of the Final Environmental Impact Statement.</p> <p>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</p>

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	<p>the DEIS mentions and then dismisses the “induced growth” associated with the project by failing to recognize that freeways basically insure low-density sprawl type development.⁷⁸</p> <p>Additionally, the cumulative impacts include increase in and spread of invasive plant species and the associated increase risk of destructive fire. This impact was not addressed in the DEIS.</p> <p>The cumulative impacts relative to air quality were not adequately addressed as there was no real regional analysis of air quality relative to the proposed freeway.</p> <p>V. SECTION 4(F) EVALUATION (Chapter 5)</p> <p>Section 4(f) of the U.S. Department of Transportation Act requires that the Secretary of Transportation only allow taking of a “public park, 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” if there is no feasible alternative and if everything has been done to minimize harm to the park, historic site, etc. In considering this relative to South Mountain (<i>Muhadagi Doag</i>) and SMPP, it is clear that this proposed freeway would violate Section 4(f).</p> <p>The people of Phoenix were so concerned about the potential loss of their park and preserve lands that they passed an ordinance to prohibit the selling of parkland without specific approval of the voters. This measure was ratified by the Arizona Legislature in 1990. ADOT argues that the proposed action does not require voter approval, however, due to a provision in the act that provided an exemption for anything in the State Highway System prior to August 15, 1990. Clearly, the proposed freeway is inconsistent with the voter intent and, as is evidenced by past and recent opposition to the freeway, many Phoenix voters object to taking a portion of the park. ADOT further gets around this provision by using the condemnation process (DEIS, p. 5-24).</p> <p>ADOT proposes that replacement land for taking a portion of the park would be done at 1:1 ratio, unless both the City of Phoenix and ADOT determine more is needed (DEIS, p. 5-24), but even a 3:1 or 5:1 ratio could not mitigate for the significant impact of this freeway on SMPP. It is not merely the direct taking of land that will harm the park, but the overall impact of having a major freeway through and along the park boundary.</p> <p>Direct use of the park is not prudent, and no build alternatives are feasible, so this proposed action violates Section 4(f). Some statements about the direct use are erroneous and unsubstantiated. For example, the DEIS states that “the Sonoran Desert features that make the park unique because of its major urban metropolitan area location would remain unchanged” (DEIS, p. 5-26). While clearly the park would still be part of a major urban area, its Sonoran Desert features would be compromised and its connections to larger desert lands would be cut off, making the park more of an island. This will have a cumulative negative impact on the landscape, on recreational uses of the land, and on the wildlife that inhabit the park.</p> <p>As noted previously, South Mountain and the park are significant to people throughout the Phoenix area and to numerous Native American communities, including the Akimel O’odam and Pee Posh tribes, among others. It has been recognized as a Traditional Cultural Property (TCP) under Section 4(f) of the</p>
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	<p>⁷⁸ Lewis (1999) and Gutfreund (2004).</p>

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95 (cont.)		<p>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 Final Environmental Impact Statement page 5-14). The project team examined alternatives to avoid the park, but did not identify any feasible and prudent alternatives to avoid impacts. The portion of the park that would be used for the proposed freeway would 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 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 proposed freeway would 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 Federal Highway Administration and Arizona Department of Transportation have committed to providing mitigation by including multifunctional crossing structures designed for wildlife such as mule deer and for limited human use, potential fencing to guide wildlife to the crossing structures, and culverts designed for connectivity for smaller species (see <i>Mitigation</i>, beginning on page 4-138 of the Final Environmental Impact Statement). The preservation of wildlife crossing opportunities incorporated into the design of the South Mountain Freeway will allow for genetic exchange to occur between wildlife populations in the Phoenix South Mountain Park/Preserve and areas located closer to or in the Sierra Estrella.</p> <p>This degree of connectivity would not likely be assured without the project. The likely result of selection of the No-Action Alternative would be a smaller road without adequate funds to address substantial crossing structures. While a local road would have a smaller physical footprint, it would not necessarily include any structures designed to allow wildlife connectivity.</p>
96	Cultural Resources, Section 4(f) and Section 6(f)	<p>The cultural and religious places of importance, like the South Mountains, are acknowledged in the Draft Environmental Impact Statement in several locations, notably on pages 4-132 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 proposed freeway. Such places are 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 has identified traditional cultural properties that are eligible for listing in the National Register of Historic Places and that could be affected by construction of the proposed freeway. In certain cases, listing these properties on the National Register of Historic Places may offer them protection under Section 4(f) of the Department of Transportation Act. The traditional cultural properties identified are culturally important to other Native American tribes as well. For more discussion of traditional cultural properties, see the section, <i>Cultural Resources</i>, beginning on page 4-140 of the Final Environmental Impact Statement and pages 5-26 through 5-28.</p>

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	<p>National Historic Preservation Act (16 U.S.C. §470). Siting a freeway through South Mountain will have an irreversible impact on the TCP and on the archaeological and historic resources of the park.</p> <p>The E1 Preferred Alternative goes through three miles of SMPP and would result in direct use of the TCP. Again, the impacts would be unmitigable as the freeway will cut off the physical connection of the tribes, restrict their ability to visit certain significant sites, and would disrupt cultural practices – regardless of the “multifunctional” crossings that have been proposed. There are alternatives to building this proposed freeway, including transportation improvements elsewhere, mass transit, and encouragement of more transit-oriented development, among others. Therefore, this proposal violates Section 4(f).</p> <p>VI. CONSULTATION AND COORDINATION (Chapter 6)</p> <p>97 The DEIS does not include information on coordination with either AGFD or the U.S. Fish and Wildlife Service relative to wildlife issues, except for comments received, which are included in the appendices. Furthermore, we saw no information about coordination relative to the native plants, limiting invasive plant species, etc., with the Arizona Native Plant Society or other entities, which would have provided valuable background information and context for the impacts of the proposed action.</p> <p>Much of the coordination and consultation with the tribal entities occurred in the context of trying to get buy-in from the Gila River Indian Community to agree to siting the proposed freeway on the Community lands. This may have influenced the consultation process significantly and, therefore, additional consultation is warranted.</p> <p>VII. SUMMARY</p> <p>We strongly question the Purpose and Need for this project and recognize that all of the routes under consideration would have significant and damaging impacts on the lands, wildlife, native plants, air quality, cultural, and other important resources. Based on the information in the DEIS, our own research, and our knowledge of the impacts and the lands involved, we find that the only alternative that is acceptable is the No Action Alternative. We ask that ADOT and FHWA select this alternative in order to keep intact these important lands and to protect our air quality and the health of our citizens. We further request that ADOT assess other options, including improving existing roads; mass transit, including rail; and pedestrian-friendly development options.</p> <p>Thank you for considering our comments.</p> <p>Sincerely,</p> <p></p> <p>Sandy Bahr Chapter Director Sierra Club – Grand Canyon Chapter</p>

Code	Issue	Response
96 (cont.)		<p>While impacts on the South Mountains Traditional Cultural Property would be substantial and unique in context, they would not prohibit ongoing access and the cultural and religious practices by Native American tribes. Mitigation measures and measures to minimize harm as the result of extensive consultation, avoidance alternatives analyses, and efforts in developing mitigation strategies would accommodate and preserve (to the fullest extent possible from the available alternatives) access to the South Mountains for religious purposes. Text relating to this mitigation can be found on pages 4-38, 4-42, and 4-44 of the Final Environmental Impact Statement. Additionally, the section, <i>Mitigation</i>, beginning on page 4-158, presents several measures (e.g., multifunctional crossings, contributing element avoidance) to mitigate effects on cultural resources. The section, <i>Measures to Minimize Harm</i>, beginning on page 5-27, presents several measures to reduce effects on the South Mountains Traditional Cultural Property and other cultural resources.</p> <p>In accordance with the National Environmental Policy Act, a range of reasonable action alternatives to carry forward for detailed study 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, <i>Alternatives</i>, of the Draft and Final Environmental Impact Statements. The criteria, in general terms, considered operations, design, ability to meet purpose and need, environmental considerations, cost, and acceptability. The Preferred Alternative was the outcome of this process, which was validated in the Final Environmental Impact Statement (see page 3-2). As described therein, a comprehensive set of modal transportation (such as light rail) and non-transportation alternatives (such as a land use based alternative) were subjected to the evaluation process. Reasons for elimination of those alternatives are summarized in Table 3-2 of the Final Environmental Impact Statement.</p> <p>A thorough feasible and prudent avoidance analysis of the South Mountains was conducted as presented in Chapter 5 of the Draft and Final Environmental Impact Statements and concluded that avoidance of the direct use of the resource was not feasible and prudent. In support of this response and given the concerns about the South Mountains, consider the following review from the U.S. Department of the Interior on the Draft Environmental Impact Statement: “Following our review of the Section 4(f) Evaluation, we concur that there is no feasible or prudent alternative to the Preferred Alternative selected in the document, and that all measures have been taken to minimize harm to these resources.” The complete letter can be found in Appendix 7, Volume III, on page B4 of the Final Environmental Impact Statement.</p>
97	Consultation and Coordination	<p>Coordination efforts with the U.S. Fish and Wildlife Service and Arizona Game and Fish Department are documented throughout the <i>Biological Resources</i> section of the Final Environmental Impact Statement.</p> <p>Mitigation measures were suggested in a letter from the Lieutenant Governor of the Gila River Indian Community to the Administrator, Arizona Division, Federal Highway Administration, dated June 23, 2010 (see page A372 of Appendix 2-1 of the Final Environmental Impact Statement). In this letter, the Gila River Indian Community submitted a proposal to address partial measures for the mitigation of adverse effect from the Pecos Road Alignment of the South Mountain Freeway. The Gila River Indian Community’s proposal found the engineering solutions</p>

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	<p>National Historic Preservation Act (16 U.S.C. §470). Siting a freeway through South Mountain will have an irreversible impact on the TCP and on the archaeological and historic resources of the park.</p> <p>The E1 Preferred Alternative goes through three miles of SMPP and would result in direct use of the TCP. Again, the impacts would be unmitigable as the freeway will cut off the physical connection of the tribes, restrict their ability to visit certain significant sites, and would disrupt cultural practices – regardless of the “multifunctional” crossings that have been proposed. There are alternatives to building this proposed freeway, including transportation improvements elsewhere, mass transit, and encouragement of more transit-oriented development, among others. Therefore, this proposal violates Section 4(f).</p> <p>VI. CONSULTATION AND COORDINATION (Chapter 6)</p> <p>97 The DEIS does not include information on coordination with either AGFD or the U.S. Fish and Wildlife Service relative to wildlife issues, except for comments received, which are included in the appendices. Furthermore, we saw no information about coordination relative to the native plants, limiting invasive plant species, etc., with the Arizona Native Plant Society or other entities, which would have provided valuable background information and context for the impacts of the proposed action.</p> <p>Much of the coordination and consultation with the tribal entities occurred in the context of trying to get buy-in from the Gila River Indian Community to agree to siting the proposed freeway on the Community lands. This may have influenced the consultation process significantly and, therefore, additional consultation is warranted.</p> <p>VII. SUMMARY</p> <p>98 We strongly question the Purpose and Need for this project and recognize that all of the routes under consideration would have significant and damaging impacts on the lands, wildlife, native plants, air quality, cultural, and other important resources. Based on the information in the DEIS, our own research, and our knowledge of the impacts and the lands involved, we find that the only alternative that is acceptable is the No Action Alternative. We ask that ADOT and FHWA select this alternative in order to keep intact these important lands and to protect our air quality and the health of our citizens. We further request that ADOT assess other options, including improving existing roads; mass transit, including rail; and pedestrian-friendly development options.</p> <p>Thank you for considering our comments.</p> <p>Sincerely,</p> <p></p> <p>Sandy Bahr Chapter Director Sierra Club – Grand Canyon Chapter</p>
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97 (cont.)		<p>acceptable, but stated that implementation and construction of the proposed freeway would require further consultation. In committing to the evaluation of the South Mountains Traditional Cultural Property, the Arizona Department of Transportation and Federal Highway Administration also committed to the Gila River Indian Community’s participation in ongoing engineering design refinements and acknowledged the importance of all plants and animals in the traditional culture of the Akimel O’odham and Pee Posh of the Gila River Indian Community.</p> <p>Other sources of information on native and invasive plants were considered adequate; therefore, the Arizona Native Plant Society was not contacted as a part of this study. Chapter 2 of the Final Environmental Impact Statement is dedicated to the explanation of the Gila River Indian Community outreach undertaken for the project. Chapter 6 of the Final Environmental Impact Statement further describes Gila River Indian Community outreach throughout the process. The Gila River Indian Community was provided equal opportunities to participate in the project as all other populations and agencies. This outreach was undertaken, in part, to ensure all populations had equal access to the process and, in part, to ensure disparate nor disproportionate and highly adverse impacts would result from the construction and operation of the proposed action.</p> <p>In addition, Section 106 of the National Historic Preservation Act requires a government-to-government relationship between the Federal Government and Indian 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 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 has resulted in concurrence from the Gila River Indian Community Tribal Historic Preservation Office 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 any commitments in a record of decision are completed.</p>
98	Purpose and Need/Alternatives	<p>Summary comments reviewed. Specific comments have been addressed above. 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), would result in no violations of the U.S. Environmental Protection Agency’s National Ambient Air Quality Standards (4-75), and would provide economic benefits of reducing regional traffic congestion (page 4-65), and would be consistent with local and regional long-range planning efforts (page 4-18).</p>

RESPONSES TO FREQUENTLY SUBMITTED PUBLIC COMMENTS

The Arizona Department of Transportation and Federal Highway Administration identified several recurring public comments. Comments that provided either support or opposition for the project were reviewed by the project team and responded simply with a “comment noted.” Other substantive comments related to a number of topics were received. The nature of these comments is summarized below, immediately followed by a broad response to the issue. Again, the responses address issues that were commented on by multiple reviewers and address the majority of the comments submitted. Many of the responses to individual comments refer the commenter to a specific response (or responses) below for more details.

Below are examples of what the response to a frequently submitted comment looks like in the comment response document. In some instances, multiple “Issues” are combined into a single response that refers to the frequent responses. For each, the Code provides a numbered identifier that corresponds to the comment document, the Issue identifies the topic of the response, and the Response refers the commenter or reviewer to the page where the frequent responses can be located.

Code	Issue	Response
1	Acquisitions and Relocations	The Arizona Department of Transportation and Federal Highway Administration identified several issues and concerns that were frequently noted by commenters. Responses to these issues can be found in the <i>Responses to Frequently Submitted Public Comments</i> beginning on page C66 of this Volume IV.
4	Air Quality	The Arizona Department of Transportation and Federal Highway Administration identified several issues and concerns that were frequently noted by commenters. Responses to these issues can be found in the <i>Responses to Frequently Submitted Public Comments</i> beginning on page C66 of this Volume IV.
5	Health Effects	
6	Biology, Plants, and Wildlife	

ISSUE: ACQUISITIONS AND RELOCATIONS

Frequent comment: *Commenters inquired about the process that would be undertaken by the Arizona Department of Transportation in the acquisition and relocation of their home or business.*

Response: 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, 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.

ISSUE: AIR QUALITY

Frequent comment: *Commenters expressed the belief that the proposed freeway would cause an increase in air pollution and that the proposed freeway would worsen air quality.*

Response: The Final Environmental Impact Statement addresses the history of air quality in the region (see text beginning on page 4-68 of the Final Environmental Impact Statement). The Clean Air Act § 109(b) (1) requires the U.S. Environmental Protection Agency to establish primary National Ambient Air Quality Standards at levels that allow an adequate margin of safety to protect the public health. Air quality in the Phoenix metropolitan area has improved over time; Phoenix was redesignated to attainment/maintenance for carbon monoxide in 2005, and the U.S. Environmental Protection Agency determined on May 30, 2014, that Phoenix is in maintenance for the particulate matter (PM₁₀) standard. These improvements are largely associated with cleaner fuels and lower-emission vehicles along with local controls on fugitive dust. Future emissions would also be reduced by the use of cleaner-burning fuels, technological advances in automotive design (including the greater use of alternative fuel vehicles), reformulated gasoline, gas can standards, stricter enforcement of emission standards during inspections, heavy-duty diesel engine and on-highway diesel sulfur control programs, dust control programs, and others.

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.

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 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. 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. 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 4-77 of the Final Environmental Impact Statement). Congestion relief resulting from the proposed freeway would 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.

The project-level air quality conformity demonstration for carbon monoxide and particulate matter (PM₁₀) was conducted at the South Mountain Freeway and Interstate 10 (Papago Freeway) interchange. To ensure that the

air quality analyses addressed public comments on the Draft Environmental Impact Statement, two additional interchanges were modeled for discussion in the Final Environmental Impact Statement: the 40th Street and E1 Alternative interchange and the Broadway Road and W59 Alternative interchange. The carbon monoxide and particulate matter (PM₁₀) results for these two interchange locations are shown in Tables 4-32 and 4-33 on pages 4-76 and 4-77, respectively, of the Final Environmental Impact Statement. Modeled carbon monoxide concentrations at all receptor locations in the vicinity of the two interchange locations were well below the 1-hour and 8-hour National Ambient Air Quality Standards of 35 and 9 parts per million, respectively. Likewise, the particulate matter (PM₁₀) design values with the Preferred Alternative did not exceed the 24-hour National Ambient Air Quality Standard of 150 micrograms per cubic meter.

In addition, fugitive dust and mobile source emissions from construction of the proposed freeway would be controlled by requiring the contractor to comply with the dust-control methods in the Arizona Department of Transportation's *Standard Specifications for Road and Bridge Construction* (2008) and Maricopa County Rule 310, Fugitive Dust Ordinance. Disruption to traffic, especially during peak travel periods, would be minimized by a traffic control plan to help reduce impacts of traffic congestion and associated emissions during construction. These methods are discussed on page 4-85 of the Final Environmental Impact Statement.

ISSUE: ALTERNATIVES, W59 ALTERNATIVE VERSUS W101 ALTERNATIVE

Frequent comment: *Commenters expressed that the W101 Alternative would be a better connection point to Interstate 10 in the Western Section and expressed concerns that traffic operations along Interstate 10 would be adversely affected by the connection at 59th Avenue (W59 Alternative).*

Response: In preparing the Final Environmental Impact Statement, the Federal Highway Administration and Arizona Department of Transportation once again compared the W59 Alternative with the W101 Alternative (see Final Environmental Impact Statement beginning on page 3-68). This comparison examined overall transportation needs, consistency with regional and long-range planning goals, environmental and societal impacts, operational differences, estimated costs, and regional support and public input. The W101 Alternative would result in approximately 200 to 600 more displaced residential properties than the W59 Alternative. The W59 Alternative would have a nominal effect on the local tax base in Phoenix. The W101 Alternative would have a severe impact on the City of Tolleson's tax base and would lead to a reduction in City-provided services. Right-of-way for the W101 Alternative would eliminate a substantial portion of the remaining developable land in Tolleson. The W101 Alternative would need the partial or complete reconstruction of the State Route 101L (Agua Fria Freeway) and I-10 (Papago Freeway) interchange and additional widening improvements to State Route 101L (Agua Fria Freeway). The total cost of the W101 Alternative would be \$490 million to \$640 million greater than the W59 Alternative. Resolutions passed by the City/Town Councils of Avondale, Buckeye, Gila Bend, Goodyear, Litchfield Park, Phoenix, and Tolleson supported an alternative near 55th Avenue (now closely represented by the W59 Alternative) and opposed the W101 Alternative. Following this reanalysis, the Federal Highway Administration and Arizona Department of Transportation identified the W59 Alternative as the Preferred Alternative in the Western Section.

In preparing the Final Environmental Impact Statement, the Federal Highway Administration and Arizona Department of Transportation reanalyzed the Western Section action alternatives' effects on operations along Interstate 10 (see Final Environmental Impact Statement beginning on page 3-62). The analysis determined that the No-Action Alternative would result in the most sections along Interstate 10 operating at level of

service E or F, and for the longest duration. The proposed connection to Interstate 10 (Papago Freeway) at 59th Avenue would include substantial improvements (widening) along Interstate 10 to provide adequate operations on Interstate 10 in the area of the junction and to allow traffic moving to and from the South Mountain Freeway to enter and exit the Interstate 10 main line (see page 3-49 of the Final Environmental Impact Statement). The design of the proposed Interstate 10 and South Mountain Freeway system traffic interchange at 59th Avenue has received preliminary acceptance from the Federal Highway Administration, subject to completion of the National Environmental Policy Act process.

ISSUE: ALTERNATIVES, E1 ALTERNATIVE

Frequent comment: *Commenters expressed a belief that other action alternatives, in addition to the E1 Alternative, should have been studied in detail in the Draft Environmental Impact Statement.*

Response: Several action alternatives were subject to the alternatives development and screening process; not just the E1 Alternative and alternatives located on the Community (Figure 3-6 on page 3-10 of the Draft 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 proposed action 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. 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 proposed action. Therefore, there is no prudent and feasible alternative to avoid use of the mountains, and the E1 Alternative is the only action alternative available. 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 reconfirmed in the Final Environmental Impact Statement (see Chapter 3, *Alternatives*). Therefore, the Arizona Department of Transportation, with concurrence from the Federal Highway Administration, identified the E1 Alternative as the eastern section of the Preferred Alternative (which includes the W59 Alternative in the western section of the Study Area). In reaching its determination, the Arizona Department of Transportation sought to balance its responsibilities to address regional mobility needs while being fiscally responsible and sensitive to local communities.

ISSUE: ALTERNATIVES, NO-ACTION (NO-BUILD) ALTERNATIVE

Frequent comment: *Commenters expressed a desire to select the No-Action (No-Build) Alternative as the Preferred Alternative.*

Response: 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-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.

ISSUE: ALTERNATIVES, GILA RIVER INDIAN COMMUNITY ALIGNMENT

Frequent comment: *Commenters expressed a desire to locate the proposed freeway on Gila River Indian Community land.*

Response: Tribal sovereignty is based on the inherent authority of Native American tribes to govern themselves. States have very limited authority over activities within tribal land (see Final Environmental Impact Statement page 2-1). The Arizona Department of Transportation and Federal Highway Administration do not have the authority to survey tribal land, make transportation determinations directly affecting tribal land, or condemn tribal land through an eminent domain process.

While efforts to study project alternatives on Gila River Indian Community land were attempted (see Final Environmental Impact Statement Chapter 2, *Gila River Indian Community Coordination*), the Gila River Indian Community has long held a position of not allowing the proposed freeway to be located on its land. For example, a coordinated referendum of Gila River Indian Community members to favor or oppose construction of the proposed freeway on Gila River Indian Community land or to support a no-build option occurred in February 2012, and Gila River Indian Community members voted in favor of the no-build option. Moving forward, therefore, the proposed freeway cannot be located on the Gila River Indian Community (see Final Environmental Impact Statement page 3-25). The Gila River Indian Community’s position regarding a “no-build” option was considered in the Draft and Final Environmental Impact Statements. That position is formally known as the No-Action Alternative and was evaluated in depth in assessments of the impacts of the proposed freeway on each resource. Whether alignments to develop on Gila River Indian Community land are ultimately identified or not, the Federal Highway Administration, Arizona Department of Transportation, and Maricopa Association of Governments will continue to coordinate with the Gila River Indian Community regarding concerns and potential mitigation for those concerns.

ISSUE: ALTERNATIVES, NONFREEWAY ALTERNATIVES

Frequent comment: *Commenters expressed a desire for the Arizona Department of Transportation to invest in nonfreeway travel modes.*

Response: 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). 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 proposed 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 proposed 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 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.

ISSUE: BIOLOGY, PLANTS, AND WILDLIFE

Frequent comment: *Commenters expressed concerns about the impacts the proposed freeway would have on wildlife within and around the Phoenix South Mountain Park/Preserve area.*

Response: Within the context of overall vegetation, wildlife, and wildlife habitat, all action alternatives and options would 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 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 for technical assistance with minimizing impacts on listed and 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 proposed 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 proposed freeway was revised to incorporate an evaluation of the provided 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 potential implementation. The analysis of biological resources may be found beginning on page 4-125 of the Final Environmental Impact Statement. The informal consultation with the

U.S. Fish and Wildlife Service resulted in “no effect” findings for all listed and candidate species except for the Tucson shovel-nosed snake, which received a “may affect, but not likely to adversely affect” finding. Mitigation measures to conduct preconstruction surveys for the Tucson shovel-nosed snake and the Sonoran desert tortoise, where appropriate and after consultation with the Arizona Game and Fish Department, were added to the Final Environmental Impact Statement (see page 4-135).

The 51st Avenue travel corridor and planned development in the area adjacent to Phoenix South Mountain Park/Preserve have and will continue to degrade the ability of wildlife to move through those areas (see the sidebar, “*Existing versus planned land use*,” on page 4-3 of the Final Environmental Impact Statement). The Arizona Department of Transportation and Federal Highway Administration have committed to providing mitigation including multifunctional crossing structures designed for wildlife and for limited human use, potential fencing to guide wildlife to the crossing structures, and culverts designed for connectivity for smaller species. Wildlife-friendly design information would be considered during the design of drainage and crossing structures for the freeway (see *Mitigation*, beginning on page 4-138 of the Final Environmental Impact Statement).

ISSUE: CULTURAL RESOURCES

Frequent comment: *Commenters expressed that the South Mountains are sacred to Native American communities and should be protected from impacts from the proposed freeway.*

Response: 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 to understand the Gila River Indian Community’s way of life and to identify and evaluate places of religious, spiritual, and cultural importance to the Gila River Indian Community that may be adversely affected by the proposed 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 has identified traditional cultural properties that are eligible for listing in the National Register of Historic Places and that could be affected by construction of the proposed freeway. The religious, spiritual, and cultural importance of the South Mountains is acknowledged in the Draft Environmental Impact Statement in several locations, notably page 5-26. The proposed project would accommodate and preserve (to the fullest extent possible from the available alternatives) access to the South Mountains for religious practices. The traditional cultural properties identified are important to other Native American tribes as well. 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 Indian 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 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 any commitments made in a record of decision are completed.

ISSUE: HAZARDOUS MATERIALS

Frequent comment: *Commenters expressed concerns about the transport of hazardous materials on the proposed freeway.*

Response: 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 Arizona Department of Transportation has a few locations in the state with hazardous cargo restrictions, but these restrictions are based on specific or unique 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, if implemented, is expected to operate under the same rules as other similar facilities in the state; transport of hazardous cargo would be expected to be permissible (see text box on Final Environmental Impact Statement page 4-166).

The Arizona Department of Public Safety (which includes the State Highway Patrol) has primary responsibility for enforcing traffic laws. It also has primacy when calling in support for traffic accidents, including hazardous materials accidents (see text box on Final Environmental Impact Statement page 4-166). The Arizona Department of Environmental Quality maintains a list of contractors who provide emergency response services, as well as local municipalities whose fire and police departments operate in cooperation with the Arizona Department of Public Safety on incidents within their jurisdiction. Requirements for shippers are maintained by the Arizona Department of Transportation’s Enforcement Compliance Division.

In the event of an incident with a hazardous materials issue on a State or federal highway, the emergency responders contact the Arizona Department of Transportation’s Traffic Operations Center to report the incident. The Traffic Operations Center then contacts the Arizona Department of Transportation’s Safety and Risk Management group, which responds to the accident scene and assesses needs in concert with the Incident Commander from the responding agency with jurisdiction. If requested, the Arizona Department of Environmental Quality can assist cleanup activities by engaging specialty subcontractors with whom the Arizona Department of Environmental Quality has contracts for such support. The Arizona Department of Transportation Safety and Risk Management group’s charge is primarily public health protection, with cleanup support being secondary.

ISSUE: HEALTH EFFECTS

Frequent comment: *Commenters expressed concern that the South Mountain Freeway would be located within half a mile of schools and other sensitive locations, and that exposure to emissions from the South Mountain Freeway could lead to asthma, autism, and other adverse health effects.*

Response: 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. Health effects from air pollutants are based on the concentration of the pollutants and the duration of exposure. Concentrations vary with distance from a roadway based on many factors, including background (or ambient) levels of pollution from all sources; the number, speed, and type of vehicles on the roadway; wind speed and direction; topography; and other factors. For the proposed freeway, modeling for carbon monoxide and particulate matter (PM₁₀) 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). 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 (see discussion 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 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).

Many studies have investigated the prevalence of adverse health effects in the near-road environment. Given concerns about the possibility of air pollution exposure in the near-road environment, the Health Effects Institute has dedicated a number of research efforts toward investigating this issue. In November 2007, the Health Effects Institute published Special Report #16: Mobile-Source Air Toxics: A Critical Review of the Literature on Exposure and Health Effects. This report concluded that the cancer health effects attributable to mobile sources are difficult to discern because the majority of quantitative assessments are derived from occupational cohorts with high concentration exposures and because some cancer potency estimates are derived from animal models. In January 2010, the Health Effects Institute released Special Report #17, investigating the health effects of traffic-related air pollution. The goal of the research was to synthesize available information on the effects of traffic on health. Researchers looked at linkages between: 1) traffic emissions (at the tailpipe) with ambient air pollution in general, 2) concentrations of ambient pollutants with human exposure to pollutants from traffic, 3) exposure to pollutants from traffic with human-health effects

and toxicological data, and 4) toxicological data with epidemiological associations. Overall, researchers felt that there was “sufficient” evidence for causality for the exacerbation of asthma (see page 25 of the *Air Quality Technical Report* [2014]). Evidence was “suggestive but not sufficient” for health outcomes such as cardiovascular mortality and others. Study authors also noted that past epidemiological studies may not provide an appropriate assessment of future health associations because vehicle emissions are decreasing over time. Finally, in 2011 three studies were published by the Health Effects Institute evaluating the potential for mobile source air toxics “hot spots.” In general, the authors confirmed that while highways are a source of air toxics, they were unable to find that highways were the only source of these pollutants. They determined that near-road exposures were often no different or no higher than background (or ambient) levels of exposure and, hence, no true hot spots were identified. These reports are available from the Health Effects Institute’s Web site at <healtheffects.org>. The Federal Highway Administration and U.S. Environmental Protection Agency provide financial support to the Health Effects Institute’s research work.

Another source of information is the U.S. Environmental Protection Agency’s recently released report on Children’s Health and the Environment:

The level of knowledge regarding the relationship between environmental exposures and health outcomes varies widely among the topics [presented in this report], and the inclusion of an indicator in the report does not necessarily imply a known relationship between environmental exposure and children’s health effects. The report provides data for selected children’s health conditions that warrant further research because the causes, including possible contributing environmental factors, are complex and not well understood at this point.

In the case of asthma, researchers do not fully understand why children develop the condition. However, substantial evidence shows exposure to certain air pollutants, including particulate matter and ozone, can trigger symptoms in children who already have asthma. Although the report found the percentage of children reported to currently have asthma increased from 8.7 percent in 2001 to 9.4 percent in 2010 and that minority populations are particularly affected by asthma, the severity of children’s asthma and respiratory symptoms has declined. The rate of emergency room visits for asthma decreased from 114 visits per 10,000 children in 1996 to 103 visits per 10,000 children in 2008. Between 1996 and 2008, hospitalizations for asthma and for all other respiratory causes decreased from 90 hospitalizations per 10,000 children to 56 hospitalizations per 10,000 children.

The report also looks at trends in other health conditions, such as Attention-Deficit/Hyperactivity Disorder (ADHD) and preterm births, for which rates have increased. There is no conclusive information on the role of environmental contaminants in ADHD or preterm births, and additional research is ongoing.

Finally, the Federal Highway Administration notes that while the incidence of some health effects (such as asthma, autism, and attention deficit/hyperactivity disorder) in the U.S. population appear to have been increasing, motor vehicle emissions have declined. This decline in mobile source air toxics emissions is documented in Figure 4-24 of the Final Environmental Impact Statement and for other pollutants at <epa.gov/ttn/chief/trends/>. This negative correlation between emissions trends and health effects trends illustrates the complexity of the issues.

ISSUE: NOISE

Frequent comment: *Commenters expressed concerns about the increase in noise from the proposed freeway alternatives.*

Response: 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. This report may also be found on the study Web site at <azdot.gov/southmountainfreeway>.

Without noise mitigation, noise levels from the proposed 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 would not be reduced as much and would be as high as 64 A-weighted decibels to 70 A-weighted decibels in those areas.

Although not recognized by the Federal Highway Administration as mitigation, rubberized asphalt would be used as the top level of paving; it is discussed beginning on Final Environmental Impact Statement page 4-99.

ISSUE: PURPOSE AND NEED, OLD PLAN OR USE OF OLD DATA

Frequent comment: *Commenters expressed concerns that the project is based on a plan from the mid-1980s and that the study used older data (prior to the economic downturn) to establish the purpose and need for the proposed freeway.*

Response: 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. Key model inputs used to forecast travel demand included (see Table 3-7 on Final Environmental Impact Statement page 3-27):

- socioeconomic data based on the adopted general plans of Maricopa Association of Governments members, which includes projected growth in population, housing, and employment (including proposed commercial centers), along with economic forecasts and the existing and planned transportation infrastructure as identified by Maricopa Association of Governments members
- 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)
- the distribution of transportation modes used by travelers in the Maricopa Association of Governments region (also tracked regularly by the Maricopa Association of Governments)
- the capacity of the transportation infrastructure to accommodate regional travel

- the future transportation infrastructure established using Regional Transportation Plan-planned projects and improvements and from known arterial street network improvements assumed to be made by the County, Cities, and private developers

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 was the most appropriate information available.

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*).

ISSUE: PURPOSE AND NEED, TRUCK BYPASS

Frequent comment: *Commenters expressed a belief that the proposed freeway would serve as a truck bypass.*

Response: Creating a truck bypass is not a goal of the proposed freeway. The proposed freeway is part of a transportation system developed to improve mobility in the region by increasing capacity and allowing traffic—including truck traffic—to access a segment of the “loop” system (see pages 1-21, 1-22, 3-1, and 3-3 of the Final Environmental Impact Statement) in the Phoenix metropolitan area. 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. 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. As disclosed in the Final Environmental Impact Statement, it is expected that “true” through-truck traffic (not having to stop in the metropolitan area) would 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).

ISSUE: PURPOSE AND NEED, LACK OF SUPPORT

Frequent comment: *Commenters expressed opposition to the proposed freeway based on a lack of need or the belief that it is not supported by local communities or that it would not be used by local travelers or regional commuters.*

Response: Providing a new freeway in an area where it would not be fully used would be an unwise expenditure of public funds. Of the projected 51 percent increase in population, 39 percent increase in housing units, and 69 percent increase in jobs between 2010 and 2035 in the Phoenix metropolitan area, nearly half of these increases are expected in areas that would be immediately served by the proposed freeway (see Final Environmental Impact Statement page 1-21). When the Arizona Department of Transportation determines whether a freeway should be built, the agency must consider numerous factors, including local and regional

transportation needs, project costs, and environmental considerations. Decisions regarding freeway projects are based on the transportation needs of the entire Phoenix metropolitan area as part of a comprehensive, multimodal, regional approach. The proposed freeway is a major component in the Regional Freeway and Highway System. Additionally, the proposed freeway is an important component of past and current planning efforts. Maricopa County, Phoenix’s villages (Laveen, Estrella, and Ahwatukee Foothills), Tolleson, and Avondale have all made transportation, land use, and economic planning decisions in a context of the proposed freeway operating in the Study Area. Finally, the proposed freeway would function as intended in the *Regional Transportation Plan*.

ISSUE: SECTION 4(f) AND SECTION 6(f)

Frequent comment: *Commenters expressed concerns about the impacts the proposed freeway would have on the South Mountain Park/Preserve or expressed that the park should be protected.*

Response: 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 Final Environmental Impact Statement page 5-14).

The proposed freeway would pass through the park’s southwestern edge. Section 4(f) of the Department of Transportation Act 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*]. The project team examined alternatives to avoid the Phoenix South Mountain Park/Preserve, but did not identify any feasible and prudent alternatives to avoid the use of the park. The portion of the park that would be used for the proposed freeway would 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). Nine-tenths of a mile of the proposed freeway would pass through the park’s southwestern edge (see Final Environmental Impact Statement page 5-13). Phoenix South Mountain Park/Preserve would 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) would remain.

Measures to minimize harm to the park were developed (see Final Environmental Impact Statement, starting on page 5-23). These measures, which were committed to by the Federal Highway Administration and the Arizona Department of Transportation, include securing replacement lands for parkland converted to a transportation use. During the design phase, the Arizona Department of Transportation would consult directly with the Phoenix City Manager’s office to identify and implement other additional design measures, including aesthetic treatment of the mountain cuts, landscaping, and structures, to further reduce land needed

and impacts from the proposed freeway. The City Manager’s office represents its constituents, including the Sonoran Preserve Advisory Committee, Phoenix Mountains Preservation Council, Mountain Bike Association of America, Phoenix Parks and Recreation Board, and Arizona Horsemen’s Association.

ISSUE: TRUCKS

Frequent comment: *Commenters expressed a belief that the proposed freeway would be the primary route for heavy trucks originating in Mexico and that this would result in air quality impacts not considered in the study.*

Response: 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 would operate under the same rules as other similar facilities in the state; truck traffic would 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.

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 (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 (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 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).

FORM LETTER COMMENTS AND RESPONSES

Code	Comment Document
	<div><div>ADOT</div><div><div><div>From:</div><div>Sierra Club <information@sierraclub.org> on behalf of Thierry Deshayes <uncleterr@hotmail.com></div></div><div><div>Sent:</div><div>Monday, June 03, 2013 3:42 PM</div></div><div><div>To:</div><div>Projects</div></div><div><div>Subject:</div><div>Comments in opposition to South Mountain Freeway</div></div><div><div>Follow Up Flag:</div><div>Follow up</div></div><div><div>Flag Status:</div><div>Completed</div></div></div><div><div>Jun 3, 2013</div><div>Arizona Department of Transportation South Mountain Study Team 1655 W Jackson St, MD 126F Phoenix, AZ 85007</div><div>Dear South Mountain Study Team,</div><div><div>1</div><div>I am writing to express my opposition to the proposed South Mountain Freeway and to urge ADOT to select the No-Build Alternative.</div></div><div><div>2</div><div>The proposed freeway would cause more problems than it would solve. In addition, it would only provide short-term congestion relief. As is evident by our numerous clogged roads and freeways, many of which have recently been built or widened, building more roads is not the answer.</div></div><div><div>3</div><div>ADOT needs to instead focus on planning for and investing in long-term transportation solutions, including mass transit. The only way to effectively reduce congestion and mobilize people is by reducing the number of vehicles utilizing our roads, not by encouraging more to use them.</div></div><div><div>4</div><div>South Mountain Freeway would have incredible negative impacts on our communities. Despite what the DEIS claims, air quality in the region would worsen over time, increasing public health risks. As more vehicles fill the "uncongested" areas this freeway would temporarily provide, more pollution will be spewed into the air, exacerbating asthma, cancer, and other diseases.</div></div><div><div>5</div><div></div></div><div><div>6</div><div>7</div><div>The freeway would also negatively effect our environment. South Mountain Park is the largest city park in our nation. It was set aside to protect resources and to benefit our communities. By blasting a freeway through a portion of this park, wildlife and habitat will be destroyed, movement corridors will be cut off, valuable public spaces will be lost, and more. This would set a terrible precedent by demolishing what should remain a protected area.</div></div><div><div>8</div><div>The freeway will also exacerbate urban sprawl and further burden Arizona's taxpayers. Its construction would continue ADOT's trend of forcing residents to remain vehicle-dependent while paying for infrastructure so that others can live farther and farther from a city center.</div></div><div><div>1</div><div>Please help protect our communities, our health, and our environment by selecting the No Action Alternative. Thank you.</div></div><div><div>Sincerely,</div><div>Mr. Thierry Deshayes Scottsdale Unified #48 Scottsdale, AZ 85251-1418 Don't call.</div></div></div></div>

Code	Issue	Response
1	Alternatives, No-Action (No-Build) Alternative	The Arizona Department of Transportation and Federal Highway Administration identified several issues and concerns that were frequently noted by commenters. Responses to these issues can be found in the <i>Responses to Frequently Submitted Public Comments</i> beginning on page C66 of this Volume IV.
2	Purpose and Need, Old Plan or Use of Old Data	<p>The Arizona Department of Transportation and Federal Highway Administration identified several issues and concerns that were frequently noted by commenters. Responses to these issues can be found in the <i>Responses to Frequently Submitted Public Comments</i> beginning on page C66 of this Volume IV.</p> <p>Although the region’s freeways are now congested during the peak travel period, conditions in 2035 without the proposed freeway would be substantially worse with more congested areas and congested conditions for longer periods of time (see Final Environmental Impact Statement pages 1-21 and 1-22).</p> <p>Congestion relief resulting from the proposed freeway would provide localized reductions on arterial streets and at interchanges. Reduced travel times would result in lower exposure to elevated concentrations of mobile source air toxics occurring in traffic. Other benefits of the proposed freeway in comparison to the No-Action Alternative are presented in Table 3-9 on page 3-38 of the Final Environmental Impact Statement.</p>
3	Alternatives	Federal regulations stipulate that an environmental impact statement shall “rigorously explore and objectively evaluate all reasonable alternatives” (40 Code of Federal Regulations § 1502.14; see Final Environmental Impact Statement page 3-1). All alternatives were screened using a multidisciplinary set of criteria. Nonfreeway alternatives were considered (see Final Environmental Impact Statement pages 3-3 through 3-6). Among other things, the study took into account improving existing freeways, improving or expanding other travel modes, strategies to reduce travel demand, and various roadway configurations. This study examined not only the potential impacts from improvements, but also the consequences of building nothing, the No-Action Alternative. As proposed by the Maricopa Association of Governments, the South Mountain Freeway would be part of the Regional Freeway and Highway System. Other transportation improvements such as mass transit and local roads are specified in the <i>Regional Transportation Plan</i> and were considered during the evaluation of this proposed new freeway. As noted in the Final Environmental Impact Statement (see page 3-60), the proposed freeway would provide opportunities to enhance operation of future mass transit improvements. As noted on page 3-60 of the Final Environmental Impact Statement, construction and operation of any of the action alternatives would create opportunities for Arizona Department of Transportation and local jurisdictions to identify additional enhancements. For example, excess right-of-way could be used for other public infrastructure projects such as park-and-ride lots for mass transit or bicycle/multiuse paths. During the design phase, the Arizona Department of Transportation, local municipalities, the Community, Valley Metro, and the Maricopa Association of Governments would work together to identify and create enhancement opportunities.

Code	Comment Document		
	The previous comment was received 4 times from the following people:		
	First name	Last name	Address
	Thierry	Deshayes	Scottsdale Unified #48 Scottsdale, AZ 85251-1418
	Cindee	Hillstrom	403 E Glenhaven Dr Phoenix, AZ 85048-2061
	Patricia	Orlinski	10511 W Kingswood Cir Sun City, AZ 85351-2246
	Mary	Wilber	PO Box 36493 Tucson, AZ 85740-6493

Code	Issue	Response
4	Air Quality	The Arizona Department of Transportation and Federal Highway Administration identified several issues and concerns that were frequently noted by commenters. Responses to these issues can be found in the <i>Responses to Frequently Submitted Public Comments</i> beginning on page C66 of this Volume IV.
5	Health Effects	
6	Section 4(f) and Section 6(f)	
7	Biology, Plants, and Wildlife	
8	Neighborhoods/Communities	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 proposed 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 the proposed freeway do not induce growth in the region (see Final Environmental Impact Statement pages 4-179 through 4-183). The proposed action would 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 proposed freeway would abut public parkland, Native American land, and a near-fully developed area—therefore, any contribution to accelerated or induced growth would be constrained. The proposed freeway would be built in an area planned for urban growth as established in local jurisdictions’ land use plans for at least the last 25 years. As noted on page 4-3, impacts on the Community from the proposed action, as presented in Final Environmental Impact Statement, are based on data available to the general public and on field observation as appropriate. Any proposed development of Community lands is unknown.

CITIZEN COMMENTS AND RESPONSES

Code	Comment Document
	<div>ADOT</div> <div><div><div>From:</div><div>Sent:</div><div>To:</div><div>Subject:</div></div><div><div>Krystal Correa <krystalmarie.correa@gmail.com></div><div>Wednesday, July 24, 2013 9:41 AM</div><div>Projects</div><div>Loop 202 opposition</div></div></div>
	<p>To whom it may concern:</p> <div><div><div>1</div><div>2</div></div><div>3</div><div><div>4</div><div>5</div></div></div> <p>I am writing to express my opposition against the Loop 202 expansion that would go harm indigenous lands. This is a multi-million dollar project that would save very little time, and it does not appear to be worth it. This freeway has also been voted against several times by the GRIC, and as such should not even be on the table at this point. I vehemently disagree with any project that would cause the massive amount of pollution this freeway will cause. Perhaps this money would be better put towards making Phoenix a more non-car commuter friendly city. Increase the bike lanes, put forward more money towards marketing Phoenix as a place to be without a car. Instead of throwing money at a freeway that will harm communities and land.</p> <div><div>1</div></div> <p>I must also express my frustration that the DEIS goes out of its way to protect private property, but absolutely destroys ancestral lands held sacred by GRIC. This throw-away opinion of indigenous lands and people is harmful, ridiculous, and racist. Please STOP advocating for this freeway.</p> <p>Sincerely, Krystal M. Correa</p>
	<div>1</div>

Code	Issue	Response
1	Cultural Resources	The Arizona Department of Transportation and Federal Highway Administration identified several issues and concerns that were frequently noted by commenters. Responses to these issues can be found in the <i>Responses to Frequently Submitted Public Comments</i> beginning on page C66 of this Volume IV.
2	Purpose and Need, Old Plan or Use of Old Data	<p>The Arizona Department of Transportation and Federal Highway Administration identified several issues and concerns that were frequently noted by commenters. Responses to these issues can be found in the <i>Responses to Frequently Submitted Public Comments</i> beginning on page C66 of this Volume IV.</p> <p>Although the region’s freeways are now congested during the peak travel period, conditions in 2035 without the proposed freeway would be substantially worse with more congested areas and congested conditions for longer periods of time (see Final Environmental Impact Statement pages 1-21 and 1-22).</p> <p>Congestion relief resulting from the proposed freeway would provide localized reductions on arterial streets and at interchanges. Reduced travel times would result in lower exposure to elevated concentrations of mobile source air toxics occurring in traffic. Other benefits of the proposed freeway in comparison to the No-Action Alternative are presented in Table 3-9 on page 3-38 of the Final Environmental Impact Statement.</p>
3	Alternatives, Gila River Indian Community Alignment	<p>The Arizona Department of Transportation and Federal Highway Administration identified several issues and concerns that were frequently noted by commenters. Responses to these issues can be found in the <i>Responses to Frequently Submitted Public Comments</i> beginning on page C66 of this Volume IV.</p> <p>The proposed freeway is part of the <i>Regional Transportation Plan</i> for the Maricopa Association of Governments region. The <i>Regional Transportation Plan</i>, 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 proposed 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.</p>
4	Air Quality	
5	Alternatives, Nonfreeway Alternatives	

Code	Comment Document
1	<p>From: Jack Lunsford [mailto:jackwlunsford13@gmail.com] Sent: Thursday, June 06, 2013 7:13 PM To: Projects Subject: I have been involved in every major transportation effort in Maricopa County & the State since 1985. I have served on the Citizens Transportation oversight Committee for Maricopa County, appointed by two different governors. During my time on these eff...</p> <p>Jack W Lunsford, President The Lunsford Group, LLC</p> <hr/> <p><small>Confidentiality and Nondisclosure Notice: This email transmission and any attachments are intended for use by the person(s)/entity(ies) named above and may contain confidential/privileged information. Any unauthorized use, disclosure or distribution is strictly prohibited. If you are not the intended recipient, please contact the sender by email, and delete or destroy all copies plus attachments.</small></p>

Code	Issue	Response
1		Comment noted.

Code	Comment Document
	<div>ADOT</div> <div><div><div>From:</div><div>26point2@cox.net</div></div><div><div>Sent:</div><div>Wednesday, July 24, 2013 3:26 PM</div></div><div><div>To:</div><div>Projects</div></div><div><div>Subject:</div><div>Comments on the Draft EIS for the Loop 202 South Mountain Freeway</div></div></div>
1	<p>I am a 15 year resident of AZ, and have spent all my time living in the Ahwatukee area of the state. I have previously voiced my position of "No Build" and will take this opportunity to do so again. I have not seen anything summarized in the report that changes my position. In fact, the report increases my level of concern with regards to the impact the proposed freeway will have on our community, Phoenix and the State as a whole.</p>
2	<p>My greatest concern is the way in which the alignment being considered cuts through South Mountain Park. Part of the reason I, and others moved to this area was because of the overall look and feel of the city, a key piece of this is the open, preserved space South Mountain provides.</p>
3	<p>The summary states "Alternatives to avoid use of the South Mountains TCP were evaluated and determined to be not prudent and feasible". The report has pages and pages of commentary yet, with regard to South Mountain – it is how we will mitigate the impact, as if we have no way to avoid it. We do have a choice, do not build it. The report tries to justify the billions needed to "complete the loop" around the city. And while that loop may have looked "nice" on the map drawn back in 1985, the justification logic used, impact and costs are now outdated, the city and state will not benefit from blind adherence to a plan that needs to be revisited.</p> <p>This need to cut into South Mountain is justified by population data presented throughout the report. Growth figures are provided based on population numbers from 2005 & 2010 for a report written in late 2012! Why are we basing the decision to support a 28+ year old idea with outdated numbers? Is it the most recent numbers don't support the 2035 population estimates?</p> <p>We are no longer on track to reach the levels of population used as justification for the 1985 plan. It is time to revisit the plan before making a tragic mistake and permanently ruining South Mountain Park and the environment that is partly responsible for the growth the city has experienced to date.</p>
4	<p>Further justification for the continuing to build is also suspect. In 2004, voters did approve the continuation of the half – cent tax to support the long range transportation plan. However, the report describes the results as if it were a yes / no vote on whether or not to build the freeway. There were multiple aspects of the transportation plan that were supported, and at the time of the vote the map provided as part of the election materials showed the alignment of the freeway with an asterisk as "alignment still to be determined". Saying that because 52% of voters in the county approved a plan that called out a note for additional study as now meaning that the majority of residents want to cut a slice through South Mountain is a blatant miss-use of statistics.</p>
3	<p>Before this freeway is built the MAG should reconcile the population projections and actuals for all time periods. Economy slowdown or not, are we on track to have 1 million more residents in 2015 than 2005, as your justification info declares??- -- NO.</p> <p>The South Mountain Freeway is no longer the solution – logic, facts and assumptions that were in place in 1985 are no longer valid and to march blindly ahead to a direction established 28 yrs. ago is irresponsible. The MAG will be leaving an irreversible mark on Phoenix, the Gila River community and the state and the price will be paid by the future of our city.</p>
	1

Code	Issue	Response
1	Alternatives, No-Action (No-Build) Alternative	The Arizona Department of Transportation and Federal Highway Administration identified several issues and concerns that were frequently noted by commenters. Responses to these issues can be found in the <i>Responses to Frequently Submitted Public Comments</i> beginning on page C66 of this Volume IV.
2	Section 4(f) and Section 6(f)	
3	Purpose and Need, Old Plan or Use of Old Data	
4	Purpose and Need	The Draft Environmental Impact Statement does not claim that the South Mountain Freeway has ever been subject to a public vote. The Draft Environmental Impact Statement states that the South Mountain Freeway has been included in regional transportation plans since 1985 and, on two occasions, Maricopa County voters have approved a half-cent sales tax to fund the projects in the regional transportation plan.

Code	Comment Document	
1	ADOT	
	From:	Michelle <mblyoung@aol.com>
	Sent:	Friday, May 17, 2013 5:59 PM
	To:	Projects
	Subject:	Please complete the 202. It is time!!!!!!
Sent from my iPad. Michelle		
1		

Code	Issue	Response
1		Comment noted.

Code	Comment Document
	<div><div>ADOT</div><div><div><div>From:</div><div>Sent:</div><div>To:</div><div>Subject:</div></div><div><div>Tuesday, June 11, 2013 10:29 PM</div><div>Projects</div><div>South Mountain Freeway</div></div></div></div> <div><div>1</div><div><p>I have lived in Ahwatukee since 1995 and don't understand why ADOT seems to be at the same place they were 10 years ago. I thought this decision had been made already but here we go again. This has been haunting Ahwatukee for way too long – especially those who live along the Pecos pathway who have homes and home values that have been and will continue to be affected. There is probably more tax dollars being spent on consultants, ongoing studies, meetings, planning and replanning with lack of decisions or change in plans from previous decisions.</p><p>For my personal opinion, it was decided as necessary back then and is even more so now with increased traffic. I was recently job hunting, and ruled out a very good job in downtown Phoenix because of the awful traffic on I10 and the Broadway curve. I know there is an impact along Pecos and those further in the Foothills don't want their "cul-de-sac" disrupted, but it is the best decision for growth in the Valley. With any new freeway, there will always be dissenters. Wasn't that the case with the 202 (San Tan) and 101?</p></div></div>
	1

Code	Issue	Response
1		Comment noted.