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Via email at projects@azdot.gov
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7010 1060 0002 2186 3861

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

**Re: South Mountain Freeway, ADOT Project Number: 202L MA 054 H5764
01L Federal-aid Project Number: NH-202-D(ADY)**

Dear South Mountain Freeway Project Team:

This letter is written on behalf of the Phoenix Mountain Preservation Council, Inc. (PMPC) with regard to the Final Environmental Impact Statement (FEIS) and Section 4(f) Evaluation prepared by the Federal Highway Administration (FHWA) and the Arizona Department of Transportation (ADOT) under the National Environmental Policy Act, 42 U.S.C. § 4321, *et seq.* (NEPA), Section "4(f)" of the U.S. Department of Transportation Act, 49 U.S.C. § 303, and applicable law.

PMPC opposes any alignment of the Loop 202 South Mountain Freeway ("SR 202L" or "the project") that would trespass onto the South Mountain Park/Preserve ("SMPP" or "the Park") or result in the destruction of ridgelines or lands within Park. Our mountain preserves ensure a lifestyle that 80% of Arizona voters consistently support. The mountain preserves are unique and are for people and wildlife, not for vehicle trespass. PMPC is also concerned that the alignment of SR 202L will adversely impact our public parks and schools and the important recreational and other opportunities that these public places provide.

The PMPC is an organization put into place by Arizona visionaries. For the last 40 years, PMPC members have worked tirelessly to preserve and protect our precious Mountain Preserve system and to monitor and address the rapid population that surrounds these important public resources, through advocacy, education, political action and collaboration with citizens, the City of Phoenix and other like-minded organizations and agencies.

PMPC members and people not only from Arizona, but from around the world, heavily use the Phoenix Preserves to recreate for physical and mental health in a unique Sonoran Desert environment that is quickly disappearing as the result of development and growth. The serene and close proximity to a large urban area makes South Mountain Park/Preserve a convenient place for everyone to reflect, hike, bike, horseback ride, and study flora and fauna within minutes of our homes. Destruction of any part of this natural resource will disrupt and destroy the plant and wildlife as well the visual, tranquil recreation experience.

The PMPC Board is made up of an Executive Board consisting of a president, vice-president, treasurer, secretary and recording secretary and supported by 15 board members. Monthly meetings are held January through September and are open to the public. Committees are regularly formed to address specific projects and meet as needed. Annual dues are collected to support a quarterly newsletter, webpage and North Mountain Visitor Center rental. Membership is open to anyone.

As discussed in greater detail below and in our prior comments on this project, ADOT and the FHWA (collectively, “the Departments”) have failed to fulfill their statutory obligations under NEPA, Sec. 4(f) and other applicable provisions of law. For this reason, PMPC urges the Departments to take a step back and revisit the FEIS and the Section 4(f) process in order to meaningfully address the serious failings in these documents that do not adequately identify, analyze, minimize or mitigate for the impacts of this project.

PMPC reserves the right to submit additional comments to any supplemental materials or new information or analysis prepared by the Departments in relation to this project. In addition, PMPC expressly incorporates the comments of Protecting Arizona’s Resources and Children (PARC), as well as those comments submitted on behalf of our individual members, including but not limited to those filed by Robin Salthouse, Sally Lindsay, Jan Hancock, Wendy Hodgson, Patrick McMullen, and Susanne Rothwell.

I. The South Mountain Park/Preserve Is a Unique and Valuable Public Resource

“The natural beauty of our horizon, our close-in mountain slopes and natural areas – this is the very substance of the natural environment that has been so instrumental in the population and economic growth of this region. The grand scale and rugged character of these mountains have set our lifestyle, broadened our perspective, given us space to breathe, and freshened our outlook. These mountains are the plus that still outweighs the growing minuses in our environmental account.” In Luckingham, preserve advocate (1989).

South Mountain Park/Preserve is one of the largest municipally operated parks in the country. It has been called the “centerpiece” of the Phoenix Sonoran Preserve System. FEIS at 5-14. The Park’s roots date back to 1924, when local citizens, who recognized the unique value and importance of the area, first started the process to obtain 13,000 acres of the Park from the United States. Later, under the Civilian Conservation Corps programs, trails were improved and recreational and other structures were built in the Park. The National Park Service drafted a park plan in 1935 that included a myriad of uses for the Park, including hiking, riding, picnic areas, and scenic overlooks.¹ Both the Phoenix Historic Preservation Office and the State Historic Preservation Office (SHPO) agree that SMPP is eligible for listing on the National Historic Register of Historic Places under Section 106 of the National Historic Preservation Act, 16 U.S.C. § 470, *et seq.* (NHPA).

With more than 16,000 acres of rugged, biologically diverse and beautiful desert habitat preserved in the urban environment, SMPP is known by both locals and travelers from around the world as a recreation gem and tourist destination. With more than 51 miles of primary trails for horseback riding, hiking and mountain biking, SMPP was wisely set aside for human enjoyment and the protection of wildlife and natural habitats.

Today, SMPP remains a place of profound solace and peace in our often noisy and hectic lives, while its steep ranges, rocks, soil, plants and animals – as they exist in the natural world – continue to play a role in the spiritual and cultural identity of tribal members of the Gila River Indian Community and other Indian tribes in the region.

From the Park’s main entrance, you can drive up the Summit Road 5.5 miles to Dobbins Lookout and spectacular valley wide views or you can continue to the Gila Lookout for a view of the Gila River Valley. The main entrance also offers access to hiking, picnicking, interpretive centers and many other recreational uses. From its rugged south side, visitors have access to multiple historic and newly created trails that offer everything from a short hike or mountain bike ride, to a long day on horseback, all of which provide an opportunity to enjoy beautiful scenery and great horizon views in virtually every direction.

SMPP also protects important cultural, archaeological and historic resources and is a place where people of all ages can learn about the Sonoran desert and the rich cultural history of the area. Indeed, the SMPP embodies virtually all of the goals found within the *Sonoran Preserve Master Plan* which was prepared in 1998 by the City of Phoenix Parks, Recreation and Library Department and which received enthusiastic support from City of Phoenix and many urban village planning committees throughout the region. The *Master Plan* at 14, explains that the goals of Phoenix’s mountain preserves, are to:

¹ <https://www.phoenix.gov/parks/trails/locations/south-mountain/civilian-conservation-corps>

- Connect significant public open spaces, utility corridors, canals, freeways, and recreation areas already owned or proposed by city, county, state, or federal agencies
- Preserve wildlife corridors and significant desert ecosystems along drainageways by preserving the natural desert wash characteristics such as low velocity, sedimentation, and dispersed flows
- Provide passive recreational opportunities for wildlife viewing, nature study, picnicking, outdoor interpretation, and education
- Provide alternative transportation corridors for walking, commuter and recreational bicycling, and horseback riding
- Preserve significant views, cultural resources, and visual landmarks such as large tree bosques, rock outcroppings, historic features, and archaeological sites
- Establish management, maintenance, acquisition, and funding guidelines that respond directly to these increased open space standards and encourage public/private partnerships
- Encourage, to the greatest extent possible, the inclusion of land and specific sites that allow access for people of all abilities to appreciate and enjoy the Sonoran Desert

ADOT's plans for the SR 202L would undermine and/or significantly harm almost every one of the goals outlined in the *Sonoran Preserve Master Plan*. While the Departments downplays the significant impacts that the SR 202L project would have on SMPP and other parks and recreation areas within the region in their NEPA and 4(F) documents, those who use and enjoy these resources are acutely aware that the project would result in the destruction of parts of three mountain ridges (two within the SMPP), see FEIS at 5-14 & 5-19, Figure 5-11, bisect historic recreation trails, undermine the historic integrity of the SMPP, and disturb its tranquility and quiet enjoyment, harm wildlife and biological resources and wildlife and plant corridors, adversely impact significant views and aesthetic values of the Park and degrade desert ecosystems, including washes and drainageways, among many other adverse impacts.

II. The FEIS Fails to Comply with the Requirements of NEPA and Applicable Law

The Departments fail to take the "hard" look required by NEPA on a variety of fronts, which are discussed in greater detail below. As ADOT and the NHWA are well aware, NEPA imposes important procedural requirements designed "(1) to ensure the agency will have detailed information on significant environmental impacts when it makes its decisions; and (2) to guarantee that this information will be available to a

larger audience.” *Inland Empire Pub. Lands Council v. U.S. Forest Serv.*, 88 F.3d 754, 758 (9th Cir. 1996). The NEPA procedures used by agencies “must insure that environmental information is available to public officials and citizens before decisions are made and before actions are taken.” 40 C.F.R. § 1500.1(b). Thus, the “NEPA process is intended to help public officials make decisions that are based on understanding of environmental consequences, and take actions that protect, restore, and enhance the environment.” 40 C.F.R. § 1500.1(c).

The FEIS, however, fails to live up to these important requirements of NEPA. Instead, the Departments have failed to (a) disclose and take a hard look at the project’s impact on recreational uses and values and the role of the Park in the cultural identity of Phoenix, which are all an important resource under NEPA; (b) meaningfully examine and fully consider the effects of the project on other important aspects of the affected environment, such as biological resources, air,² water, visual resources and historical and cultural resources; (c) identify and analyze cumulative impacts of the project, including past, present and reasonably foreseeable future actions; (d) disclose or discuss mitigation plans in sufficient detail to ensure that the environmental consequences of the action have been fairly evaluated by the Departments and the public at large; and (e) address other important requirements of NEPA.

A. The FEIS Fails to Disclose and Take a “Hard Look” at the Impact of the SR 202L Project on Recreational Uses and Values

Under NEPA, environmental factors must be considered on an equal basis with other, more traditional, concerns. See *Foundation for North American Wild Sheep v. United States Department of Agriculture*, 681 F.2d 1172, 1177 (9th Cir. 1982). With this approach to decision making, agencies must take the necessary “hard look” at environmental consequences before approving any major federal action. See *Kleppe v. Sierra Club*, 427 U.S. 390, 410, n.21, 96 S. Ct. 2718, 49 L. Ed. 2d 576 (1976). This includes impacts to recreational uses and values. See, e.g., *LaFlamme v. FERC*, 852 F.2d 389 (9th Cir. 1988).

The E1 Alternative for SR 202L would cut through the southwestern end of the SMPP, blasting through ridges, bisecting trails and injecting substantial direct, indirect and cumulative impacts to the recreational purposes, uses, and values of the Park. This, in turn, will have significant economic impacts due to loss of tourism and Park visitorship. However, the FEIS completely fails to examine and fully consider the project’s impact on these important aspects of the affected environment.³ This failure is surprising since

² Poor air quality is a well document problem in Maricopa County. As noted by the EPA in its communications to the Departments regarding the project, the FEIS and background analysis wholly fails to address the substantial human health impacts arising from the direct, indirect and cumulative effects of the project.

³ While the Departments provide a limited discussion of some aspects of recreation (visual and trails) in the Sec. 4(f) evaluation found at Chapter 5 of the document, this is not a substitute for NEPA compliance, nor could it be given the limited analysis contained therein. See *South Fork*

ADOT and the NHTSA admit in the summary to the FEIS that “[v]isual and noise intrusions would affect rural, natural areas and recreational areas adjacent to the E1 Alternative.” FEIS at S-12, Table S-3, Environmental Impact Summary Matrix (emphasis added); see also FEIS at 4-191 (“Implementation of the E1 Alternative would adversely affect recreational, visual, natural, and cultural values of resources in the South Mountain”). In addition, the Departments acknowledge as part of the 4(f) evaluation that at least 16 other existing or planned parks (in addition to SMPP) are adjacent to or near one of the alternatives to the planned freeway,⁴ and that 12 Public School Recreational Facilities are similarly located nearby (some less than 100 feet from the proposed E1 Alternative).⁵

Recreational uses that would be affected by the project include (among other things), hiking and horseback riding, mountain biking, passive recreational opportunities for wildlife viewing, nature study and the enjoyment of scenic views and rock outcroppings, picnicking, outdoor interpretation, and the rare opportunity for quiet enjoyment in the Sonoran Desert, so close to an urban environment.⁶ These forms of recreational uses provide substantial benefits to the health and well-being of citizens of Phoenix and visitors from around the world.⁷

Recreational activities are well documented as having a myriad of direct benefits beyond physical fitness, including stress reduction, enhancing mental health and feelings of personal well-being, and the treatment of mental health related illnesses, including even post-traumatic stress disorder – a problem that our returning veterans

Band Council of W. Shoshone v. DOI, 588 F.3d 718, 726 (9th Cir. 2009) (explaining that a “non-NEPA document . . . cannot satisfy a federal agency’s obligations under NEPA.”).

⁴ See Section 4(f) Evaluation at 5-13, Figure 5-7. In addition, Fig. 5-7 fails to identify Vista Canyon Park, which is an existing Phoenix City Park. See: https://www.phoenix.gov/pdds/Document/Document/pdd_pz_pdf_00021.pdf#search=ahwatukee%2520village%2520parks

⁵ See *id.* at 5-11, Figure 5-6.

⁶ The FEIS fails to identify the newer Bursera Trail, located a mile north from Pecos Road, in Figure 5-6 and Figure 5-8, which is located off 19th Ave., on south side of SMPP. Pyramid goes northeast while Bursera travels to the southwest. This trail will be significantly impacted by noise and view shed impacts despite the fact that this error was pointed out in comments on the Draft Environmental Impact Statement (DEIS). <https://www.phoenix.gov/parks/Document/Document/062880.pdf>

⁷ It is noteworthy that the original area of South Mountain Park was conveyed from the U.S. Government to the City of Phoenix under a series of grants issued under a Special Act of Congress, 43 Stat. 643, P.L. 68-256 ch. 334 (June 7, 1924). The Act specifies that the conveyed South Mountain Park area were conveyed for a number of purposes, including for municipal, park, recreation, and playgrounds.

have struggled with in great numbers over the last decade of multiple deployments and combat.⁸

The FEIS explains that all of the action alternatives would be on a common alignment through SMPP, with 0.9 mile of freeway actually passing through the southwestern edges of the Park, resulting in the “direct use” of approximately 31.3 acres of parkland. See, e.g., FEIS at S-39. This characterization of the project’s impact on the SMPP and its recreational uses and values ignores the larger (and likely irreparable) impacts that would result from the freeway construction project and the destruction of recreational uses and values, soil crusts, desert washes and drainages, plants and biodiversity and other important features of the Park, both during and after construction.

In fact, it is difficult to see how the construction (including blasting) and the ultimate presence of a large freeway cutting through or adjacent to these recreation lands would not impose substantial direct, indirect and cumulative impacts to the recreational uses and overall integrity of the Park as discussed here, due to visual and view shed impacts, aesthetic impacts, air quality and haze, increased noise and traffic, including truck traffic,⁹ nighttime lighting, potential trail re-alignments and impacts to

⁸ Trails provide the serenity, safety, and outdoor environment that are healing these veterans. The Phoenix VA Hospital can utilize the South Mountain Park trail systems as one of the closest areas for veterans’ equine therapy treatment. The 202 South Mountain Freeway would negate the value of the South Mountain Park trail system for Wounded Warrior program treatment. For information about the “Horses for Heroes” national program at PATH International, please see: <http://www.pathintl.org/> For statistical information, please see the Veteran’s Administration 2010 report on veteran’s suicides: <http://www.va.gov/opa/docs/Suicide-Data-Report-2012-final.pdf>

The specific section in this report is encaptioned, *Suicide among Veterans – As Reported on Death Certificates.* Among cases where history of U.S. military service was reported, Veterans comprised approximately 22.2% of all suicides reported during the project period. If this prevalence estimate is assumed to be constant across all U.S. states, an estimated **22 Veterans will have died from suicide each day** in the calendar year 2010. Recreation and activities in the outdoor environment, such as activities within a tranquil and undisturbed SMPP, can play a role in reducing this tragedy.

⁹ ADOT and the FHWA reject suggestions that SR 202L will become a corridor for truck traffic for drivers hoping to avoid traveling through Phoenix on their way to other destinations. The Departments explain that “[i]t is not a goal of ADOT and FHWA for the proposed freeway to function as a truck bypass.” FEIS at S-42. This statement is not only unsupported by appropriate analysis, it also deliberately misses the point. There can be little doubt that the development of a freeway that will allow truckers to bypass the traffic and congestion of Phoenix will result in substantial increases in semi-truck traffic on this new segment of the freeway – above normal levels. This increase in truck traffic and the noise and disturbance caused by the increase is, at the minimum, an indirect effect of the proposed action under NEPA. The Council on Environmental Quality regulations define indirect effects as those “caused by the action, [and] later in time or further removed in distance, [but] still reasonably foreseeable.” 40 C.F.R. § 1508.8(b). The Departments must consider it. See 40 C.F.R. § 1508.8(b). Moreover, as an indirect effect of the action, the Departments also are required to consider mitigation options for

animal and plant species, just to name a few issues. And yet, the FEIS contains no substantive analysis of the direct, indirect and cumulative impacts to these important uses and values stemming from the project.¹⁰

In addition, even for people who do not use the SMPP, the sweeping and rugged presence of the South Mountains, whether on the horizon or just outside one's backdoor, plays an important role in the fabric and culture of our City. It is a landmark, a sacred site and an icon that represents a part of the cultural identity of Phoenix. To damage South Mountain by blasting through its ridges is to damage Phoenix and the people who live here. Indeed, such an action would strongly indicate to all who look that we do not value our natural resources in Phoenix, and in a way, our own well-being. The failure of the Departments' to consider this important aspect in the FEIS further demonstrates their overall failure to take the "hard look" required by NEPA.

Furthermore, because the FEIS fails to analyze the potential impacts to recreational uses and values and the integrity of the South Mountain as a whole in any substantive way, it similarly fails to meaningfully consider or offer sufficiently mitigating measures that might reduce these impacts as required by NEPA.¹¹

For example, while it is true that the FEIS generally examines noise impacts as part of the affected environment, it does not examine or consider mitigation in any specific way relative to the SMPP. To be sure, the increased noise levels resulting from the freeway construction project and the freeway itself would have a significant impact on recreational values and uses and the overall purpose of the SMPP as a place of solace and quiet enjoyment. While the FEIS discusses noise impacts in Chapter 4, it does not meaningfully model or consider noise impacts on these important resources. Interestingly, while the Departments explain that noise receivers were modeled adjacent to "noise-sensitive locations" along the E1 Alternative, Figure 4-29 and Table 4-39

the additional noise caused by the increased truck traffic, which could include restricting truck traffic on the freeway, reducing the posted speed limit for semi-trucks or reducing weight limits. ADOT and FHWA refuse to consider these options, ironically noting they are not "consistent with the purpose and need for the proposed action" See FEIS at 4-100. This too violates NEPA.

¹⁰ At Table 4-54 (FEIS at 4-180), the Departments erroneously conclude (without explanation) that indirect (secondary) effects to "recreational land" need not be considered in the secondary impact analysis.

¹¹ The Departments' broad generalizations and vague references in the FEIS to potential mitigation measures that might be used to reduce visual impacts due to the cuts through the ridgelines in and near the SMPP or to allow connectivity of trails through crossings, (a) do not address all of the known impacts of the project to the variety of recreational uses and values, discussed above; and (b) nevertheless fail to provide sufficient detail and certainty relative to the mitigation measures as required by NEPA. See, e.g., *Neighbors of Cuddy Mountain v. USFS*, 137 F.3d 1372, 1381 (9th Cir. 1998). This is discussed further in Section II(B) of this Letter.

reveal that virtually no ambient or existing noise level readings were taken in portions of the SMPP that are to be the most impacted by the freeway as it cuts through the Park.

In addition, due to the location of the noise receivers discussed above and as shown in Table 4-39 (FEIS at 4-92), the results of the ambient noise monitoring shown at Table 4-40 (FEIS at 4-97), reveal that rather than modeling noise impacts within the Park (which generally has trails – not roads) the Departments examined noise impacts and unmitigated action noise levels for the SMPP by incorporating significant existing ambient noise from arterial and surface streets in the baseline. See *also* FEIS at 4-91 (ambient noise impacts from traffic included in the No-Action Alternative). This undermines the results of the noise modeling and fails to take the “hard look” required by NEPA.

In a somewhat similar fashion, the document acknowledges that the E1 Alternative would be located adjacent to planned and existing trails,¹² and would cross over trail segments within or connected to the SMPP (specifically, Segments Seven, Fifty-six, Sixty eight, and Sixty-nine of the Maricopa County Regional Trails System, and Segment One of the Sun Circle Trail), resulting in the “potential harm” to these segments, *see, e.g.,* Summary at S-32, Table S-4; however, the Departments summarily conclude that because the freeway, as proposed, would be constructed as an elevated span to clear the trail segments, any impacts would be mitigated. This approach is completely insufficient under NEPA to analyze the impact of the project on recreational values and uses. While elevating the freeway would allow for the physical connectivity of trails, it ignores the myriad of other impacts that the presence of the freeway would have on the recreational values and uses of these trails (at least 5 trails are located within less than a mile of freeway), such as aesthetic impacts, the loss of quiet enjoyment and solitude, loss of the Sonoran Desert experience, impacts to wildlife viewing and safety, among others.¹³ None of these impacts were analyzed. This violates NEPA.

¹² Significantly, the impact to specific trails is mostly discussed in the Section 4(f) evaluation and not in the FEIS. As noted above, however, the analysis of impacts in Section 4(f) does not relieve the Departments of their obligation to take a “hard look” and consider mitigation of these impacts under NEPA.

¹³ Parks need to feel safe for people to want to use them. Research has documented that perception of safety can be more significant in influencing human behavior than crime statistics. If citizens perceive a park to be unsafe, they may be less likely to use it. This is particularly true for women. When freeways bisect trails or walking paths, safety (and the perception of safety) can be adversely impacted. Trails that necessarily require a hiker or traveler to walk or ride under bridges (as proposed here) present a significant safety issue that must be considered. This was not analyzed in the FEIS.

B. The Departments Fail to Meaningfully Examine and Fully Consider the Impact of the Project on Other Aspects of the Affected Environment

The Departments' NEPA analysis also fails to examine and fully disclose and consider the direct, indirect and cumulative impact of the SR 202L proposal on a number of aspects of the affected environment, including but not limited to biological resources (including plants and animals), visual resources, water,¹⁴ and topography/geography and the fragmentation of the endangered Sonoran Desert ecosystem – which was listed in 2011 as one of the 12 most threatened landscapes in the U.S. by the Cultural Landscape Foundation.¹⁵

Many of these impacts are discussed in the PARC's comments, which are expressly incorporated herein, as well as in the previous and current comments of our members and other stakeholders, including, without limitation:

- Increase in types of invasive species and spread of existing invasive species, in that their distribution will be encouraged by the highway that will provide a corridor for their movement, further impacting individual native plant and animal species and habitat/ecosystem
- Loss of connectivity for plants and animals with Sierra Estrellas, Sonoran Desert National Monument
- Increase in heavy metals, particularly lead from vehicles, and cancer-causing pollutants emitted from asphalt
- Increase in elevated levels of particulates such as black carbon, nitrogen oxides and carbon monoxide downwind from freeway resulting in increased pulmonary and cardio health issues (Environ Health. 2007; 6:23)

¹⁴ The FEIS admits that both that portions of the Salt and Gila Rivers are on the CWA Section 303(d) list, including that portion of the Salt River in the Study Area (ADEQ 2011), and that “[i]ncreased pollutant loading from freeway operation might further impair listed reaches of the Salt River and might need measures in addition to existing permit controls to achieve or maintain water quality standards in accordance with CWA Section 303(d).” FEIS at 4-105. However, the CWA prohibits discharges of a pollutant in an impaired water body if that pollutant is the reason for the impairment (i.e. the reason why the water body is on the 303(d) list), unless certain stringent planning and stream remediation efforts are in place – which has not been done in this case. See *Friends of Pinto Creek v. U.S. E.P.A.*, 504 F.3d 1007 (9th Cir. 2007). The failure to disclose what remediation efforts might be needed as part of the FEIS process violates NEPA.

¹⁵ <http://travel.usatoday.com/destinations/dispatches/post/2011/09/cultural-landscapefoundation-most-threatened-landscapes/548464/1>

- With increase in pollutants, increased hazard to humans who hike and bike in South Mountain Park, particularly the west end – bicycling and walking increase exposure to air pollutants
- Air pollutants negatively affect many plants whether airborne or in the soil (most particles fall to ground) – loss of photosynthetic ability, reduced plant health and vigor; those plants that can exist near highways have increased susceptibility to environmental stresses when compared to plants further away from highway
- Construction kills plants including such iconic plants as ironwood, saguaro, Arizona Queen of the Night, elephant tree, ocotillo; those that are removed to be replanted, such as saguaro and littleleaf paloverde, historically experience a very high mortality rate; and
- Roads are highly correlated with changes in species composition and population sizes – populations of the more specialized species such as elephant tree, saguaro, Arizona escheveria, will respond negatively due to loss of habitat, including appropriate substrate.

The FEIS fails to meaningfully address these prior comments or to adequately analyze or mitigate for the cumulative effects of these impacts. See Section II(C) of our Comment Letter (addressing cumulative effects). In addition to the foregoing, a number of key failures found in the FEIS related to the natural environment are discussed further, below.

First, while the FEIS at least discloses some of the potential impacts of the project to wildlife,¹⁶ it makes few references (other than noting potential “vegetation removal” and the possible introduction and spread of invasive species) to the profound and irreparable direct, indirect and cumulative impacts that the construction and ultimate presence of the freeway project will have on important plants and plant communities within the Study Area and in particular, in and around SMPP. See Comments of Wendy C. Hodgson, Desert Botanical Garden, Phoenix Arizona, attached here as Attachment “A”, and fully incorporated by reference.

These impacts include, among others things, impacts that extend far beyond the immediate road and vegetation clearing activities needed for the freeway. These impacts are direct, indirect and/or cumulative effects of the proposed action. For example, roads and freeways decrease genetic diversity of affected populations (due to population size and genetic drift), fragment plant corridors that provide genetic conduits between individuals and populations for plant species, introduce and serve as dispersal corridors for invasive plants and exotic species, and increase the possibility of fire,

¹⁶ The analysis contained in the FEIS relative the freeway’s potential impact on wildlife and plants is abbreviated, at best. See *ROADS AND THEIR MAJOR ECOLOGICAL EFFECTS*, Richard T. T. Forman and Lauren E. Alexander, Harvard University Graduate School of Design, Cambridge, Massachusetts 02138.

among other impacts. See *id.* None of these impacts are identified or adequately addressed in the FEIS. This is inconsistent with NEPA, which requires, at a base, a “reasonably thorough discussion of the significant aspects of probable environmental consequences.” *Oregon Natural Resources Council v. Lowe*, 109 F.3d 521, 526 (9th Cir. 1997).

In addition to the foregoing, the FEIS also fails to disclose, analyze and discuss in any detail the substance of the mitigation measures that ADOT and the FWHA intend to utilize to address the direct, indirect and cumulative impacts of the construction activities and the ultimate presence of SR 202L freeway on “biological resources” and other affected resources located within the unique Sonoran ecosystem in the project area, including impacts to plants and vegetation, discussed above, and to wildlife and wildlife habitat. These impacts are significant and include adverse direct, indirect and cumulative effects to (among other things), (a) candidate species protected under the Endangered Species Act (desert tortoise – Sonoran population and the Tucson shovel-nosed snake); (b) numerous plants protected under Arizona’s Native Plant Act, which are often unusual or rare, have high value for landscaping or are long-lived and not easily replaced, susceptible to theft and vandalism or are being unnecessarily lost because of development (Arizona Department of Agriculture [ADA] 2009; Maricopa County 2004b); and (c) as well as other animals and plants that are unique to the Sonoran Desert or otherwise considered wildlife of special concern. Some animal species impacted by the project are also protected under the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act, such as the rare Desert Nesting Bald Eagle and Golden Eagles.

The Departments acknowledge in the FEIS that, “all action alternatives and options would decrease the amount of cover, nesting areas, and food resources for wildlife species caused by habitat loss, fragmentation, and traffic disturbance.” FEIS at 4-136. They also admit (with little analysis) that “[c]onstruction of any action alternatives and options would involve vegetation removal and would cause a decrease in habitat, foraging, and nesting resources for wildlife.” *Id.*

Additional impacts would occur, according to the Departments’ own analysis, during construction and blasting, see *id.*, although the manner and scope of these impacts are not discussed in the FEIS in any meaningful way. The FEIS further explains at 4-136 that, “[i]n the Eastern Section of the Study Area, the E1 (Preferred) Alternative would affect wildlife because of the presence of undeveloped areas and open space land uses along the SMPP and [Gila River Indian] Community boundaries—the areas with the most natural habitat.” In addition, the FEIS discloses at 4-136:

Operation of the freeway would cause a long-term increase in noise levels that would vary in intensity depending on factors such as time of day and day of the week. Nighttime noise levels, excluding evening periods, would be less than daytime noise levels; therefore, species active during daytime periods may be affected more than species active at night. Some species rely on hearing to avoid predators, communicate, and find food (Noise

Pollution Clearinghouse 2004). An increase in traffic noise may affect the ability of some animals to hear at a level necessary for survival when near the proposed action. In addition, hearing loss resulting from vehicle noise has been shown to occur in some desert animals (Bondello and Brattstrom 1979).

The FEIS also states (at least in passing) that the project will result in impacts to wildlife movement and habitat connectivity, explaining at 4-138:

Impacts on biological resources caused by construction and operation of public roads include vehicle-wildlife collisions, habitat loss, and habitat fragmentation (FHWA 2011) as well as disturbances caused by traffic noise (Barber et al. 2010). A report supported by AGFD and the Arizona Wildlife Linkages Workgroup summarizes a workshop attended by a broad range of organizations and interests that interactively provided input and mapping for important wildlife linkages across Maricopa County (AGFD 2012). The report identifies the area between SMPP and the Sierra Estrella as a landscape movement area.

The Departments, having disclosed the above described adverse impacts on wildlife and plants throughout the range of the Study Area, including within and adjacent to the SMPP, see 2 U.S.C. § 4332(2)(C)(ii), were next obligated under NEPA to describe what mitigating efforts will be used to off-set the harms that would result from the project. See 40 C.F.R. § 1502.16(h) (stating that an EIS “shall include discussions of . . . means to mitigate adverse environmental impacts”). The FEIS fails to do this.

Instead, the FEIS repeatedly suggests that the specifics of the mitigation measures will be developed at a later time, either during the design phase or just prior to or during construction activities. This approach is devoid of specifics or even a firm commitment to actually conduct the mitigation measures at all in many cases.¹⁷ This is a significant failure that permeates the entire FEIS document and is used repeatedly to essentially “punt” specifics regarding mitigation until after the FEIS process is complete. This tactic is used when discussing a myriad of currently vague (but crucial) mitigation measures, such as the potential use of multi-functional road crossings and culverts for wildlife movement and to reduce vehicle-wildlife collisions, mitigating for impacts to 303(d) impaired waters and impacts to protected plants, developing species-specific mitigation measures to minimize potential impacts to birds and animals, conducting plant and animal surveys, determining the ultimate location of noise barriers and the configuration of bridges to span historic features and trails, determining the means to limit damage to visual resources, including the cuts through SMPP, among other things. See, e.g., Table S-4 (providing a summary of the mitigation measures for this project).

¹⁷ See *Neighbors of Cuddy Mountain v. USFS*, 137 F.3d 1372, 1381 (9th Cir. 1998) (rejecting as insufficient mitigation measures proposed by the Forest Service when it was not certain that the mitigation measures, would in fact, be adopted).

It is well settled under NEPA that a mere perfunctory description of mitigating measures is inconsistent with the “hard look” ADOT and the FHWA is required to take under NEPA. Rather, “[m]itigation must ‘be discussed in sufficient detail to ensure that environmental consequences have been fairly evaluated.’” *City of Carmel-By-the-Sea v. U.S. Dep’t of Transp.*, 123 F.3d 1142, 1154 (9th Cir. 1997) (quoting *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 353, 104 L. Ed. 2d 351, 109 S. Ct. 1835 (1989)). “A mere listing of mitigation measures is insufficient to qualify as the reasoned discussion required by NEPA.” *Northwest Indian Cemetery Protective Ass’n. v. Peterson*, 795 F.2d 688, 697 (9th Cir. 1986), *rev’d on other grounds*, 485 U.S. 439, 99 L. Ed. 2d 534, 108 S. Ct. 1319 (1988).

Here, the Departments’ decision to punt the specifics of its mitigation measures until the design or construction phase of the project is not explained in the FEIS, nor have they even provided an estimate of how effective the mitigation measures would be if adopted or given a reasoned explanation as to why such an estimate is not possible. This also violates NEPA. See *Neighbors*, 137 F.3d at 1381; see also *Klamath-Siskiyou Wildlands Ctr. v. Bureau of Land Mgmt.*, 387 F.3d 989, 993 (9th Cir. 2004) (rejecting as insufficient an environmental assessment that failed to meaningfully analyze mitigation measures where the agency concluded that the “[i]mpacts are being avoided by project design”, because “[t]he EA[s] [are] silent as to the degree that each factor will be impacted and how the project design will reduce or eliminate the identified impacts.”).

Furthermore, an essential component of a reasonably complete mitigation discussion is an assessment of whether the proposed mitigation measures can be effective. Compare *Neighbors of Cuddy Mountain v. U.S. Forest Service*, 137 F.3d 1372, 1381 (9th Cir. 1998) (disapproving an EIS that lacked such an assessment) with *Okanogan Highlands Alliance v. Williams*, 236 F.3d 468, 477 (9th Cir. 2000) (upholding an EIS where “[e]ach mitigating process was evaluated separately and given an effectiveness rating”). The Supreme Court has required a mitigation discussion precisely for the purpose of evaluating whether anticipated environmental impacts can be avoided. See *Methow Valley*, 490 U.S. at 351-52 (citing 42 U.S.C. § 4332(2)(C)(ii)). A mitigation discussion without at least some evaluation of effectiveness is useless in making that determination. None of these requirements are met in the FEIS.

In short, the Departments’ broad generalizations and vague references to mitigation measures in relation to the project do not constitute the requisite detail that ADOT and the FHWA were required to provide since they fail to disclose at any level of specificity what mitigation measures would be undertaken and the potential effectiveness of these measures. For these reasons, the FEIS must be revisited and substantially improved before a record of decision can be entered.

C. The FEIS Fails to Sufficiently Identify and Analyze Cumulative Impacts of the Project, Including Past, Present and Reasonably Foreseeable Future Actions

The FEIS fails to sufficiently identify and analyze cumulative impacts of the project, including impacts stemming from past, present and reasonably foreseeable future actions in the Study Area. Federal guidance defines cumulative impacts as “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions” 40 C.F.R. § 1508.7. “Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.” 40 C.F.R. § 1508.7. In addition, cumulative impacts are considered direct effects, which are “caused by the action and occur at the same time and place” 40 C.F.R. § 1508.8. In sum, cumulative impacts occur where several actions in an area combine to create an impact greater than any one individual activity.

Here, the FEIS devotes a scant few pages to addressing the cumulative impacts of the project on the affected environment, only briefly discussing cumulative impacts related to biological resources, water, cultural resources, land use, environmental justice, visual resources, recreational lands, noise and air quality. This is not sufficient for NEPA, since the Departments’ analysis of cumulative impacts “must give a sufficiently detailed catalogue of past, present, and future projects, and provide adequate analysis about how these projects, and differences between the projects, are thought to have impacted the environment.” *Te-Moak Tribe of Western Shoshone v. DOI*, 608 F.3d 592, 603 (9th Cir. 2010) (*quoting Lands Council v. Powell*, 395 F.3d 1019, 1027, 1028 (9th Cir. 2005) (internal quotation marks omitted)).

The FEIS identifies only a handful of activity types that the Departments believe could contribute to cumulative impacts, including highway projects, planned mass transit in the Study Area, other major infrastructure projects, like utility expansions, and “other general development patterns.” FEIS at 4-183. Of these activities, the chief type of cumulative impact that is discussed in the document is the ongoing, planned and permitted residential and commercial development with the Study Area. *Id.* However, the FEIS discusses the location, scope and effects of past, present and future projects in the Study Area only in generalities, without offering any specific analysis of how the developments actually interact with the affected environment to result in a cumulative effect. This sort of vague discussion of cumulative impacts can be found in virtually every part of the cumulative effects section. This is inconsistent with the requirements of NEPA.

For example (and without limitation to the failings in each subpart of the section), in discussing habitat loss, the FEIS notes that the project would “irrevocably convert existing natural habitat to transportation and use and, therefore, contribute to a reduction in the amount of wildlife habitat in the region.” FEIS at 4-183. The FEIS goes on to explain that urbanization in the affected area increased by 15 percent from 1975-2000, but then merely concludes (without offering any specifics) that:

Ongoing planned and permitted residential, commercial, and transportation development would likely further this trend of habitat loss

through direct conversion, habitat isolation (addressed below), and native plant loss (addressed below). Also, wildlife typically is displaced, causing either increased competition among species members and/or population reduction.

Furthermore, in discussing habitat isolation, as referenced above, the FEIS merely reiterates its prior conclusions on direct effects, saying only that:

Construction and operation of the proposed action would bisect existing natural habitat for the purposes of a transportation use and, therefore, would contribute to habitat isolation, inhibiting the movement of wildlife for life requirements. This effect would likely be most prevalent in the areas between the South Mountains Sierra Estrella. *Id.*

In short, the Departments' purported discussion of cumulative effects on habitat isolation does nothing to further the analysis, since the FEIS merely concludes that, when considering ongoing planned residential, commercial, and transportation development together, "[t]hese ongoing developments would contribute to continued adverse effects on habitat connectivity. The provision of mitigation for the proposed action in the form of multiuse crossings to be situated in cooperation with federal and State wildlife officials would minimize impacts attributable to the proposed action." *Id.* at 4-184.

The FEIS takes the same approach with regard to analyzing cumulative impacts to plant loss, as noted above, summarily concluding that:

Future residential, industrial, commercial, and transportation projects in conjunction with the proposed action can be reasonably expected to contribute to a loss of native vegetation, as defined and protected under the Arizona Native Plant Act (A.R.S. § 3-901 *et seq.*). Notably, the proposed action as currently planned would convert natural areas around the South Mountains to a transportation use.

FEIS at 4-184 – 4-185. This form of vague and insufficient cumulative effects analysis continues throughout the cumulative effects section. See, e.g. FEIS at 4-184 (concluding the "over time" development in the southwestern Phoenix will result in a diminishment of vehicle-animal collisions "as habitat decreases and becomes less able to sustain large wildlife populations"); FEIS at 4-185 (observing cumulative impacts on ESA listed species will occur due to proposed SR 30 freeway, but noting only that "NEPA requirements will be addressed in an environmental assessment for that federally funded project"); FEIS at 4-185 (noting that associated development from "other projects" such as "transportation, commercial, and residential developments" would "result in a higher runoff volumes and a higher potential for pollutant discharges into receiving waters."); FEIS at 4-186 (noting that "[o]ngoing planned and permitted residential, commercial, and industrial development in the region would likely continue to place a demand on water availability. The proposed action would have little

cumulative effect on water availability.”); FEIS at 4-187 (concluding that visual resources would be impacted by “rapid transition in land use from low-density, open uses to residential, commercial and light industrial uses”); FEIS at 4-188 (stating, with no analysis, that “[w]ith the planned growth and urbanization in the Study Area, noise levels would be expected to increase because of the increased density of human activities”, but saying impacts to be minimized with best practices).

The Departments’ description of past, present and reasonably foreseeable future developments and projects in the Study Area which are based on mere generalities is insufficient to permit adequate review of their cumulative impact under NEPA. See, e.g., *City of Carmel-by-the-Sea v. USDOT*, 123 F.3d 1142, 1160-61 (9th Cir. 1997) (general references to development projects and ongoing urbanization was insufficient for a proper cumulative effects analysis under NEPA); see also *Natural Resources Defense Council, Inc. v. Hodel*, 275 U.S. App. D.C. 69, 865 F.2d 288, 299 (D.C. Cir. 1988) (“These perfunctory references do not constitute analysis useful to a decisionmaker in deciding whether, or how, to alter the program to lessen cumulative environmental impacts.”).

So too is the Departments’ mere recitation of direct effects and reliance of mitigation measures in lieu of conducting a true cumulative effects analysis. See *Te-Moak Tribe of Western Shoshone v. DOI*, 608 F.3d 592, 603 (9th Cir. 2010) (finding inadequate a cumulative effects analysis where the majority of the discussion focused on how effects of the proposed activities will be avoided or mitigated and noting that the document’s “discussion of the . . . direct effects in lieu of a discussion of cumulative impacts.”).

D. The FEIS is Replete with Other Failings Under NEPA

As discussed in the comments of our members and PARC, incorporated here, the FEIS falls short under NEPA on a myriad of other fronts, as well, all of which demonstrate that ADOT and the FHWA have failed to take the requisite “hard look” required by NEPA. These include, but are not limited to:

- The failure to meaningfully identify, analyze and mitigate for the indirect (secondary) impact of the proposed action;
- Failure to consider reasonable alternatives, in particular, with regard to the E1 Alternative that would bisect SMPP;
- The unlawful use of pre-decisional actions and the irretrievable commitment of resources in the purchase of lands, planning actions and other activities towards a pre-determined outcome as prohibited under NEPA;
- Denial of the growth inducing impacts of the project; and

- The wrongful segmentation of the larger Loop 202 highway system and related actions.

III. The Section 4(f) Evaluation is Insufficient to Meet the Requirements of the U.S. Department of Transportation Act, 49 U.S.C. § 303(c)

In addition to performing the NEPA analysis described above, because the SR 202L project will impact Section 4(f) resources, including historic sites,¹⁸ trails, the SMPP and other public parks and recreational facilities, ADOT and the FHWA have a separate and independent duty to properly consider and document their Section 4(f) evaluation as required by 49 U.S.C. 303(c) of the U.S. Department of Transportation Act, 23 C.F.R. 774 and applicable law, before they can approve the use, as defined in §774.17, of the Section 4(f) properties to be affected by the project.

The Departments have failed to comply with their obligations under Section 4(f), by (among other things), ignoring the very real and adverse direct and constructive uses of the affected 4(f) properties and their resources as defined in § 774.15, and by failing to ensure that all possible planning to minimize harm to the properties has been undertaken (as defined in § 774.17), before the final 4(f) determination and not after, as required by § 774.3(a)(2).

Given the serious failings of the Departments' 4(f) evaluation, PMPC urges ADOT and the FHWA to perform a proper 4(f) evaluation before issuing a Record of Decision in this matter. Anything less violates the law.

Section 303(a) of the U.S. Department of Transportation Act explains that it is the "policy of the United States Government that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites." To this end, under § 303(c), the Secretary of Transportation:

[M]ay approve a transportation program or project . . . requiring the use of publicly owned land of a recreation area, or wildlife and waterfowl refuge of national, State, or local significance, or land of an historic site of national, State, or local significance (as determined by the Federal, State, or local officials having jurisdiction over the park, area, refuge, or site) only if—(1) there is no prudent and feasible alternative to using that land; and (2) the program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use.

¹⁸ These historic sites include the whole of the SMPP and places and sites recognized as traditional cultural properties (TCPs) under Section 106 of the NHPA, as well as certain sites within the SMPP and elsewhere. The Departments have failed to meaningfully examine the impact of the proposed project on the integrity and purposes of these historic sites or undertake the appropriate planning required by law to minimize for such impacts. This also violates the NHPA and its implementing regulations, as well as NEPA and Section 4(f).

In *Sierra Club v. USDOT*, 948 F.2d 568, 573 (9th Cir. 1991), the Ninth Circuit summarized the important role of Section 4(f), explaining: “If a planned road will use park land, and if the state will use federal funds to construct that road, then section 4(f) requires that the road be relocated unless no prudent and feasible alternative exists. 49 U.S.C. § 303(c)(1).” (Emphasis added).

In examining the Congressional History behind Sec. 4(f), the Court in *Sierra Club* observed that Congress had enacted 4(f) because “it was concerned that roads and other infrastructures would encroach upon the beauty of existing parks.” *Id.* at 574. The Court pointed to a report in the Congressional Record that explained, “section 4(f) is designed to insure that in planning highways . . . and other transportation facilities, care will be taken . . . not to interfere with or disturb established recreational facilities and refuges. S. Rep. No. 1659, 89th Cong., 2d Sess. 5-6 (1966).” *Id.* (internal quotation marks omitted).

Thus, if a planned freeway will “use” park land, historic sited or public recreation facilities, as in the current instance, then Section 4(f) requires that the freeway be relocated unless no other prudent or feasible alternative exists. 49 U.S.C. 303(c)(1). The Ninth Circuit has interpreted this provision to apply to constructive uses as well as actual use of park land. In this Circuit, “constructive use” of park land occurs when a road significantly and adversely affects park land even in those portions of the park that are not physically used by the road. See *Adler v. Lewis*, 675 F.2d 1085, 1091-92 (9th Cir. 1982). Furthermore, the court in *Adler*, 675 F.2d at 1092, interpreted the word “use” broadly to apply to any road that would “substantially impair the value of the site in terms of its prior significance and enjoyment.” See also *Brooks v. Volpe*, 460 F.3d 1193 (9th Cir. 1972) (applying the definition of “use” under the Federal-Aid Highway Act, 23 U.S.C. § 138 broadly to find that a freeway that did not directly bisect (but encircled) an alpine campground was nevertheless a “use” of the campground under the Act).

A. The Departments Have Failed to Address Both the Direct and the Constructive Uses of the Project on Sec. 4(f) Resources

With regard to the current project, the Departments identified multiple Section 4(f) resources in relation to the project,¹⁹ including: (a) at least 17 public parks, including SMPP, Sec. 4(f) Analysis at 5-13, Figure 5-7; (b) at least 7 recreation trails or trail systems, Sec. 4(f) Analysis at 5-9, Figure 5-5; (c) at least 12 public school recreational facilities (some less than 100 feet from the freeway), see Sec. 4(f) Analysis at 5-11, Table 5-6; and (d) at least 8 properties eligible for inclusion on the National Register of Historic Places in addition to SMPP, see Sec. 4(f) Analysis at 5-7, Figure 5-4. Yet, in relation to every one of these 4(f) resources (except SMPP), the Departments incredulously conclude that none of the action alternatives or options would result in the

¹⁹ For reasons already discussed in this Letter, above, PMPC disputes the accuracy of this information, having found a number of 4(f) resources that were not properly identified or discussed by the Departments.

direct or constructive use of these resources and therefore, the Departments determined that no measures to minimize harm to these resources is warranted. See id.

Furthermore, in relation to SMPP, the Departments acknowledge that the E1 Alternative would result in the direct use of SMPP, but then unlawfully limit their analysis of the “use” to only those 31.3 acres to be directly (physically) impacted by the project, instead of examining the larger and more substantial impacts to the uses of the Park as a whole (such as recreation, hiking, horseback riding, historical integrity, solitude and quiet enjoyment, wildlife viewing and the preservation of the unique Sonoran Desert ecosystem), concluding under § 774.15, that, “as a rule, applicable in this case, when direct use of a Section 4(f) resource would occur, analysis to determine whether proximity impacts would result in constructive use is no longer applicable.” Sec. 4(f) Analysis at 5-17 (emphasis added). This unduly narrow interpretation of the constructive use test strains the bounds of reason and is inconsistent with the purpose of the Transportation Act itself and applicable rulings from the Ninth Circuit.²⁰

1. Impacts to Resources Other Than SMPP

While the Departments identify a multitude of resources afforded protection under Section 4(f) within the Study Area, they determine, with virtually no substantive analysis, but only conclusory statements, that no constructive uses of these resources would occur. This violates the requirements of Section 4(f).

The standards for determining whether a “constructive use” of resources will occur are outlined in § 774.15. Specifically, a constructive use occurs when:

[T]he transportation project does not incorporate land from Section 4(f) property, but the project's proximity impacts are so severe that the protected activities, features, or attributes that qualify the property for protection under Section 4(f) are substantially impaired. Substantial impairment occurs only when the protected activities, features, or attributes of the property are substantially diminished.

In this instance, with regard to the multiple public parks, NRHP eligible historic places (including Traditional Cultural Properties), recreational trails, and public school recreational facilities to be impacted by the project, the Departments simply conclude that, irrespective of the construction and presence of a large multiple lane freeway nearby (in many instances less than 1,000 feet from the resource or less), none of the action alternatives would result in the constructive use of these resources. This in turn, conveniently obviates the need for the Departments to determine under Section 4(f) whether measures to minimize the harm are warranted under the law. This fatal flaw permeates the entire Section 4(f) analysis and must be corrected.

²⁰ Even the FHWA's own policy does not support this constrained review. See Appendix A – Excerpt from FHWA *Section 4(f) Policy Paper, FHWA Office of Planning, Environment and Realty, Project Development and Environmental Review (March 1, 2005).*

For example, the Departments acknowledge that some segments of recreational trails will be bisected by the proposed freeway, but conclude that because the freeway would be constructed as “elevated spans” to “clear” the trail segments, no direct impact would occur (a point that is disputed by PMPC) and, amazingly, they further conclude (without explanation) that there will be no constructive uses of these recreational resources.

Again, this strains reality. It is difficult to see how having a freeway running over one’s head (on a previously undisturbed and once quiet and natural hiking, biking or horseback riding trail) would not affect the resources and purpose of the trail. Indeed, this idea was long ago rejected both in the Ninth Circuit and elsewhere. See, e.g., *Brooks*, 460 F.3d at 1193; *Adler*, 675 F.2d at 1092; see also *D.C. Federation of Civic Associations v. Volpe*, 148 U.S. App. D.C. 207, 459 F.2d 1231, 1239 (D.C.Cir.1971), *cert. denied*, 405 U.S. 1030, 92 S. Ct. 1290, 31 L. Ed. 2d 489 (1972).

Under § 774.15(d), the Departments were required to perform a constructive use determination based, among other things, on:

- (1) Identification of the current activities, features, or attributes of the property which qualify for protection under Section 4(f) and which may be sensitive to proximity impacts;
- (2) An analysis of the proximity impacts of the proposed project on the Section 4(f) property. If any of the proximity impacts will be mitigated, only the net impact need be considered in this analysis. The analysis should also describe and consider the impacts which could reasonably be expected if the proposed project were not implemented, since such impacts should not be attributed to the proposed project; and
- (3) Consultation, on the foregoing identification and analysis, with the official(s) with jurisdiction over the Section 4(f) property.²¹

A plain review of the Departments’ 4(f) evaluation of the project’s proximity impacts on recreational trails demonstrates that they did not comply with this important requirement of 4(f). Also, as noted above, relying on unspecific plans for an elevated freeway over these recreational trails is also insufficient for purposes of 4(f) and it cannot be considered mitigation or minimization for purposes of their net impact analysis.

Furthermore, with regard to the directly bisected trails, the Departments make no effort whatsoever to identify the current features and attributes of these trails (which have been discussed at length in this letter and in other comments) which will be impacted by the project – attributes that form the very basis for the trails’ 4(f)

²¹ Construction of the proposed South Mountain freeway has been opposed by the City of Phoenix Parks Board. See FEIS, p. 5-14. The District 7 Executive Committee (FEIS, p. 2-8) and District 6 City Councilman Sal DiCiccio (FEIS Appendix, p. B120) have also submitted letters of opposition for this project.

qualification in the first place. The Departments certainly take no further steps to analyze the proximity impacts of the project on these trails, except to minimize and ignore said impacts. With regard to potential proximity impacts to those trail segments located within ¼ mile of the action alternatives, the Departments inexplicably conclude (without any foundation) that “[n]one of the trail segments . . . have noise-sensitive activities or viewshed characteristics that contribute to their importance as Section 4(f) resources”, because (according to the Departments) these trails are merely used for “high-intensity recreational activities such as running, hiking, and biking, not noise or viewshed sensitive activities.” Sec. 4(f) Analysis at 5-9, Figure 5-5. Common sense and multiple comments about the uses of these trails by members of the public (including for solitude and due to the natural setting and views) demonstrate there is no basis for these conclusions in the document and the Departments make no effort to support these specious determinations.

To make matters worse, this sort of conclusory analysis is also found throughout the remainder of the Departments’ 4(f) analysis with regard to other impacted uses. See, e.g., Sec. 4(f) Analysis at 5-11, Figure 5-6 (concluding public school recreational facilities do not have “noise-sensitive activities or viewshed characteristics); Sec. 4(f) Analysis at 5-13, Figure 5-7 (“None of the public parks . . . have noise-sensitive activities or viewsheds.”). Also, the Departments use much of the same tactic with regard to eligible NRHP properties and features, including historic trails and TCPs. See Sec. 4(f) Analysis at 5-7, Figure 5-4.

2. Impacts to South Mountain Park/Preserve

The Departments make all of the same mistakes discussed above with regard to examining the impact of the project on SMPP, both as it bisects the Park and where it would be built in close proximity to the Park, once again discounting the constructive use of Park resources in every instance. True, ADOT and FHWA at least make a half-hearted attempt to examine the direct impacts to a handful of Park resources from the physical presence of the proposed freeway, such as landscape alteration, intrusion, access, and habitat connectivity, and historic resources, but they quickly conclude these impacts are mitigated or simply not compromised. This is not believable or supported in the 4(f) document.

However, the Departments then compound their 4(f) failings exponentially by concluding as a matter of law, that, under § 714.15, “when direct use of a Section 4(f) resource would occur, analysis to determine whether proximity impacts would result in a constructive use is no longer applicable.” Sec. 4(f) Analysis at 5-17 (emphasis added). Having made this convenient conclusion, the Departments then simply wash their hands of any obligation to perform a constructive use analysis of the Park and its many resources and values that have been discussed herein or to examine whether all possible efforts have been undertaken to avoid or minimize these impacts. This is unlawful.

The Departments appear to base their erroneous legal conclusion on an overly narrow interpretation of the definition of “constructive use” found at § 714.15(a), which provides in relevant part:

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

Thus, it appears that the Departments believe that because (in this instance) the project would incorporate land within the SMPP, they are relieved of any obligation to perform a constructive use analysis under § 714.15 of other areas of uses of the Park. The law does not support this conclusion.

First, what ADOT and the FHWA have essentially concluded strains the bounds of common sense and runs contrary to the purpose of the statute, which is, after all, to ensure that a “special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites.” 49 § U.S.C 303(a). Indeed, under the Departments’ reading of the rule, they would be required to conduct a constructive use analysis where a freeway runs right up to or along the boundary of a Section 4(f) resource like a park, but would have absolutely no obligation to consider the project’s proximity impacts where the freeway actually runs through the park, as is the case here.

The unlawful nature of this position hardly requires further analysis, and indeed, it has been rejected in the past by the Ninth Circuit in any event. For example, in *Adler*, 675 F.2d at 1092, the Ninth Circuit observed Section 4(f) requires “far more than calculating the number of acres to be asphalted”, noting that “the location of the affected areas in relation to the remainder of the parkland may be a more important determination than the number of acres affected.” *Quoting D.C. Federation of Civic Associations*, 459 F.2d at 1239 (internal quotation marks omitted).

Finally, under 714.15(e), it is clear that the potential for constructive use of SMPP and its important resources has already been anticipated by the FHWA, and determined in this case. It matters not that the freeway is actually “incorporating lands” of the Park as opposed to circling or running along side the Park. Specifically, 714.156(e) provides in part:

The Administration has reviewed the following situations and determined that a constructive use occurs when:

- (1) The projected noise level increase attributable to the project substantially interferes with the use and enjoyment of a noise sensitive facility of a property protected by Section 4(f), such as:
 - (i) Hearing the performances at an outdoor amphitheater;

- (ii) Sleeping in the sleeping area of a campground;
- (iii) Enjoyment of a historic site where a quiet setting is a generally recognized feature or attribute of the site's significance;
- (iv) Enjoyment of an urban park where serenity and quiet are significant attributes; or
- (v) Viewing wildlife in an area of a wildlife and waterfowl refuge intended for such viewing.

(2) The proximity of the proposed project substantially impairs esthetic features or attributes of a property protected by Section 4(f), where such features or attributes are considered important contributing elements to the value of the property. Examples of substantial impairment to visual or esthetic qualities would be the location of a proposed transportation facility in such proximity that it obstructs or eliminates the primary views of an architecturally significant historical building, or substantially detracts from the setting of a Section 4(f) property which derives its value in substantial part due to its setting

(3) The project results in a restriction of access which substantially diminishes the utility of a significant publicly owned park, recreation area, or a historic site.

It is sufficient to say that none of these proximity impacts were evaluated in any meaningful way, since the Departments concluded that applicable law did not require such an evaluation. This is a deep failing in the Section 4(f) analysis that must be corrected.

B. The Departments Have Failed to Ensure that All Possible Planning to Minimize Harm to 4(f) Resources Has Been Undertaken as Required By § 774.3(a)(2).

ADOT and the FHWA are required, prior to the issuance of the Record of Decision, to ensure that the action “includes all possible planning, as defined in 774.17, to minimize harm to the property resulting from such use . . .”. § 774.3. In this respect, “all possible planning” means that “all reasonable measures identified in the Section 4(f) evaluation to minimize harm or mitigate for adverse impacts and effects must be included in the project.” § 774.17.

Setting aside all of the failings already described here, which have resulted in the gross failure of the Departments to even consider the need for minimization of harm to most of the 4(f) resources imperiled by this project, the Departments also fall far short where they look to the mitigation measures outlined in the FEIS to cure their failure to ensure that “all possible planning” has already been undertaken to minimize harm or mitigate for those few adverse impacts they admit will occur as a direct result of the construction and ultimate physical presence of the proposed freeway, such as landscape alteration, intrusion, access, and habitat connectivity, and historic resources.

For the same reasons outlined by PMPC regarding the Departments' decision to "punt" mitigation to future planning opportunities after NEPA, as discussed in Section II(B) of this letter, this approach similarly fails to meet the obligations of § 774.17, for purposes of Section 4(f).²²

IV. Conclusion

In conclusion, PMPC opposes any alignment of the Loop 202 South Mountain Freeway that would trespass onto the South Mountain Park/Preserve or result in the destruction of ridgelines or lands within Park. SMPP is undoubtedly unique and must remain a place for people and wildlife, not freeways, noise and concrete.

ADOT and the FHWA have failed to fulfill their statutory obligations under NEPA, Sec. 4(f) and other applicable provisions of law. For this reason, PMPC urges the Departments to take a step back and revisit the FEIS and the Section 4(f) process in order to meaningfully address the serious failings in these documents. Nothing less complies with the Department's obligations under the law. Nothing less will preserve the integrity SMPP and by correlation, our community's own values that have long recognized and appreciated our natural landscapes, historic sites and traditional cultural properties, parks and recreational facilities.

Yours Truly,



Robin Salthouse, President
Phoenix Mountain Preservation Council, Inc.

CC: Executive Board, Phoenix Mountain Preservation Council, Inc.
S. Montgomery, Esq.

²² Furthermore, the Departments have failed to meaningfully examine and consider "prudent alternatives" to the use of the 4(f) lands described in this letter, as required by § 774.3(a)(1), just as they have failed to consider reasonable alternatives under NEPA.

ATTACHMENT A

**LOOP 202 SOUTH MOUNTAIN FREEWAY PROJECT:
ACTUAL AND POTENTIAL IMPACTS ON PLANTS & PLANT COMMUNITIES**

By Wendy Hodgson, November 7, 2014

I. Fragmentation of Habitat

Roads often decrease the genetic diversity of affected populations due to reduced population size and genetic drift.¹ Like animals, plant corridors exist, providing genetic conduits between individuals and populations for many plant species. Although there are limited studies done in our region, the presence of a genetic corridor for individual species is an important population dynamic. With loss of habitat and corresponding fragmentation, genetic bottlenecking can be expected, reducing the population vigor and possibly increasing the risk of local extirpation. How it affects certain species, such as those whose pollen and seed dispersal are more limited, is not known. For example, recent studies have suggested that the elephant tree (*Bursera microphylla*) populations are represented by plants that are mainly female (that only produce fruit) or male flowers, but sometimes hermaphroditic (flower has both male and female functional parts); plants may also have flowers that change sexes with external factors such as severe frost. This plant is known to occur in the impact zone of the Loop 202 within South Mountain Park. How further fragmentation within the Park and from surrounding mountain ranges such as the Sierra Estrella and White Tank Mountains affects this special plant of South Mountain and its insect pollinators is unknown. Such fragmentation of habitat and its impact on connectivity of plant populations are not addressed in the FEIS.

II. Invasive Species

Roads and road verges serve as dispersal corridors in plants, including exotic species (Holderegger & DiGiulio, 2010). The potential conduit function of roads depends on the habitat specificity of the spreading species, its dispersal range relative to the spacing of roads in the landscape, and the relative importance of long- and short-range dispersal. Effective management of an invasion requires distinguishing between the habitat and conduit functions, a distinction difficult to make with only snapshot data.² None of this was addressed in the FEIS.

The proposed highway loop 202 will act as a major corridor for invasive species dispersal and establishment via the tremendous habitat disturbance, vehicular traffic, and the increased access to this southwest side (which has previously experienced

¹ Holderegger, R. and DiGiulio, M. 2010. The genetic effects of roads: A review of empirical evidence. *Basic and Applied Ecology* 11: 522–531.

² Christen, D. and Matlack, G. 2006. The Role of Roadsides in Plant Invasions: A Demographic Approach. *Conservation Biology*, volume 20: 385–391.

relatively minimal influence from development). Disturbance-tolerant species predominate, especially with intensive management adjacent to highways, and exotic species typically are common.³ Hansen and Clevanger (2005) showed how compared to forests, highway corridor edges in arid or semi-arid habitats act as microhabitats for non-native species and are more prone to invasion, especially if disturbed. The study's results emphasize the importance of minimizing the disturbance of adjacent plant communities along highways and railways during construction and maintenance, particularly in arid or semi-arid habitats and in areas sensitive to additional fragmentation and habitat loss, such as that found in South Mountain.⁴ The only mitigation addressing invasive species in the FEIS was to have the construction equipment cleaned. This is unacceptable; further discussion and proposed actions to minimize disturbance of plant communities adjacent to corridor should have been addressed in the FEIS.

In addition, the following statements can be applied to Loop 202 with respect to invasive species:

- Numerous seeds are carried and deposited along roads by vehicles.⁵
- Plants may also spread along roads due to vehicle-caused air turbulence or favorable roadside conditions.⁶ For example, the short-distance spread of an exotic wetland species, purple loosestrife (*Lythrum salicaria*), along a New York highway was facilitated by roadside ditches, as well as culverts connecting opposite sides of the highway and the median strip of vegetation.
- Non-authorized hiker/biker access encourages disturbance and increase in accidental seed dispersal for invasive species establishment and proliferation.
- Nutrient enrichment from nearby agriculture enhances the growth of aggressive weeds and can be a major stress on a roadside native-plant community (Panetta FD, Hopkins AJM. 1991, pp. 341–351).

None of the above has been addressed in the FEIS.

Finally, I found that there are relatively few invasive species in this area, an observance of significance especially following an epic summer precipitation pattern that would have encouraged establishment and spread of invasive species.

³ Tyser, R. and Worley, C. 1992. Alien flora in grasslands adjacent to road and trail corridors in Glacier National Park, Montana (U.S.A.) *Conservation Biology*, 6:253–62.

⁴ Hansen and Clevanger. 2005. *Biological Conservation* 125: 249–259; http://www.lauxen.net/conecte/referencias/Hansen_2005a.pdf.

⁵ Schmidt W. 1989. Plant dispersal by motor cars. *Vegetatio* 80:147–52.

⁶ Panetta FD, Hopkins AJM. 1991. Weeds in corridors: invasion and management. pp. 341–351, in: Saunders DA, Hobbs RJ, eds. 1991. Nature Conservation 2: The Role of Corridors. Chipping Norton, Australia

III. Fire

Human access and disturbance effects on remote areas tend to increase with higher road density.⁷ Similarly, human-caused fire ignitions may increase. Fires, which are fueled by invasive species and often ignited by humans along such corridors, have devastating impacts on the local Sonoran Desert flora, including the iconic saguaros. Once established, alien grasses such as buffelgrass (*Pennisetum ciliare*) and Sahara mustard (*Brassica tournefortii*) may contribute to a grass/fire cycle; a short fire return interval can cause local extinctions of saguaros (*Carnegiea gigantea*) and foothills paloverde (*Cercidium microphyllum*), the latter, along with several other small shrubs such as bursage (*Ambrosia deltoidea*, *A. dumosa*), are important nurse plants for saguaro seedlings and young plants.⁸

IV. Floristic Analysis

A bare-bones, poor floristic analysis was provided in the FEIS, which included only an assessment of some of the major species in the various habitats provided by a “biologist.” I conducted a two hour reconnaissance of the area and following a relatively quick referral to SEINet herbarium database, I listed at least 75 species as occurring in the impacted area. In addition, I located several areas supporting biological soil and desert pavement in the impacted area, which was not addressed in the FEIS.

Regarding whether or not a Park visitor’s experience will be negatively affected by the Loop 202, the response was that there would be “no impact for the visitor to have a Sonoran Desert experience.” What is a Sonoran Desert experience? The experience involves not only seeing, touching and/or smelling, but also listening to Sonoran Desert sounds *and* lack of sounds, save for birds, insects and other inhabitants. It also involves being present in an area whose indications of impacts, such as roads, car noise and pollution are minimal at best. Five major trails are within $\frac{3}{4}$ of a mile of this multi-lane roadway. Increased traffic leads to an increased establishment and pervasiveness of invasive species that leads to increased fire risk and frequency. All of this lead towards changing the Sonoran Desert ecosystem from a diverse assemblage of cacti, shrubs, trees and annuals, to a less diverse scrub-alien grassland plant community. This also changes the visitors’ opportunity to experience the Sonoran Desert as we knew it. To say that Park visitors will not have their experience in the desert impacted is ludicrous.

V. Disposition of Plants Affected And Follow-Up Maintenance

Although the FEIS states that ADOT will contact the Arizona Department of Agriculture regarding what plants will be affected, there is no statement as to what options they will have (ex., transplanting or allowing salvage), and depending on the

⁷ Forman RTT. 1995. Land Mosaics: The Ecology of Landscapes and Regions.

Cambridge, UK: Cambridge Univ. Press, Mech LD. 1989. Wolf population survival in an area of high road density. *Am. Midl.Nat.* 121:387–389.

⁸ Rogers, G. F. 1985. Mortality of burned *Cereus giganteus*. *Ecology*. 66: 630-632.

options, how they will ensure that chosen options are followed through using best practices for the highest success rate. In addition:

- Is there be a plan and budget for what kind of vegetation will be planted along the corridor, including roadsides, ie., mixture of plantings representing several species to have some semblance to native plant distribution and species makeup or “mass plantings” of few species?
- Is there a plan and budget for continued maintenance and plant care of transplants or newly acquired and planted native plants? Too often plants are installed and tended for only a short amount of time at best, only to be ignored prior to the plants’ successful establishment.
- From where will they get their plant material? Nurseries? Will nursery staff and contractor really know exactly what they are providing? For example, will they know how to differentiate a South American mesquite or a hybrid from a native velvet mesquite? I doubt it, based on what I have seen over the decades.
- Will herbicides be used and how will the herbicides affect native species along and outside the corridor? Herbicides often kill non-target plants, particularly from blanket applications in drifting air.
- Will they hire people who actually know how to transplant saguaros so that the plants have a higher risk of establishment? How dense are the plantings? Will the different types of plantings affect wildlife and influence road-kill, including carrion feeders?

VI. Area Pollutants

Runoff pollutants alter soil chemistry and may be absorbed by plants, the effects of which are poorly known amongst desert plants but varying amongst species. Soils adjacent to the road surface typically contain the greatest mass of heavy metals. In one study, elevated concentrations in grass tissue may occur within 5–8 m of a road, although high lead levels were found in soil out to 25 m. As far as I can tell, this was not addressed in the FEIS. Road dust (which is little-studied) sediment transfer may directly damage vegetation, provide nutrients for plant growth, or change the pH and vegetation.⁹ Effect-distances are usually < 10–20 m but may extend to 200 m downwind. In arid lands such as the South Mountain area, soil erosion and drainage are common road problems.¹⁰ How pollutants and dust can affect the native plants along Loop 202 was not addressed in the FEIS.

Finally, this development of another major freeway mirrors that of a larger policy of most, if not all highway developments in the U.S., where environmental transportation policy largely ignores a range of ecological issues including biodiversity loss, habitat

⁹ Santelman MV, Gorham EV. 1988. The influence of airborne road dust on the chemistry of Sphagnum mosses. *J. Ecol.* 76:1219–31.

¹⁰ Iverson RM, Hinckley BS, Webb RM. 1981. Physical effects of vehicular disturbances on arid landscapes. *Science* 212:915–17.

fragmentation and disruption of horizontal natural processes (which contrasts sharply with a policy that focuses on recreating “nature, including natural processes and biodiversity; and enhancing the national ecological network” as is found in the Netherlands). It was very clear that the FEIS paid little attention to plants and plant communities and how they would be affected by the construction of Loop 202; short-term, let alone, long-term consequences were not addressed and any mitigation offered was of little import.