Federal Highway Administration
Office of the Chief Counsel
Alternatives Analyses White Paper
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INTRODUCTION

If FHWA is to fulfill its mission "To Improve Mobility on our Nation's Highways Through National Leadership, Innovation, and Program Delivery," it must be more efficient. Improving project delivery times is one of the core components of Administrator Mendez's *Every Day Counts* initiative. Efficient and timely completion of environmental documents required by the National Environmental Policy Act (NEPA),[1] most notably Environmental Impact Statements (EIS), should result in positive gains in reducing the overall project delivery schedule.

The alternatives analysis is "the heart" of the EIS.[2] However, there are limitations on the required scope of an alternatives analysis. This white paper summarizes how FHWA can be most efficient in this area while still adhering to the goals and legal requirements of NEPA, discusses the principles FHWA counsel will apply when reviewing NEPA alternatives analyses, and suggests resources available from FHWA, the American Association of State Highway Transportation Officials (AASHTO), and others that offer more detailed information and examples of best practices. This white paper discusses strategies to minimize the number of alternatives that must be evaluated in detail, including:

- The requirements for alternatives analysis in an EA are less rigorous than the requirements for EISs.
- Alternatives eliminated during the transportation planning process may be omitted from detailed analysis in an EIS in certain circumstances.
- The number of alternatives studied in detail in an EIS may be reduced through a screening process conducted during scoping.

WHAT IS THE APPROPRIATE CONSIDERATION OF ALTERNATIVES UNDER NEPA?

EISs - NEPA requires all Federal agencies to consider "all reasonable alternatives."[3] For FHWA, this may include roadway alternatives such as alternative locations or alignments, the number of lanes, and whether or not the facility is tolled, as well as considering Transportation Management Systems and modal alternatives that are outside the purview of FHWA, such as rail.[4] What is a "reasonable" alternative? While the CEQ regulations do not specifically define the term, it is generally understood to mean those technically and economically feasible project alternatives that would satisfy the primary objectives of the project defined in the Purpose and Need statement.[5] If there are many possible reasonable alternatives, the guidance and case law clearly permit a focus on a "reasonable range" of project alternatives.[6]

ENVIRONMENTAL ASSESSMENTS (EAs) – The requirements for an alternatives analysis in an EA differ from those for EISs. The EA is intended to help the agency determine whether to

prepare an EIS or a Finding of No Significant Impact (FONSI).[7] The agency is required to "study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources."[8] In cases involving EA/FONSIs, some courts have found the obligation to consider alternatives to be less than that required for an EIS, and consequently have allowed agencies to study a more limited range of alternatives, including the use of so-called "Build/No-Build" or "Project/No-Project" analyses.[9] Where the agency seeks to utilize a Build/No-Build EA, the document should include a brief discussion of other alternatives considered and the basis for rejecting them during the scoping process. This is particularly true if the proposed project is controversial, or a permitting or consultation process required under another environmental law requires demonstration that avoidance of the resource is not possible before mitigation can be considered. For both EAs and EISs alike, the practitioner should also keep in mind that other statutes such as Section 4(f) can broaden the range of alternatives. [10] For example, Section 4(f) and some other statutes have their own legal definitions of concepts affecting alternatives, such as "feasible" and "prudent."[11]

WHAT IS THE ROLE OF A CLEAR AND SUPPORTABLE PURPOSE & NEED STATEMENT?

The environmental documentation, be it an EA or EIS, "shall briefly specify the underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action."[12] Since the case law is clear that an alternative is unreasonable if it does not meet the project's purpose and need (P&N),[13] it is important to carefully craft a statement outlining what the needs or problems are that require the project, and how the project will remedy those problems – i.e., the project's purposes. Likewise, section 6002 of the Safe, Flexible, Efficient Transportation Equity Act: A Legacy for Users,[14] requires a clear statement of the objectives that the proposed action is intended to achieve.[15] The objectives are not limited to transportation needs, such as a reduction in congestion, but may include a non-transportation objective, such as economic development.[16] The facts providing the basis for the P&N must be correct and supportable (e.g., do not state there is a safety problem if the data do not show this).[17]

FHWA and its co-lead agencies have wide latitude in deciding what the P&N of the project is,[18] but they cannot craft a P&N statement so narrowly that it unduly restricts alternatives.[19] Nevertheless, if the proposal is legitimately constrained because the identified need is narrow or specific by nature, then one can eliminate alternatives that do not meet such a project's very specific P&N. An example of this is the Woodrow Wilson Bridge project, for which the District of Columbia Circuit Court upheld the elimination of bridge alternatives with fewer than twelve lanes since FHWA's record demonstrated that fewer lanes would not meet the transportation needs.[20] In short, the broader the problem that needs to be solved, the more likely it is that a broad range of alternatives (possibly including alternatives that only partially satisfy the P&N) may be found to be reasonable and accordingly will need to be analyzed.

CAN PROJECT ALTERNATIVES BE ELIMINATED DURING PLANNING?

Yes, in appropriate circumstances.[21] The joint FHWA/FTA planning regulation in 23 C.F.R. Part 450 envisions that material produced by or in support of the planning process may be incorporated directly or by reference into NEPA documents if the requirements specified in section 450.318(b) are satisfied.[22] Appendix A to the regulation, which is non-regulatory in nature, identifies key issues to consider before deciding to use such material.[23] Projects subject to the requirements of 23 U.S.C. § 139 (mandatory for EIS projects, optional for other classes of action) must also meet the public and agency involvement requirements for NEPA decisions on P&N and range of alternatives. Among the important factors affecting the ability to use planning products in NEPA documents are:

- Were FHWA and other relevant agencies involved in the planning process?
- Were participants informed during the planning process that their only opportunity to consider certain alternatives may be during the planning process?
- Was the material available to those agencies and the public during both the planning process and during NEPA scoping?
- Was the proposed use of the planning material discussed and vetted during NEPA scoping?
- Was a statement of project P&N fully developed in the planning process and then adopted in the NEPA process?
- Is the information still relevant/valid?
- Does the planning material adequately document the planning outcomes and the basis for them?

Alternatives eliminated during the transportation planning process, because they are not reasonable or feasible, as those terms are defined in the context of NEPA, or do not meet the proposed project's statement of P&N, can be omitted from the detailed analysis of alternatives in the NEPA document as long as the rationale for elimination is briefly explained in the NEPA document.[24] Alternatives that remain "reasonable" after the planning-level analysis must be considered for the EIS, even when they are not the preferred alternative. When the proposed action evaluated in an EA involves unresolved conflicts concerning alternative uses of available resources, NEPA requires that appropriate alternatives be studied, developed, and described.[25]

When such planning decisions about alternatives are carried forward into the NEPA process, it is important to continue to monitor the information and provide any necessary updates in the NEPA document. This should be done both to ensure the accuracy of the information provided to decision-makers and other interested parties, and to minimize the possibility of successful challenges after the NEPA process is complete.

WHAT ROLE CAN SCREENING ALTERNATIVES DURING THE NEPA SCOPING PROCESS PLAY?

The number of alternatives studied in detail in an EIS may be reduced through a screening process conducted during scoping.[26] Likewise, if there is a very broad or vast number of

alternatives, the document can look at a reasonable range within those. [27] While there is no standard methodology for such screening, HCC recommends a systematic process that eliminates those alternatives that obviously cannot meet the P&N;[28] those with known major environmental problems;[29] those that are not technically or economically feasible (as contrasted to simply not desirable);[30] and those that are substantially similar to other alternatives already under consideration.[31] Of particular importance is the need to use sound project cost estimation methods during screening to eliminate alternatives that are not economically feasible. The lead agencies cannot make a determination about an alternative's economic feasibility without supporting cost estimates and an analysis of likely revenue (funding) sources.

Since this screening is performed prior to undertaking the actual study of environmental impacts, the level of detail involved need not approach that of the EIS. The critical points are that the methodology selected be reasonable and that it be documented. For projects subject to 23 U.S.C. § 139 procedures, FHWA must also collaborate with the participating agencies when determining the methodologies and the level of detail to be used for the analysis of alternatives. An opportunity for public involvement in the determination of the range of alternatives is also required. [32]

A successful example of such screening is the Inter-County Connector project in Maryland, which used a "funneling" process to narrow over 300 alternatives identified during scoping to three alternatives that were studied in detail in the EIS.[33] The funneling methodology was an iterative process that was carefully documented. In the first stage, alternatives were compiled from the scoping results. Next, the study team performed a preliminary screening of every alternative to determine whether it would generally meet the P&N and whether it presented incurable environmental or engineering obstacles. This resulted in 18 preliminary alternatives, including several non-highway alternatives including transit, land use changes, and improvements to existing roads. The third stage focused on each individual element of the P&N and assessed whether the potential alternative was likely to meet all P&N elements; this resulted in three alternatives that were then evaluated in detail in the EIS (two build alternatives and a no-action alternative). Public and agency input was sought during the funneling process and a technical report was prepared that was summarized and referenced in the EIS. When presented with this record, the reviewing court upheld the process because "[t]he record clearly indicates that Defendants adequately considered reasonable alternatives and engaged in a very thorough and collaborative process when deciding which alternatives would be eliminated."[34]

For some projects, it may become necessary to revisit the reasons for screening out a particular alternative as the EIS is developed. For example, a community organization may object to a particular alternative having been eliminated during the planning process. By re-examining the proposed alternative in greater detail than was initially done during screening, the agency can increase the defensibility of its decision whether or not to add the alternative to those being studied in detail. Another common reason to revisit alternatives previously screened out is compliance with Section 4(f). Accordingly, Section 4(f) should be one of the screening criteria used. If the preferred alternative would require the use of more than a *de minimis* amount of Section 4(f) property, the project applicant must demonstrate that there is no feasible and prudent alternative to using land from the protected property.[35] This requires documentation of more substantial drawbacks, meeting the regulatory definition in 23 C.F.R. § 774.17, before an

avoidance alternative may be eliminated from consideration. Likewise, the screening process should also include consideration of other substantive environmental statutes, such as section 404 of the Clean Water Act and section 7 of the Endangered Species Act.

WHAT NEEDS TO BE DOCUMENTED?

It is crucial that the alternatives selection process be discussed within the EIS itself. The discussion should be of sufficient specificity that the reader understands the rationale behind the decision that was made[36]. If litigation ensues, FHWA's decision will be evaluated under a standard of reasonableness, meaning: Is there a reasonable explanation in the EIS for having excluded the plaintiff's favored alternative from consideration? If the material is voluminous, then the explanation may be summarized in the EIS and set forth in detail in the underlying record.

During the screening process described above, it is important that the administrative record (all of the documents directly or indirectly before the decisionmaker at the time the decision was made) describe the methodology and benchmarks -- technical and economic feasibility, consistency with P&N, analysis of environmental impacts -- used to gather, narrow and select alternatives. If the EIS relies on a separate technical report, the report can be incorporated by reference into the EIS.[37] In addition, all documentation related to the development of the project alternatives during the planning and scoping stages should be retained and made available for public review upon request.[38] For projects subject to section 139 procedures, this documentation must also include evidence that shows that both the public and agencies were afforded an opportunity for input into the P&N and the range of alternatives. Also, documentation must show that the lead agencies collaborated with participating agencies on the methodologies and level of detail used in the analysis of alternatives.

In cases where Federal agencies have been sued and lost, courts have focused upon the lack of clarity in the record and the lack of evidentiary facts to support the alternatives studied and to explain those which were eliminated.[39] Courts generally applaud a step–by-step decision-making process that clearly illustrates how and why alternatives were screened out.[40] One way to clearly illustrate the screening process is to provide a side-by-side comparison between those alternatives that are reasonable and those that are not in clear, concise language.[41] Such an approach provides a proper defense and can prevent the project from being sent back to the drawing board by the court.[42] Consistent use of methodology that relies upon factual determinations will also aid in the legal sufficiency review.

CONCLUSION

In conclusion, an effective project development process will begin to narrow the range of alternatives during the planning stage by following the procedures discussed above. During NEPA scoping, the potential project alternatives can be reduced to a reasonable range of alternatives through a systematic screening process. If properly documented, this approach to alternatives analysis can reduce the time and effort for that element of the NEPA process and will make the document more legally defensible.

ADDITIONAL RESOURCES (as of March 2010)

Federal Highway Administration Technical Advisory: *Guidance for Preparing and Processing Environmental and Section 4(f) Documents*.[43] T6640.8A. October 30, 1987, http://environment.fhwa.dot.gov/projdev/impTA6640.asp

NEPA and Transportation Decision-making: Development and Evaluation of Alternatives (FHWA), http://www.environment.fhwa.dot.gov/projdev/tdmalts.asp

AASHTO Practitioners Handbook 07: Defining Purpose and Need and Determining the Range of Alternatives for Transportation Projects (AASHTO, August 2007), http://environment.transportation.org/center/products_programs/practitioners_handbooks.aspx#6

CSS and the Project Development Process (Context Sensitive Solutions.org), http://www.contextsensitivesolutions.org/content/topics/process/project-development/

Improving the Quality of Environmental Documents (AASHTO, May 2006), http://environment.transportation.org/center/products_programs/improving_quality_nepa.aspx

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[1] 42 U.S.C. § 4321 et seq.
[2] 40 C.F.R. § 1502.14.
[3] 23 C.F.R. § 771.123(c) and 40 C.F.R. § 1502.14.
[4] Guidance on these requirements is located in FHWA's environmental toolkit, "*Development and Evaluation of Alternatives*" at http://www.environment.fhwa.dot.gov/projdev/tdmalts.asp.
[5] Question 2a in NEPA's Forty Most Asked Questions, 46 Fed. Reg. 18,026 (March 23, 1981).
[6] *See* CEQ, *Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations*, Question 1b, 46 Fed. Reg. 18,026 (March 23, 1981).*; City of Alexandria v. Slater*, 198 F.3d 862 (D.C. Cir. 1999), *cert. denied* 531 U.S. 820 (2000).
[7] 40 C.F.R. § 1508.9(a)(1); 23 C.F.R. § 771.119(a).
[8] 42 U.S.C. § 4332(E). See also 40 C.F.R. § 1508.9(b).
[9] E.g., *Native Ecosystems Council v. U. S. Forest Serv.*, 428 F.3d 1233 (9th Cir. 2005); *Mt. Lookout-Mt. Nero Prop. Prot. Ass'n v. Fed. Energy Regulatory Comm'n*, 143 F.3d 165 (4th Cir. 1998); *Sierra Club v. Espy*, 38 F.3d 792 (5th Cir. 1994); *North Carolina v. Fed. Aviation Admin*., 957 F.2d 1125 (4th Cir. 1992); *Friends of the Ompompanoosuc v. F.E.R.C*., 968 F.2d 1549 (2d Cir. 1992); *Olmsted Citizens for a Better Cmty. v. U. S.*, 793 F.2d 201 (8th Cir. 1986).
[10] Section 4(f) of the Department of Transportation Act of 1966, Pub. L. 89–670, 80 Stat. 931, codified at 49 U.S.C. § 303 and 23 U.S.C. § 138; See also *Davis v. Mineta*, 302 F.2d 1104 (10th Cir. 2002);
[11] See 23 C.F.R. § 774.17.
[12] 40 C.F.R. § 1502.13.
[13] E.g., *Associations Working for Aurora's Residential Environment v. Colorado Dep't of Transp*., 153 F.3d 1122, 1130 (10th Cir. 1998); *Laguna Greenbelt, Inc. v. U. S. Dep't of Transp*., 42 F.3d 517, 524-25 (9th Cir.1994); *North Buckhead Civic Ass'n v. Skinner*, 903 F.2d 1533, 1541-42 (11th Cir. 1990) .
[14] Pub. L. 109-59, Aug. 10, 2005, 119 Stat. 1144; codified at 23 U.S.C. § 139.
[15] See 23 U.S.C. § 139(f)(3)
[16] 23 U.S.C. § 139(f)(3); *City of Grapevine v. Dep't. of Transp.*, 17 F.3d.1502, 1506 (1993)
[17] Guidance is available on FHWA's website to assist in drafting a statement of purpose and need at http://environment.fhwa.dot.gov/projdev/tdmelements.asp
[18] *Citizens Against Burlington, Inc. v. Busey*, 938 F.2d 190, 195-96 (D.C. Cir. 1991); 23 U.S.C. § 139(f)(2).
[19] *Davis v. Mineta*, 302 F.2d 1104 (10th Cir. 2002); *Simmons v. U.S. Army Corps of Engineers*, 120 F. 3d 664, 666-70 (7th Cir. 1997).

[20] *City of Alexandria v. Slater*, 198 F.3d 862, 867-69 (D.C. Cir. 1999), rehearing and rehearing en banc denied (March 7, 2000), cert. denied, 531 U.S. 820 (2000).
[21] Case law on the use of planning products in the NEPA process is not voluminous, but existing cases provide a sufficient body of law to validate this "linking planning and NEPA" approach. Most of the cases focus the question whether planning actions may be used to define P&N under NEPA. The courts have pointed to the long-standing regime under which community planning is the province of the States and local communities, not Federal agencies, and upheld the Federal agencies reliance on such planning decisions. Examples of such cases appear in a FHWA/FTA Chief Counsel joint memorandum on "Integration of Planning and NEPA Processes," dated February 22, 2005 (available at http://environment.fhwa.dot.gov/strmlng/integmemo.asp).
[22] Sections 450.212 and 450.318 of the FHWA/FTA planning regulations outline the procedures and considerations for incorporating planning products into the analysis and documentation required under NEPA. The regulation cites the relevant provisions in the NEPA statute and implementing regulations (23 C.F.R. Part 771 and 40 C.F.R. Parts 1500-1508) that support the use of planning products in NEPA. *See* 23 C.F.R. §§ 771.105(a)-(b), 771.111(a)(2), 771.123(b); 40 C.F.R. §§ 1501.1(a)-(b), (d), and § 1501.2.. More detailed non-binding guidance appears in Appendix A to 23 C.F.R. Part 450.
[23] *See* questions outlined in Section II, Questions 7 and 14 of Appendix A to 23 C.F.R. Part 450.
[24] *See* CEQ, *Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations*, Question 2a; *See also* FHWA/FTA Planning regulations 23 C.F.R. §§ 450.212 and 450.318.
[25] NEPA, 42 U.S.C. §102(2)(E); 42 U.S.C. § 4332(E).
[26] *Tongass Conservation Society v. Cheney*, 924 F.2d 1137, 1140-42 (D.C. Cir. 1991); *American Rivers v. FERC*, 201 F.3d 1186, 1200 (9th Cir. 2000); *Laguna Greenbelt*, 42 F.3d at 524-525.
[27] CEQ, *Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations*, Question 1b, 46 Fed. Reg. 18,026 (March 23, 1981).
[28] See cases cited in note 13.
[29] E.g., *Natural Resources Defense Council v. F.A.A.*,564 F.3rd 549, 557 (2nd Cir. 2009).
[30] CEQ, *Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations*, , Question 2a; *Valley Citizen for a Safe Environment v. Aldridge*, 886 F.2d 458 (1st Cir. 1989).
[31] NEPA does not require a separate analysis of alternatives which are not significantly different from alternatives actually considered, or which have substantially similar consequences. *Northern Plains Resource Council v. Lujan*, 874 F.2d 661, 666 (9th Cir. 1989).
[32] Alternatives considered in the NEPA process for an EIS, according to 23 U.S.C. § 139, must arise from a process where the public and agencies have an opportunity for input in the identification of the range of alternatives considered. *See also* 23 C.F.R. § 771.111(h)(2)(vii) and Question 37 of the FHWA guidance issued 11/15/06 http://www.fhwa.dot.gov/hep/section6002/index.htm .
[33] *Audubon Naturalist Society v. U.S. Dep't of Transp.*, 524 F.Supp.2d 642, 667-72 (D. Md 2008).
[34] *Id.*, at 669.
[35] 23 C.F.R. § 774.3(a)(1).
[36]A related issue is the identification of a preferred alternative. The agency's preferred alternative may be identified in the Draft EIS and must be identified in the Final EIS. See 40 C.F.R. § 1502.14(e), 23 C.F.R. § 771.125(a)(1), and 23 U.S.C. § 139(f)(4), as applicable.
[37] 40 C.F.R. § 1502.21.
[38] If FHWA counsel has any concern about the sufficiency of supporting documentation for purposes of the future administrative record, counsel should request review of the relevant project file material.
[39] *Dubois v. U.S. Department of Agriculture*, 102 F.3d 1273 (1st Cir. 1996).
[40] E.g., *Native Ecosystems Council v. U.S. Forest Service*, 428 F.3d 1233 (9th Cir. 2005); *Citizens' to Save our Canyons v. U.S. Forest Services*, 297 F.3d 1012 (10th Cir. 2002).
[41] David S. Mattern, *Reader-Friendly Environmental Documents: Opportunity or Oxymoron?*, 39 Envtl. L. Rep. News and Analysis 10624, (July 2009), *See also, Improving the Quality of Environmental Documents*, A report of the joint AASHTO/ACEC Committee in cooperation with the Federal Highway Administration, May 2006.
[42] E.g., *Davis v. Mineta*, 302 F.3d 1104 (10th Cir. 2002).
[43] The Section 4(f) material in this document has been superseded. Please refer to 23 C.F.R. Part 774.