This Handbook provides recommendations for defining the purpose and need and determining the range of alternatives in environmental impact statements and environmental assessments for transportation projects, in accordance with the National Environmental Policy Act (NEPA).

Issues covered in this Handbook include:

- Considering relevant legislation and planning decisions
- Determining and documenting the need for the project
- Defining the project purpose
- Developing and applying alternatives screening criteria
- Coordinating with agencies and involving the public
Overview

This Handbook is intended to provide practitioners with practical suggestions for defining the purpose and need and determining the range of alternatives for highway, public transportation, and railroad projects.

The adoption of the purpose and need statement is one of the most consequential decisions that the lead agencies make in the National Environmental Policy Act (NEPA) process, because the purpose and need provides the foundation for determining which alternatives will be considered and for selecting the preferred alternative. The purpose and need also can be a major factor in deciding whether a particular alternative can be approved under other laws such as Section 4(f) of the U.S. Department of Transportation (U.S. DOT) Act and Section 404 of the Clean Water Act. Because of its importance, the decision on purpose and need can become a source of disagreement and delay in the NEPA process and is frequently a focal point for litigation. This Handbook summarizes key requirements and provides suggestions about how to develop a purpose and need statement that is clear, well-supported, and defensible.

Alternatives screening also plays an enormously important role in the NEPA process, because it is the vehicle for deciding which alternatives remain on the table for detailed environmental analysis. Typically, a screening process involves identifying a broad range of potential alternatives and then applying a standard set of evaluation criteria to eliminate alternatives that do not meet the purpose and need or are otherwise found to be unreasonable. In addition, when the number of reasonable alternatives is very large, similar alternatives may be combined to allow for a manageable number of alternatives to be studied in detail. Disagreements about which alternatives to eliminate from consideration can become a significant source of delay in the NEPA process, and litigation challenges often focus on the adequacy of an agency’s rationale for its screening decisions. This Handbook provides an overview of the legal requirements for alternatives screening and provides suggestions for managing this process effectively.

The topics covered in this Handbook include:

- Considering relevant legislation and transportation planning decisions
- Determining and documenting the need for the project
- Defining the project purpose
- Developing and applying alternatives screening criteria and
- Coordinating with agencies and involving the public

Background Briefing

This section summarizes key requirements that apply when defining the purpose and need and determining the range of alternatives in NEPA studies for transportation projects. It focuses primarily on the requirements for an environmental impact statement (EIS) or environmental assessment (EA) prepared by the Federal Highway Administration (FHWA), Federal Transit Administration (FTA), or Federal Railroad Administration (FRA).

Why a Purpose and Need Is Required. The Council on Environmental Quality (CEQ) regulations require an EIS to “briefly specify the underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action.” For an EA, the regulations require a “brief discussion of the need for the proposal.” Agencies have broad, but not unlimited, discretion to determine the purpose and need. As one court stated, “[o]nce an agency has considered the relevant factors, it must define goals for its action that fall somewhere within the range of reasonable choices.”

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1 40 CFR 1502.13.
2 40 CFR 1508.9(b).
Whether a Purpose Is Too Narrow. Courts have cautioned agencies against defining the project purpose too narrowly. The most commonly cited rule is that "an agency may not define the objectives of its action in terms so unreasonably narrow that only one alternative from among the environmentally benign ones in the agency’s power would accomplish the goals of the agency’s action, and the EIS would become a foreordained formality." In deciding whether an agency’s purpose is “unreasonably narrow,” courts review the factors considered by the agency. Examples of factors that may help to support a purpose and need include: direction provided by Congress in legislation; objectives identified in the transportation process; factual information in the project record; and input provided by agencies and the public.

How the Purpose and Need Statement Is Used. A succinct, well-supported purpose and need statement is a fundamental building block of any EIS. It plays a critically important role under NEPA and other laws:

- **NEPA.** The purpose and need statement is a key factor in determining the range of alternatives considered in an EIS. The purpose and need limits the range of alternatives because an agency can dismiss, without detailed study, any alternative that fails to meet the project’s purpose and need.5
- **Section 4(f).** Under Section 4(f), the U.S. DOT is required to determine whether there is any “feasible and prudent” alternative that avoids the use of significant publicly owned parks, recreation areas, and wildlife or waterfowl refuges, as well as any significant historic sites. An alternative that does not meet the purpose of a project is not prudent and therefore can be eliminated from consideration under Section 4(f).7
- **Section 404.** Under Section 404 of the Clean Water Act, the U.S. Army Corps of Engineers is required to determine whether there is any “practicable” alternative that avoids the use of aquatic resources within its jurisdiction. In general, an alternative that does not meet the purpose of a project is not practicable and therefore can be eliminated from consideration under Section 404.8 The determination of “practicability” under Section 404 is distinct from the determination of “reasonableness” under NEPA. The agency responsible for determining “practicability” under Section 404 is the Corps.

Requirement to Evaluate “All Reasonable Alternatives.” The CEQ regulations require an EIS to “rigorously explore and objectively evaluate all reasonable alternatives” and to “[d]evote substantial treatment to each alternative considered in detail so that reviewers may evaluate their comparative merits.”9 The regulations also provide that “for alternatives which were eliminated from detailed study, [the EIS should] briefly discuss the reasons for their having been eliminated.”10 These requirements have been clarified through guidance, case law, and agency practice. Some key points include:

**Alternatives can be eliminated for failing to meet purpose and need and/or for other reasons.** Alternatives can be eliminated in the screening process based on any factor that is relevant to reasonableness, including but not limited to its inability to meet the purpose and need.

- An alternative that does not meet the purpose and need is, by definition, unreasonable, and for that reason, it can be eliminated in the screening process.
- Even if an alternative meets or potentially meets the purpose and need, it can still be rejected as unreasonable based on one or more other factors, including environmental impacts, engineering, and cost, and limited ability to meet purpose and need.

**An alternative may be reasonable even if it is not desired by the project sponsor.** The CEQ has explained that “[i]n determining the scope of alternatives to be considered, the emphasis is on what is ‘reasonable’ rather than on whether the proponent or applicant likes or is itself capable of carrying out a particular alternative. Reasonable alternatives include those that are practical or feasible from the technical and economic standpoint and using common sense, rather than simply desirable from the standpoint of the applicant.”11

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5 City of Alexandria v. Slater, 198 F.3d 862, 867–869 (D.C. Cir. 1999).
6 49 USC 303. The requirement to consider feasible and prudent avoidance alternatives does not apply if the use has a “de minimis” impact.
7 23 CFR 774.17 (definition of “feasible and prudent avoidance alternative”).
8 40 CFR 230.3(l) (definition of “practicable”).
9 40 CFR 1502.14(b).
An alternative may be reasonable even if it requires legislative change. Courts have held that an alternative is not necessarily unreasonable simply because of the fact that a legislative change would be needed before the alternative could be implemented.\(^\text{12}\) This principle does not preclude agencies from taking the need for legislative change into account when determining reasonableness. It simply means that the need for a legislative change, by itself, does not automatically make an alternative unreasonable.

Studying a “reasonable range” is allowed. The reference in the CEQ regulations to “all reasonable alternatives” implies that every reasonable alternative must be rigorously evaluated, no matter how many reasonable alternatives exist. The CEQ has clarified this requirement as follows: “When there are potentially a very large number of alternatives, only a reasonable number of examples, covering the full spectrum of alternatives, must be analyzed and compared in the EIS. ... What constitutes a reasonable range of alternatives depends on the nature of the proposal and the facts in each case.”\(^\text{13}\)

Requirements for an EA. The requirement to consider “all reasonable alternatives” applies to an EIS; for an EA, the CEQ regulations state that an environmental assessment (EA) shall include a “brief discussion” of alternatives.\(^\text{14}\) Courts have held that the alternatives analysis required for an EA is less rigorous than the alternatives analysis required for an EIS.\(^\text{15}\) Consideration of the proposed action and a No Action alternative is often sufficient in an EA, whereas an EIS typically includes a range of action alternatives in addition to the No Action alternative.

Key Requirements in 23 USC 139. All highway, transit, and multimodal projects for which an EIS is prepared must follow an environmental review process defined in 23 USC 139. Railroad projects requiring an EIS must comply with Section 139 “to the greatest extent feasible.”\(^\text{16}\) Section 139 includes several important requirements related to the development of the purpose and need and the range of alternatives:

- **Potential Elements of Purpose and Need.** Section 139 states that the following purposes can be included in a purpose and need statement:
  - Achieving a transportation objective established in statewide or metropolitan transportation plans;
  - Supporting land use, economic development, or growth objectives established in Federal, state, local, or tribal plans; and
  - Serving national defense, national security, or other national objectives established in Federal laws, plans, or policies.\(^\text{17}\)

- **Lead Agencies’ Role.** Section 139 gives the lead agency in the NEPA process responsibility for defining the purpose and need and determining the range of alternatives considered.\(^\text{18}\) The term “lead agency” is defined to include any state or local agency that is serving as a “joint lead agency” and any project sponsor that is a state or local government is required to be designated as a joint lead agency. Thus, the lead Federal agency and the state or local project sponsor share the responsibility for defining the purpose and need and determining the range of alternatives. The process does not move forward until any disagreement between them is resolved.

- **Opportunity for Involvement by Agencies and the Public.** Section 139 requires lead agencies to provide an opportunity for involvement for agencies and the public in defining the purpose and need and determining the range of alternatives. The law leaves lead agencies with substantial flexibility in determining how to provide this opportunity, but does state that this opportunity must occur “as early as practicable” in the NEPA process, implying that it cannot simply be combined with the comment period on the Draft EIS. Participating agencies are required to provide comments “on those areas within the special expertise or jurisdiction of the agency.”\(^\text{19}\) Similarly, the lead agencies are required to “consider and respond to comments received from participating agencies on matters within the special expertise or jurisdiction of those agencies.”\(^\text{20}\)

\(^{12}\) *Kilroy v. Ruckelshaus*, 738 F.2d 1448, 1454 (9th Cir. 1984).

\(^{13}\) CEQ, “Forty Most Asked Questions Concerning CEQ’s NEPA Regulations” (Mar. 16, 1981), Question 1b.

\(^{14}\) See 40 CFR 1508.9(b).

\(^{15}\) *Native Ecosystems Council v. U.S. Forest Service*, 428 F.3d 1233, 1246 (9th Cir. 2005).

\(^{16}\) 49 USC 24201(a) (The U.S. DOT “shall apply the project development procedures, to the greatest extent feasible, described in Section 139 of Title 23 to any railroad project that requires the approval of the Secretary” under NEPA.).

\(^{17}\) 23 USC 139(f)(3).

\(^{18}\) 23 USC 139(f)(2) and 139(f)(4)(B).

\(^{19}\) 23 USC 139(d)(9).

\(^{20}\) 23 USC 139(c)(6).
• **Issue Resolution.** Section 139 creates an “issue resolution” process for resolving disagreements among Federal agencies in the NEPA process. This process can be invoked by a Federal agency with jurisdiction over the project, by a project sponsor, or by the Governor of a state. Once this process is invoked, the lead agency is required to convene a meeting with the relevant agencies and the project sponsor. If the issue is not resolved directly between the agencies, the issue can be elevated to the CEQ and ultimately the President. This process can be used to resolve disagreements on purpose and need and range of alternatives; however, it is not automatically triggered when a participating agency submits a comment expressing disagreement or concern. This process is triggered only when an issue resolution meeting is specifically requested by a Federal agency, a project sponsor, or the Governor of a state.

• **Single NEPA Document.** In 2015, Section 139 was amended to require, in general, that “all Federal permits and reviews for a project shall rely on a single environment document prepared under [NEPA] under the leadership of the lead agency.” This provision means that, if two or more Federal agencies have an approval role for the same project, those agencies generally (with limited exceptions) must rely upon the same NEPA document to satisfy their NEPA responsibilities. Preparing a single document avoids the potential for different NEPA documents with different definitions of the project’s purpose and need.

**Use of Planning–Environmental Linkages.** Transportation agencies can use the transportation planning process to produce decisions or analyses that can later be adopted for use in the NEPA process—a practice known as planning–environmental linkage (PEL). For highway and transit projects, there are two main sources of authority for adopting planning decisions for use in the NEPA: the process described in Appendix A to the transportation planning regulations (23 CFR Part 450) and a separate process established in a Federal statute (23 USC 168). These processes allow similar types of decisions and analyses to be adopted, including:

- Purpose and need
- General travel corridor and mode
- Preliminary screening of alternatives
- Need for tolling or other innovative financing
- Travel demand and socio-economic growth forecasts

Both Appendix A to Part 450 and 23 USC 168 establish requirements that must be met before adoption can occur. While the requirements are similar, there are some notable differences. For example, under 23 USC 168, concurrence of a cooperating agency is required “if the planning product is necessary for a cooperating agency to issue a permit, review, or approval for the project.”

There is also a provision in 23 USC 139(f)(4) that allows the lead agency in the NEPA process to eliminate from detailed consideration an alternative that was previously rejected in the metropolitan transportation planning process or in a state environmental review process. This provision only applies to adoption of an alternatives screening decision. It requires concurrence by cooperating agencies in some cases.

**Coordination with Section 404 and Other Laws.** The requirements of Section 404 of the Clean Water Act are distinct from NEPA and are more stringent in the sense that Section 404 requires selection of the practicable alternative that causes the least impact to aquatic resources.

- **Independent Authority.** As the permitting agency under Section 404, the Corps has a responsibility to determine which alternatives are practicable. Under its regulations, the Corps determines practicability based on “cost, existing technology, and logistics in light of overall project purposes.” Thus, the Corps’ role under Section 404 requires the Corps to determine the “overall project purposes.” In that capacity, the Corps must determine the project’s “overall project purpose” and analyze alternatives to support the Corps’ decision on the Section 404 permit application. In addition, because issuance of a permit is a Federal action, the Corps has an independent responsibility to comply with NEPA.

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21 23 USC 139(d)(8).
22 23 CFR 450.212 and 450.318 and Appendix A to Part 450.
23 23 USC 168(d).
25 40 CFR 230.3(l).
• **Substantial Deference.** The CEQ has issued guidance, in the form of a letter to U.S. DOT, stating that non-transportation agencies should give “substantial deference” to transportation agencies’ definition of a project’s purpose and need. In joint guidance, FHWA and FTA observed that “substantial deference” means that other Federal agencies “should only raise questions regarding our purpose and need statements when those questions relate to substantive or procedural problems (including omission of factors) important to that agency’s independent legal responsibilities.”

• **Use of Checkpoints.** Because the U.S. DOT’s decisions in its NEPA process are not binding on the Corps, the U.S. DOT and the Corps have devised various procedures for coordinating their respective reviews and decisions, as well as reviews and decisions made by other Federal agencies under other laws. One acceptable approach is to establish a series of “checkpoints” at which the U.S. DOT agency seeks comment or concurrence from the Corps and other agencies on the purpose and need, the range of alternatives, and the preferred alternative (and perhaps other decisions as well).

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### Key Issues to Consider

**Considering Relevant Legislation and Planning Decisions**

- Is there any legislation (Federal, state, or local) that is relevant to defining the project purpose?
- Are there any policies in state or metropolitan transportation plans that are relevant to defining the purpose?
- Did the transportation planning process produce a preliminary purpose and need statement for this project?
- Has the transportation planning process produced data that can be used to support the purpose and need?
- Did the transportation planning process include a preliminary screening of alternatives?
- Have the conditions been met for adopting planning-level decisions or analyses for use in the NEPA process?

**Determining and Documenting the Need for the Project**

- What data is available to evaluate the transportation needs in the project area?
- Are there any data gaps? If so, how will those gaps be addressed?
- Has any of the data become stale?
- How will the supporting information for the purpose and need be documented?
- What are the key assumptions underlying the travel demand forecasts and are they realistic?
- If concerns have been raised regarding the travel forecasting model, how have they been addressed?
- What visual aids would be helpful in conveying the key elements of the purpose and need?

**Defining the Project Purpose**

- Is there a single purpose of the project, or does the project serve multiple purposes?
- If there are multiple purposes, are some more important than others? What are the true “drivers” of the project?
- What criteria will be used to determine whether an alternative meets the project purposes?
- Have the project purposes changed over time? If so, how will this change be explained?
- Is the project purpose stated clearly, succinctly, and consistently throughout the NEPA document?

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26 Letter from J. Connaughton, Chairman, CEQ, to N. Mineta, Secretary, U.S. DOT (May 12, 2003).
Developing and Applying Alternatives Screening Criteria

- What criteria will be used to determine whether an alternative meets purpose and need?
- Aside from purpose and need, what other factors will be considered in the screening process?
- How will the alternatives screening process be documented?
- Are there any circumstances that warrant reconsideration of previous screening decisions (e.g., new data)?

Coordinating with Agencies and Involving the Public

- If an EIS is being prepared, what opportunity for involvement will be provided for agencies and the public in developing the purpose and need and determining the range of alternatives?
- Is there an interagency agreement that requires coordination and/or concurrence from other agencies at key milestones, such as purpose and need and the range of alternatives?
- If an EA is being prepared, will there be any agency coordination or public involvement regarding purpose and need and the range of alternatives?
- How will agency coordination and public involvement efforts be documented?
- If commenters have raised concerns about the purpose and need and/or the range of alternatives, how have those concerns been addressed?

This section provides suggestions for developing the purpose and need statement and then applying the purpose and need statement, along with other factors, in the development and screening of alternatives. It is not intended to prescribe a specific format or approach. Rather, it draws on regulations, guidance, court decisions, and experience in the NEPA process to provide ideas and insights for practitioners to consider.

Practical Tips

1 | Considering Relevant Legislation and Planning Decisions

The purpose and need for a project should be shaped by the transportation planning process and, where applicable, by policy direction provided in Federal legislation.

Federal Legislation. Courts have recognized in a variety of contexts that Federal agencies can and should consider Federal legislative direction when determining a project’s purpose.29 In developing the purpose and need for a toll project, FHWA could consider legislation that:

- establishes overall policies for the national transportation system—e.g., reducing congestion;
- provides funding for a specific type of transportation project—e.g., expanding capacity of existing transit systems;
- designates a national or regional network and provides goals for that network;
- designates specific corridors or routes as a high priority for improvement;
- establishes design criteria that must be met by projects to be eligible for a funding program; and
- creates a process through which transportation priorities can be adopted for projects that use Federal funds—e.g., the statewide and metropolitan transportation planning process.

When such legislation exists, the purpose and need statement should include specific discussion of the applicable legislation and explain how it relates to the proposed project. In addition, on a cautionary note, practitioners should keep in mind that legislation can be amended or repealed. If a purpose and need statement is based solely or primarily on legislative direction, the basis for the purpose and need could be undermined by a change in that legislation.

29 See, e.g., Westlands Water District v. U.S. Dept. of Interior, 376 F.3d 853, 866 (9th Cir. 2004) (“Where an action is taken pursuant to a specific statute, the statutory objectives of the project serve as a guide by which to determine the reasonableness of objectives outlined in an EIS.”).
State Legislation. States also may adopt legislation establishing transportation policies and priorities, which may provide input to the development of the purpose and need for transportation projects. For example, a state legislature may establish plans or policies calling for the development of a statewide highway network to support economic development, or calling for the incorporation of pedestrian and bicycle facilities into certain types of road construction projects. It is important to recognize, however, that state legislation cannot override Federal requirements. Therefore, while state legislation can contribute to development of the purpose and need, the Federal lead agency will nonetheless exercise independent judgment in determining whether those state goals are compatible with Federal law. The same considerations would apply with regard to local ordinances.

Transportation Planning. As discussed in the Background Briefing, the transportation planning process can and should shape the definition of the purpose and need in the NEPA process and may also be used to limit the range of alternatives considered in the NEPA process. The transportation planning process can contribute in several ways, including:

- defining overall policies for the state or metropolitan transportation system, such as a policy of reducing congestion, increasing transit ridership, or expanding tolling;
- defining the complementary roles of different modes within the transportation system, potentially including specific corridors within which individual modal improvements will be made;
- establishing performance measures and performance targets (e.g., for congestion and safety), which can be used as benchmarks for determining the need for transportation improvements;
- designating specific projects as priorities for the state or region;
- designating the funding sources to be used for individual projects (e.g., tolling);
- establishing economic development and growth priorities, which may shape travel forecasts;
- developing regional travel demand forecasts, which may help to identify and support the need for individual projects; and
- developing a preliminary purpose and need for individual projects.

Taking advantage of these opportunities requires close cooperation between practitioners involved in the transportation planning and environmental review processes. During the planning process, environmental practitioners can be engaged to consider in advance the opportunities that may exist to adopt transportation planning products for use in subsequent NEPA processes for individual projects. Then, when the NEPA process is about to begin, planners can be engaged to ensure that the NEPA team is aware of the relevant planning products and can make an informed decision about which planning products are appropriate for adoption in the NEPA process.

2 | Determining and Documenting the Need for the Project

The “needs” section of the purpose and need chapter provides the factual foundation for the statement of project purpose. This section should describe the problems that the proposed action is intended to address and, to the extent possible, explain the underlying causes of those problems—for example, population growth trends. The following suggestions address some of the topics that should be considered in deciding what data to include and how it should be presented.

Finding the Right Data. In developing the data for the purpose and need chapter, the key question for practitioners is not “What type of data is available?” Rather, the key question is: “What type of data is needed to explain the transportation conditions?” In many cases, obtaining the right data is a time-consuming task. For example:

- Existing models may need to be updated to provide a sufficient level of detail in the project corridor
- Data may not be available at a scale appropriate for the size of the study area
- Data may be lacking to support problems that are widely perceived to exist

Overcoming these challenges is an important part of developing a sound purpose and need statement. The data in the purpose and need statement should be current, accurate, and above all relevant to the issues being considered.

Defining the “No Action” Scenario. A defensible and consistent definition of the No Action scenario is essential to a sound assessment of the need for a project. The heart of this task is defining the conditions that will exist in the forecast year if
the proposed action is not implemented. This involves making assumptions about both future land use (i.e., population and employment) and the future transportation network, including both physical improvements and operational changes that may be made in the future. These assumptions should be carefully documented and explained in the NEPA document, since they provide the underpinning for the definition of the need for the project. It is also helpful to describe the major elements of the No Action scenario in the EIS itself. This can be done by listing the key transportation projects that are assumed to be in place in the forecast year under the No Action condition.

**Transportation Forecasting Methodology.** Travel demand forecasts are often the linchpin of the purpose and need statement for transportation projects. When the purpose and need rest on travel demand forecasts, it is critical to ensure that the NEPA document and/or technical report include a “plain-English” explanation of the way those forecasts were developed. Generally, this explanation should address the following issues:

- the specific transportation model used to develop the forecasts;
- the key assumptions used in the model regarding population and employment growth rates, and the justification for those growth assumptions;
- the key assumptions used in the model regarding transportation improvements that would occur under the No Action scenario, including future construction projects and operational measures;
- any important modifications or adjustments made to the model for purposes of the forecasts used in the NEPA process; and
- responses to any specific concerns raised during the NEPA process regarding the reliability of the forecasts or appropriateness of those forecasts for use in the NEPA process.

In addition, the travel model inputs and outputs should be maintained in the project file in electronic form, in case it becomes necessary to review or disclose the underlying support for the forecasts. This data should be preserved for the forecasts that were actually included in a published NEPA document.

**Growth Projections.** Where the purpose and need statement relies in part on future growth in population and employment, the purpose and need chapter (or supporting technical reports) should include data and analysis to demonstrate that the projected growth trends are reasonable and well-supported by evidence. Practitioners should keep the following points in mind when developing and documenting these forecasts:

- If the projected growth rates significantly differ from growth rates in recent years, the NEPA document also should explain why future growth is expected to be significantly faster or slower than recent growth. This explanation is especially important if the growth forecasts assume a future growth rate that greatly exceeds recent trends.
- Growth projections that are used to support the purpose and need should not assume the existence of the transportation project itself. If the regional growth forecasts assumed the presence of the project, it may be necessary to develop updated growth forecasts that omit the project, and then use those forecasts as the basis for the purpose and need.

**Selecting the Forecast Year.** There is no specific NEPA requirement regarding the time horizon that should be used in defining a project’s purpose and need, but the typical period for highway projects is approximately 20 to 25 years from the initiation of the NEPA study. The forecast year should be specified in the purpose and need chapter, and should be used consistently throughout the EIS. In some cases, where a NEPA study takes considerably longer than expected, it may be appropriate to move the forecast year farther out. If this is done, the change should be explained in the document and should be implemented consistently in the NEPA document and supporting technical reports.

**Transportation Performance Measures.** Traditionally, a handful of relatively simple measures were used to demonstrate the need for transportation projects—for example, level of service (LOS) as a measure of congestion for roadway projects. Over time, many transportation agencies have come to adopt a broader set of measures for evaluating transportation needs, seeking to capture all aspects of personal mobility rather than simply the speed of automobile traffic (or, in the case of public transit, the frequency or speed of transit service on a specific route). Therefore, when a NEPA process is initiated, the “toolkit” of potential performance measures may be quite large, and a decision is then needed about which specific measures are most appropriate to capture the relevant transportation needs for that project. In deciding what performance measures to use, practitioners should consider factors such as:
Defining the Purpose and Need and Determining the Range of Alternatives for Transportation Projects

• What performance measures are used in the statewide and metropolitan planning process? Are any of those measures applicable to this project?

• What are the perceived transportation problems that gave rise to the proposal for this transportation project? What measures are most relevant for quantifying those problems?

• What performance measures will be useful in distinguishing among alternatives and determining whether alternatives meet each component of the purpose and need?

• Are there any inherent limitations in the performance measures that are being used? If so, are there additional performance measures that could be used to offset those limitations?

Updating Forecasts or Other Data. Since the purpose and need statement is typically one of the first issues addressed in a NEPA study, the data used to establish the need can become stale as the NEPA process moves forward. The risk of staleness is especially great when a study encounters delays and ends up taking years longer than originally scheduled. Therefore, it is prudent to review the purpose and need data periodically and assess whether there is a need to incorporate updated information. Situations that could warrant updating the data include:

• Availability of new population and employment forecasts

• Availability of new Census data

• Changes in regional or local land use or economic development plans

• Significant expansions of major transportation generators

• Significant reductions or closures of major transportation generators

• Significant change in transportation plans (e.g., addition or removal of capacity–expansion projects)

• Significant change in transportation system operations (e.g., introduction of new tolled lanes)

3 Defining the Project Purpose

This section of the Handbook provides suggestions for drafting a purpose statement that is clear and concise, as well as legally defensible.

Identifying the Project Purposes. The purpose and need chapter should include—preferably early in the chapter—a clear and succinct statement of the project purpose. In many cases, the purpose can be stated in a single sentence. If a project has several distinct purposes, each purpose should be individually listed. The purpose statement should not be a laundry list of all the potential benefits of building a project, nor should it list every possible purpose that could conceivably apply to the project. The goal in drafting the purpose statement should be to define as sharply as possible the fundamental reasons why the project is being proposed, expressed as a desired transportation outcome.

Defining the Mode and Facility Type in the Purpose Statement. In some situations, it is possible to identify the need for a specific transportation mode as part of the purpose and need statement in a NEPA document. For example, the transportation planning process can be used to identify a need for a particular mode, and that determination can later be adopted in the NEPA process. Courts have upheld purpose statements that called for:

• Constructing a new highway bridge across a specific portion of a river, excluding other crossing locations that had been considered and dismissed in the planning process.\(^{30}\)

• Implementing a “high-capacity public transportation service” in a specific corridor utilizing the adopted high-capacity transit mode identified in the regional transportation plan.\(^{31}\)

• Improving mobility for people and goods within a specific highway corridor across a lake, excluding alternatives that involved improving the only other corridor that crossed the lake.\(^{32}\)

• Providing “high-capacity rapid transit” that provides “faster, more reliable public transportation service in the study corridor than can be achieved with buses operating in congested mixed-flow traffic” in that corridor.\(^{33}\)

\(^{30}\) Citizens for Smart Growth v. Secretary of Department of Transportation, 669 F.3d 1203, 1212 (11th Cir. 2012).


\(^{33}\) HonoluluTraffic.com v. FTA, 742 F.3d 1222, 1230 (9th Cir. 2014).
Of course, these cases do not mean that it is always appropriate for the project purpose to focus on a specific mode, facility type, and corridor. For example, there will be situations in which the project was not addressed in the planning process, or in which the planning process did provide clear direction on these issues. The main point to note is that, with proper planning, it may be possible to focus the purpose statement on a specific mode, facility type, and/or corridor.

**Safety as a Purpose.** Many transportation projects produce safety benefits, in the sense that completing the project will tend to reduce accident rates and/or the overall number of accidents. Yet, the potential for a safety benefit does not necessarily mean that safety is one of the purposes of the project. In general, safety should be included as a project purpose only where there is an identified safety need, supported by facts. Typically, a safety need exists where there is data demonstrating the existence of a safety problem—for example, an accident rate that exceeds the statewide average for similar roadways. Other types of data also can be used to demonstrate the existence of a safety problem.

**Economic Development as a Purpose.** Many transportation projects are proposed, at least in part, with the expectation that they will help promote economic growth. As with safety, the potential for an economic development benefit does not necessarily mean that economic development should be defined as a project purpose. In many cases, a more appropriate course of action is to express the project purpose in terms of the desired transportation outcome. For example, the purpose could be defined as providing the transportation infrastructure needed to support an economic development plan. By maintaining the focus on the transportation system, this approach avoids defining a purpose so broad that it would require consideration of a vast range of non-transportation alternatives for promoting economic development.

**Environmental Protection as a Purpose.** In general, the purpose and need should focus on the underlying reasons for proposing the transportation project, and, typically, those reasons are based on meeting a transportation need. Considerations that relate to the manner in which the project is carried out—such as minimizing environmental impacts—generally should be distinct from the purpose and need. This approach is supported by a report prepared for a Federal agency task force on purpose and need. The report states that “for the bulk of transportation projects, most staff across Federal agencies agreed that although environmental protection and community enhancement are important goals, these issues should not be a part of the purpose and need statement.”

**Including Tolling in the Project Purpose.** FHWA has recognized that, where tolling has been identified in the planning process as an essential funding source for the project, tolling can be included in the project’s purpose and need. Similarly, if the regional plan calls for tolling to manage congestion or reduce greenhouse gas emissions, those policies also could provide a basis for including tolling as part of the project’s purpose and need. Even if tolling is not included in the project purpose, financial feasibility still can be considered when evaluating alternatives, which may provide a basis for carrying only tolled alternatives forward for detailed study.

**Refining the Project Purpose during the NEPA Process.** The purpose and need can evolve while alternatives are being screened, or even later in the NEPA process. However, it is important to recognize that if changes in purpose and need are made, it may be necessary to revisit prior alternatives screening decisions and potentially re-initiate the public and participating agency involvement pursuant to 23 USC 139. Therefore, it generally is desirable to resolve any significant outstanding issues regarding the purpose and need well before publication of the EA or Draft EIS, and wherever possible, before conducting the initial screening of alternatives.

**Criteria for Determining Ability to Meet Purpose and Need.** When establishing that a need exists and defining a project purpose, it is important to consider this question: “How will we determine whether an alternative actually meets this purpose and need?” For some projects, there will be a clear-cut answer to that question—for example, an alternative meets the project purpose if it relieves congestion at a specific intersection in a certain forecast year. For other projects, especially larger and more complex ones that serve several purposes, the answers to this question will be less clear-cut. Even for those projects, it is helpful to begin identifying the criteria that will be used when evaluating the ability of alternatives to meet the purpose and need. These evaluation criteria, if identified, can be provided to agencies and the public for comment along with the proposed purpose and need.

**Documenting the Purpose and Need in a NEPA Document.** The NEPA document itself should include a clear, well-supported, easily understood explanation of the project’s purpose and need. Practitioner’s Handbook 15, *Preparing High-
Quality NEPA Documents for Transportation Projects, includes the following recommendations to strengthen the explanation of the purpose and need in the NEPA document:

- **Use plain language to describe purposes and needs.** The purpose and need statement should use words that most readers can easily understand and relate to their own experience. Jargon (e.g., “roadway deficiencies”) should be replaced where possible with plain language (e.g., “By today’s standards, the bridge is too narrow.”) When jargon is used, it should be explained in the purpose and need chapter itself. A sidebar or text-box can be used to introduce technical terms.

- **Use bullets or numbering to itemize purposes and needs.** Many transportation projects serve multiple purposes—for example, to reduce congestion and to improve safety. Attempting to capture all of the elements of the purpose in a single lengthy sentence may create confusion. If the project serves several distinct purposes, they can usually be expressed most clearly in a series of bullets.

- **Provide specific supporting data for each need.** Each of the project needs should be supported with data or other relevant information. In deciding what data to include, it is useful to consider each element of the need separately and ask “Do we have the data to support this need?” For example, if safety is identified as a need, the purpose and need statement should include data demonstrating the existence of the safety problem.

- **Use graphics to illustrate needs.** Figures, maps, renderings, and other visual elements should be used to illustrate important aspects of the purpose and need. For example, if the need is to address road congestion, a map could be included showing the locations where congestion will occur and, ideally, the severity of the congestion in those locations. If the need is to replace a structure at risk of catastrophic failure, a photograph or rendering could be included showing the problems with the existing structure.

- **Describe agency and public involvement in developing the purpose and need.** Under 23 USC 139, the lead agency is required to give participating agencies and the public an “opportunity for involvement” in developing the purpose and need for an EIS. To document compliance with this requirement, the EIS should describe the process for gathering input on the purpose and need, identify any major issues that were raised, and explain how those issues were addressed.

4 | Developing and Applying Alternatives Screening Criteria

The alternatives screening process involves reviewing a broad range of alternatives and selecting a more limited number that will be carried forward for detailed study in the NEPA document. The decisions made at this stage are among the most important in the NEPA process, and can be among the most difficult to resolve, especially when there is strong disagreement among Federal agencies about whether an alternative should be eliminated. The methods suggested in this section are applicable primarily in the context of an EIS, which is required to consider “all reasonable alternatives.” An EA is required only to include a “brief discussion” of alternatives; therefore, an alternatives screening for an EA is less extensive than for an EIS. (See Background Briefing).

**Adopting Alternatives Analyses from the Planning Process.** The development and screening of alternatives in the NEPA process does not necessarily begin with a blank slate. As discussed in the Background Briefing, the lead agencies in the NEPA process have the authority to adopt alternatives screening decisions made in the planning process. To take advantage of this flexibility, the lead agencies should carefully review prior planning studies before the NEPA process even begins and make a preliminary assessment of which decisions and analyses may be appropriate for adoption. The scoping stage of the NEPA process can then be used to solicit public and agency comments on the proposed adoption of decisions or analyses from those planning studies.

**Developing Preliminary Alternatives.** The scoping process, which is required for an EIS and is optional for an EA, typically produces a wide range of concepts, which must be melded into specific alternatives for consideration in the screening process. The assessment of an alternative in the screening process may depend greatly on how that alternative was defined. The following suggestions are intended to promote development of a comprehensive set of preliminary alternatives:

- Listen carefully to suggestions from agency and public commenters during the scoping process; seek to develop preliminary alternatives that reflect the commenters’ underlying goals and concerns.
- Develop preliminary alternatives that incorporate a combination of elements (“hybrid” alternatives), not just alternatives that are based on a single element or concept.

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Develop preliminary alternatives that represent a middle ground between extremes—e.g., an alternative that provides significant transportation benefit at much lower cost and/or impact than other build alternatives.

Do not exclude preliminary alternatives simply because they are undesirable from the project sponsor’s standpoint.

In short, seek to develop a range of preliminary alternatives that reflects the full range of possible approaches to meeting the purpose and need. The more comprehensive the set of preliminary alternatives, the lower the risk of finding a blind spot that requires re-opening the screening analysis at a later stage of the NEPA process.

Developing the Alternatives Screening Criteria. The criteria used to screen alternatives should be comprehensive enough to include all of the factors that are relevant to evaluating the reasonableness of alternatives, not just factors related to purpose and need. Potential criteria include:

- **Purpose and Need Criteria.** This set of screening criteria would be used to assess the alternatives’ ability to achieve the purpose and need. For example, if the proposed action has two distinct purposes, there should be specific criteria for assessing the alternatives’ ability to meet each of those two purposes.

- **Environmental Impacts.** Impacts to environmental resources can be considered during screening and, in some cases, may support a determination that an alternative is unreasonable. For example, an alternative could be screened out based on substantial impacts to a wetlands complex or park that would be avoided by similar alternatives. But keep in mind that an impact that appears unacceptable during screening could ultimately be found acceptable as a way of avoiding an even greater impact on another resource. Also, impact estimates at the alternatives screening stage tend to have a higher degree of uncertainty, because the alternatives are less well-defined and environmental field work usually has not yet been done.

- **Cost.** FHWA has recognized that cost is an appropriate factor to use when screening alternatives, either on its own or in combination with other factors. When cost is used as a screening factor, it is helpful to provide some parameters for determining which alternatives are too costly. For example, it may be helpful to address cost and affordability issues in relation to the overall funding levels available for transportation in the state or region, and the amounts allocated for this project through the transportation planning process.

Considering a “Reasonable Range” of Alternatives. As noted in the Background Briefing, the CEQ has recognized that, when the number of reasonable alternatives is very large, it may be infeasible to study literally all reasonable alternatives, and therefore agencies can carry forward for detailed study “a reasonable number of examples, covering the full spectrum of alternatives”—in other words, a “reasonable range” of alternatives. This approach is especially useful for large-scale projects where the alternatives involve construction of new facilities, with a wide range of potential geographic locations and facility types. When this approach is used, it is important to be clear that the screening process did not simply eliminate unreasonable alternatives; it also consolidated similar alternatives with one another in order to present a “reasonable range” of alternatives representing the full spectrum of reasonable alternatives.

Considering Section 4(f) and Section 404. The development and screening of alternatives should take into account, to the extent possible, the requirements of Section 4(f) and Section 404, both of which include their own alternatives analysis requirements. While the impacts on Section 4(f) and Section 404 resources may not be fully known at the time alternatives screening is being done, it often is possible to identify the potential for impacts to those resources. Practitioners should seek to ensure that the range of alternatives carried forward in the NEPA process will be sufficient to satisfy alternatives analyses that may be required by Section 4(f) or Section 404. Coordination with resource agencies at key milestones, including adoption of purpose and need and screening of alternatives, can help to ensure that the range of alternatives is adequate for compliance with these other laws.

Re-Evaluating Screening Decisions after the Initial Screening. After the screening process is concluded, lead agencies should be alert for new information that may require screening-level decisions to be revisited. Examples include:

- the MPO has adopted a new or significantly updated regional travel model;
- the MPO’s growth forecasts have significantly changed;

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36 D.J. Gribbin, Chief Counsel, FHWA, to D. Nicol, FHWA Division Administrator, Colorado, “NEPA Analysis for Toll Roads” (Oct. 15, 2004). ("Although there are not any such cases relating to toll roads, there are cases in other contexts holding that cost or economic feasibility are appropriate factors to use to screen alternatives to eliminate those that are unreasonable.")

• the costs, impacts, or other drawbacks of the alternatives carried forward have increased;
• the transportation benefits of the alternatives carried forward have decreased;
• an alternative that was eliminated in the screening process will be carried forward (raising the question of whether other previously eliminated alternatives also should be carried forward); and
• any other new information becomes available that significantly calls into question assumptions or findings that were relied upon previously as the basis for eliminating alternatives.

In short, if new information becomes available that calls into question the rationale for a screening decision, it is prudent to revisit that decision and confirm that it remains valid.

**Addressing New Alternatives Proposed Late in the NEPA Process.** New alternatives or variations on existing alternatives sometimes are proposed late in the NEPA process, long after screening decisions have been made. If this occurs, the potential new alternatives should be evaluated to determine if they warrant detailed study. If an EIS has been prepared, the alternative can be eliminated without detailed study if the agency determines that:

• the alternative is not a reasonable alternative, based on the same evaluation criteria applied when evaluating other alternatives in the screening process; and
• the alternative is only a minor variation of other alternatives that were already considered in detail, so it does not require detailed analysis on its own.

But if the alternative is reasonable and is not just a minor variation of an alternative that was already considered, it generally would need to be carried forward for detailed study as a reasonable alternative. If a Draft EIS has already been issued, then studying this new alternative in detail would require a supplemental EIS to be prepared.38

**Documenting the Screening Process.** The alternatives chapter of the EIS should summarize decisions made in the alternatives screening process and the reasons for those decisions, typically with more detailed documentation in a separate alternatives screening report. Some important issues to cover in this documentation include:

• description of each alternative considered in the screening process;
• overall methodology used for screening, including screening criteria;
• data used in the screening process, including any important limitations of that data;
• agency and public input into the screening process;
• explanations of the reasons for eliminating each alternative in the screening process; and
• results of any additional screening-level analysis completed after the initial screening of alternatives.

5 | Coordinating with Agencies and Involving the Public

The tips in this section are intended to assist practitioners in resolving differences of opinion that may arise when developing the purpose and need and determining the range of alternatives in the NEPA process.

**Resource Agency Involvement in the Planning Process.** Resource agency involvement in the transportation planning process can help to lay the groundwork for building consensus in the NEPA process on the purpose and need and the range of alternatives for a project. Transportation agencies can help to encourage resource agency participation by:

• educating resource agencies about opportunities that exist for planning-level decisions and analyses to be adopted in the NEPA process;
• entering into agreements with resource agencies to provide a framework for implementing planning–environmental linkage concepts for specific projects or an entire program;

38 See CEQ, “Forty Most Asked Questions Concerning CEQ’s NEPA Regulations” (Mar. 16, 1981), Question 29 (recommending preparation of a supplemental EIS if a commenter “points out an alternative which is not a variation of the proposal or of any alternative discussed in the draft impact statement, and is a reasonable alternative that warrants serious agency response”).
• implementing planning–environmental linkage concepts for a small number of projects as a way of demonstrating the efficiency benefits for all agencies involved in the NEPA process; and

• entering into funding agreements with resource agencies to enable those agencies to dedicate the staff needed for participation in the transportation planning process.

**Compliance with 23 USC 139.** Section 139 requires the lead agencies in the NEPA process to give participating agencies an opportunity for involvement in developing the purpose and need and the range of alternatives. The coordination plan required under Section 139 should define the process to be used for obtaining resource agency input at these key milestones, including timeframes to be provided for comment by agencies. The coordination plan can also be used to address coordination of NEPA alternatives analysis with alternatives analyses required under Section 404 of the Clean Water Act.

**Checkpoints.** One way to provide structure for agency involvement is to establish a system of “checkpoints” at which the Corps and other agencies will be asked to provide input on key decisions, including the purpose and need and the range of alternatives. In some cases, agencies are also asked to provide written concurrence at these checkpoints. For a transportation agency, checkpoint agreements with resource agencies have the potential benefit of providing greater certainty that the alternative ultimately selected in the NEPA process will also be acceptable to each other agency with permitting authority over the project, including the Corps (for Section 404 permitting) and the U.S. Coast Guard (for bridge permits). At the same time, checkpoints also have the potential to make the environmental process more cumbersome, by preventing the process from moving forward except when there is consensus. One way to strike the balance between these benefits and risks is to require coordination with resource agencies at early milestones, such as purpose and need and range of alternatives, and require concurrence only for selection of the preferred alternative.

**Considering Permitting Requirements in Screening Alternatives.** When preliminary alternatives are being developed and screened, it is helpful to consider whether any of those alternatives could meet the standards for obtaining environmental permits and approvals—in particular, Section 404 of the Clean Water Act, which requires selection of the practicable alternative with the least impact to aquatic resources (often called the “least environmentally damaging practicable alternative” or “LEDPA”). If it is clear that an alternative could not meet the LEDPA requirement, that alternative could be rejected as unreasonable. On the other hand, an alternative still could be deemed reasonable even if doubts have been raised about its ability to satisfy permitting requirements, because the information available at the screening stage is inherently preliminary. In short, transportation agencies should at least consider permitting requirements during the development and screening of alternatives and incorporate those considerations into screening decisions to the extent possible given the level of detail available at that stage.

**Involving the Public.** For transportation projects that require an EIS, the lead agency must provide an opportunity for involvement by participating agencies and the public in developing the purpose and need and determining the range of alternatives. This requirement is commonly met by providing two rounds of public and agency comment prior to publication of the NEPA document: first, review of a draft purpose and need statement, and then review of a draft alternatives screening report. Although not required, agencies often hold public meetings during the alternatives screening stage. Agencies should make sure to retain substantive comments received during these public involvement opportunities and include them in the project file. Comments need not be addressed individually; however, if specific objections or concerns were raised, it is prudent to develop responses to those concerns and include them in the NEPA document or appropriate technical reports or memoranda in the project file.

39 See 23 USC 139(f)(1) and 139(f)(4)(A).
40 For additional information, see FHWA, USFWS, Corps, et al., “Synchronizing Environmental Reviews for Transportation and Other Infrastructure: 2015 Red Book (Step. 2015).”
Reference Materials

Statutes, regulations, and guidance documents cited in this Handbook are available on the Center for Environmental Excellence by AASHTO web site: http://environment.transportation.org.

Statute and Regulations

23 USC 139 (environmental review process)
23 USC 168 (planning-environmental linkage)
23 CFR Part 450 (statewide and metropolitan transportation planning)

Guidance

J. Connaughton, Chairman, CEQ, Letter to N. Mineta, Secretary, USDOT (May 12, 2003).
FHWA, “The Importance of Purpose and Need in Environmental Documents” (Sept. 18, 1990).
ADDITIONAL RESOURCES

PRACTITIONER’S HANDBOOKS AVAILABLE FROM THE CENTER FOR ENVIRONMENTAL EXCELLENCE BY AASHTO:

1. Maintaining a Project File and Preparing an Administrative Record for a NEPA Study
2. Responding to Comments on an Environmental Impact Statement
3. Managing the NEPA Process for Toll Lanes and Toll Roads
4. Tracking Compliance with Environmental Commitments/Use of Environmental Monitors
5. Utilizing Community Advisory Committees for NEPA Studies
6. Consulting Under Section 106 of the National Historic Preservation Act
7. Defining the Purpose and Need and Determining the Range of Alternatives for Transportation Projects
8. Developing and Implementing an Environmental Management System in a State Department of Transportation
9. Using the SAFETEA-LU Environmental Review Process (23 USC § 139)
10. Using the Transportation Planning Process to Support the NEPA Process
11. Complying with Section 4(f) of the U.S. DOT Act
12. Assessing Indirect Effects and Cumulative Impacts under NEPA
13. Developing and Implementing a Stormwater Management Program in a Transportation Agency
15. Complying with Section 7 of the Endangered Species Act

For additional Practitioner’s Handbooks, please visit the Center for Environmental Excellence by AASHTO web site at: http://environment.transportation.org

Comments on the Practitioner’s Handbooks may be submitted to:
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