

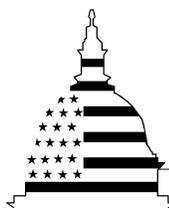
GAO

Report to the Chairman, Committee on
Transportation and Infrastructure,
House of Representatives

May 2003

HIGHWAY INFRASTRUCTURE

Stakeholders' Views on Time to Conduct Environmental Reviews of Highway Projects



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HIGHWAY INFRASTRUCTURE

Stakeholders' Views on Time to Conduct Environmental Reviews of Highway Projects

Highlights of [GAO-03-534](#), a report to the Chairman, House Committee on Transportation and Infrastructure

Why GAO Did This Study

The federal government has a long-term commitment to helping states construct, improve, and repair roads and bridges to meet the nation's mobility needs. The Federal Highway Administration (FHWA) expects to provide states about \$20 billion for highway construction projects in fiscal year 2003. State departments of transportation are primarily responsible for initiating and completing projects. Many federal and state agencies with environmental responsibilities (called resource agencies) help ensure that environmental issues are considered. The environmental review of a federally funded highway project can take from several days to several years.

GAO is reporting on the (1) activities involved in the environmental reviews of federally funded highway projects and (2) stakeholders' views on the aspects of environmental review, if any, that unduly add time to gaining environmental approval. GAO obtained stakeholder views from 16 transportation improvement and 12 environmental officials from a variety of federal, state, and private organizations with responsibilities for or interests in constructing federally funded highways. The Department of Transportation had no comments on a draft of this report. Other agencies provided either technical comments or did not respond to our request for comments.

www.gao.gov/cgi-bin/getrpt?GAO-03-534.

To view the full product, including the scope and methodology, click on the link above. For more information, contact Katherine Siggerud at (202) 512-2834 or siggerudk@gao.gov.

What GAO Found

Environmental review activities typically consist of identifying and assessing environmental impacts, evaluating alternatives, and gaining input and/or approvals from FHWA, resource agencies, and the public; and become more complex if significant environmental impacts are anticipated. For the 91 percent of projects that are expected to have minimal environmental impacts, state departments of transportation need only to identify environmental features, assess possible impacts, address any resource agency and public concerns, and obtain permits, if needed. For the 6 percent of projects where it is initially unclear whether significant environmental impacts may exist, additional activities occur, including evaluating alternatives to the proposed project and obtaining FHWA approval. For the 3 percent of highway projects with expected significant environmental impacts, states conduct extensive environmental review, including evaluating all reasonable alternatives and their environmental impacts and consult with resource agencies.

Stakeholders we contacted identified 43 aspects that they said frequently (more than half the time) add more time than viewed as necessary to environmental reviews of federally funded highway projects. A majority of stakeholders with primary responsibilities for environmental and historical preservation issues and those with primary responsibilities for transportation improvement identified five aspects as occurring frequently. However, there was no overall agreement about which aspects frequently add undue time to environmental reviews. A majority of environmental stakeholders told us that state departments of transportation waited too long to consider environmental impacts and involve important stakeholders. In contrast, a majority of transportation improvement stakeholders told us that state departments of transportation and federal resource agencies lack sufficient staff to handle their workloads and that meeting statutory criteria for historic preservation projects on public lands and obtaining wetlands permits are too time consuming. However, the stakeholders generally could not tell us how much time these aspects add to the reviews.

Aspects Viewed as Frequently Adding Undue Time to Environmental Reviews

| Aspect cited by majority of environmental or transportation improvement stakeholders | Environmental stakeholders | Transportation improvement stakeholders |
|--|----------------------------|---|
| Environmental impacts are not considered early enough | ✓ | |
| Stakeholders are not involved early enough | ✓ | |
| Transportation and resource agencies lack staff | | ✓ |
| Statutory criteria for projects involving historic properties on public lands are burdensome | | ✓ |
| Obtaining wetlands permits is time consuming | | ✓ |

Source: GAO analysis of responses of at least 26 of the 28 stakeholders.

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Abbreviations

FHWA Federal Highway Administration
NEPA National Environmental Policy Act

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United States General Accounting Office
Washington, D.C. 20548

May 23, 2003

The Honorable Don Young
Chairman, Committee on Transportation and Infrastructure
House of Representatives

Dear Mr. Chairman:

In order to meet the mobility needs of the United States, the federal government has had a longtime commitment to helping fund needed maintenance and expansion of the nation's road network—from interstate highways to rural roads—in an environmentally sound manner. Given the importance of transportation to the nation's economy, mobility, and security and the need to improve the nation's roads to meet these needs, many transportation improvement stakeholders—such as the Federal Highway Administration (FHWA), state departments of transportation, and others—have said that completing a federally funded highway project takes too long, and that the most time consuming aspect involves environmental review.¹ Transportation improvement stakeholders acknowledge that environmental reviews result in better project decisions, but say that reaching decisions is difficult and time consuming.² The Transportation Equity Act for the 21st Century, enacted in 1998, contained provisions designed to streamline environmental reviews. As the reauthorization of this act approaches, the Congress may again consider measures for reducing the time it takes to complete a federally funded highway project so that transportation benefits are realized sooner.

You requested that we (1) describe the activities involved in the environmental review of federally funded highway projects and (2) report on stakeholders' views on which aspects of these environmental reviews, if any, unduly add time to gaining environmental approval. To carry out this work, we reviewed laws and documents related to environmental review. We asked officials from FHWA and the departments of transportation from Maryland and North Carolina to identify the activities involved in

¹U.S. General Accounting Office, *Highway Infrastructure: Perceptions of Stakeholders on Approaches to Reduce Highway Project Completion Time*, [GAO-03-398](#) (Washington, D.C.: April 9, 2003).

²U.S. General Accounting Office, *Highway Infrastructure: Preliminary Information on the Timely Completion of Highway Construction Projects*, [GAO-03-1067T](#) (Washington, D.C.: Sept. 19, 2002).

environmental review and to identify federal, state, and local agencies that routinely participate in reviews of federally funded highway projects.³ To obtain stakeholders' views on aspects that add undue time—more time than they view as necessary—to environmental reviews, we asked officials from federal and state agencies with responsibilities relating to the construction of federally funded roads, transportation professional organizations, historic preservation organizations, and environmental organizations to identify laws, behaviors, resource issues, or project management approaches, if any, that unduly add time to environmental review. We asked these officials to identify other stakeholders with expertise in such reviews and asked those individuals to identify aspects that they felt add undue time. Overall, 39 stakeholders identified 43 aspects they have encountered during environmental reviews that they felt add undue time to these reviews. We then asked these stakeholders to rate each aspect on how frequently, if at all, they occur. Twenty-eight officials representing different interests provided these ratings (of these 28, 16 stakeholders had primary transportation improvement responsibilities or interests, and 12 stakeholders had primary environmental responsibilities or interests). The approach we used makes two contributions. First, it captures the views of a wide range of stakeholders that are identified by their peers as knowledgeable. Second, it provides a systematic assessment of the perceived frequency of the aspects that knowledgeable stakeholders indicated add undue time to environmental reviews. We did not attempt to corroborate whether or not particular aspects actually occur or the reasons why stakeholders rated individual aspects as occurring more or less frequently. In addition, because of the relatively small number of stakeholders who rated approaches, we did not extrapolate our results more broadly. (See app. I for additional details on our scope and methodology.)

Results in Brief

Environmental review activities typically consist of (1) identifying and assessing the environmental impacts of projects, evaluating alternatives, gaining input or approvals from FHWA, federal and state agencies with

³We chose these two states because transportation officials that we interviewed identified these states as those that have studied their environmental review procedures and have taken steps to improve the timeliness of environmental reviews. When discussing activities involved in environmental review, we include environmentally related activities, such as determining whether environmental resources are present or obtaining permits, that may be undertaken before environmental reviews are started or after they are completed as well as the activities that take place during environmental review.

environmental responsibilities (resource agencies), and the public and (2) obtaining environmental permits. The activities become more complex if significant environmental impacts are anticipated. (See fig. 1.) FHWA estimates that:

- Approximately 91 percent of federally funded highway projects (representing about 76 percent of the \$17.6 billion in federal funding distributed to states for highway projects in fiscal year 2001) have minimal environmental impacts, and therefore receive “categorical exclusions,” qualifying them for limited environmental review. These projects are limited in scope—and some are so routine (such as installation of traffic signals) as to be pre approved by FHWA—and seldom add new miles of road to the road system, according to FHWA. For projects that qualify for a categorical exclusion, state departments of transportation need only identify environmental features, sufficiently establish that environmental impacts are minor, obtain approval for projects in some circumstances, and address known and foreseeable public and agency concerns. While there is no standard method for computing the length of time for environmental review, environmental review activities for these projects have been estimated to take an average of 6 to 8 months to complete, according to FHWA, and could take as long as an average of 22 months to complete, according to a report prepared for the American Association of State Highway and Transportation Officials.
- Approximately 6 percent of federally funded highway projects (representing about 15 percent of the \$17.6 billion in federal funding distributed to states for highway projects in fiscal year 2001) receive a more extensive environmental review when it is initially unclear whether significant environmental impacts may occur (called an environmental assessment). Projects that qualify for environmental assessments do not typically add new miles of road to the road system according to FHWA. For these projects, state departments of transportation conduct additional review activities, which include (1) evaluating the environmental impacts of one or more alternatives to the proposed project, (2) consulting with the public and affected federal and state resource agencies, and (3) obtaining FHWA approval. While there is no standard method for measuring length of time for environmental review, environmental review activities for these projects have been estimated to take an average of 14 to 18 months to complete, according to FHWA, and could take as long as an average of 41 months to

complete, according to a report prepared for the American Association of State Highway and Transportation Officials.

- About 3 percent of federally funded highway projects (representing about 9 percent of the \$17.6 billion in federal funding distributed to states for highway projects in fiscal year 2001) are likely to have significant environmental impacts. For these projects, state departments of transportation conduct the same types of additional activities as they do for environmental assessments, but on a more comprehensive basis, resulting in an environmental impact statement. For example, state departments of transportation evaluate all reasonable alternatives (rather than evaluating one or more alternatives as is done for environmental assessments) and, in Maryland and North Carolina, gain concurrence from affected federal and state resource agencies (rather than consulting with them). Other states may interact with resource agencies differently. Environmental review activities for these projects take an average of 5 years to complete, according to FHWA. This duration is measured using formal FHWA decision points. States, such as Maryland and North Carolina, may conduct some environmental review activities before or after these decision points, such as early identification of expected impacts and obtaining permits from federal agencies with responsibilities for such things as water quality and wetlands that extend this duration.

Figure 1: Key Activities under Different Types of Environmental Review

| Activity | Categorical exclusion | Environmental assessment | Environmental impact statement |
|------------------------------------|-----------------------|--------------------------|--------------------------------|
| Identify environmental features | ● | ● | ● |
| Evaluate alternatives ^a | ○ | ◐ | ● |
| Assess impacts | ◐ | ● | ● |
| Public involvement | ◐ | ◐ | ● |
| FHWA approval | ◐ | ● | ● |
| Consult with affected agencies | ◐ | ● | ● |
| Obtain permits, if needed | ● | ● | ● |

- Required
- ◐ Required to some extent or under certain circumstances
- Not required

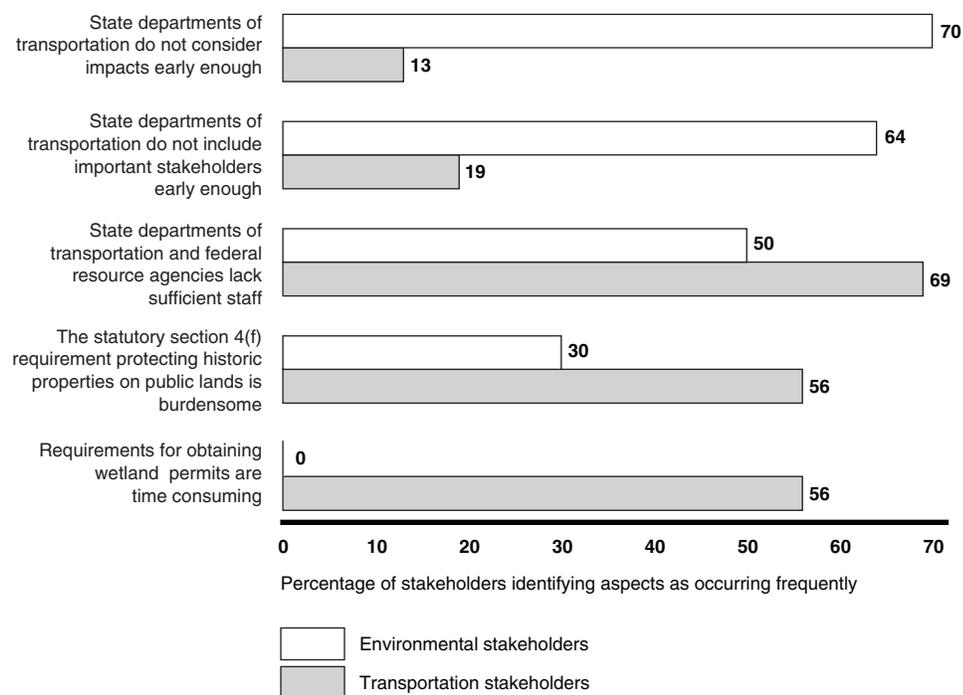
Source: GAO analysis of FHWA data.

^aFor an environmental assessment, states must evaluate one or more alternatives, whereas for environmental impact statements, states must evaluate all reasonable alternatives.

Transportation improvement and environmental stakeholders differed in their views of which of the 43 aspects they identified as frequently adding undue time to conducting environmental reviews. In no case did a majority of transportation improvement and a majority of environmental stakeholders agree. (See fig. 2.) A majority of environmental stakeholders, such as resource agencies, state historic preservation agencies, and environmental advocacy organizations, told us that undue time is added to environmental reviews because state departments of transportation do not consider environmental and historic preservation impacts early enough (7 of 10 of these stakeholders responding or 70 percent), and they do not include important stakeholders early enough (7 of 11 stakeholders responding or 64 percent). In contrast, transportation improvement stakeholders, such as state departments of transportation, FHWA division offices, and transportation advocacy organizations, typically did not identify these aspects as adding undue time. A majority of transportation improvement stakeholders told us that a lack of sufficient staff at state departments of transportation and federal resource agencies (11 of 16 responding or 69 percent), meeting the stringent statutory requirements for

historic preservation projects on public lands (“section 4(f) requirements;” 9 of 16 of these stakeholders or 56 percent) and obtaining permits for projects on wetlands (9 of 16 stakeholders or 56 percent) frequently added undue time to environmental reviews. Environmental stakeholders typically did not identify these aspects as frequently adding undue time. While stakeholders had identified these aspects as adding time to environmental review, generally they could not estimate how much time these aspects added.

Figure 2: Stakeholders’ Views on Aspects That Frequently Add Undue Time to Environmental Review



Source: GAO analysis of responses of 28 stakeholders.

Note: Not all stakeholders rated each aspect. At least 26 stakeholders (93 percent) rated each of the 5 aspects shown in this figure.

The Department of Transportation responded that it had no comments on a draft of this report. Maryland offered several technical comments, which we have incorporated into this report. The Department of Interior and

North Carolina did not provide a response to our request for comments on our report draft.

Background

Federally funded highway projects vary in size, from new lane striping or installing traffic signals to resurfacing an existing road or building a new road or interchange. Of the federally funded highway projects in 2000 that took place on approximately 27,000 miles of road (latest data available), about 26,000 miles (96 percent) involved either the addition of capacity, preservation, or improvements (such as widening lanes, resurfacing, and rehabilitating roadways) and the remaining 1,000 miles (4 percent) involved new road construction projects. For fiscal year 2003, FHWA expects to fund about \$20 billion for highway infrastructure improvements and projects designed to relieve congestion.

Regardless of their size and scope, federally funded highway projects are typically completed in four phases:

- **Planning:** State and local planning organizations and state departments of transportation assess a project's purpose and need and consider its need in relation to other potential highway projects.
- **Preliminary design and environmental review:** State departments of transportation identify project cost, level of service, and construction location; identify the effect, if any, of the proposed project and alternatives on the environment; and select the preferred alternative.
- **Final design and right-of-way acquisition:** State departments of transportation finalize design plans, acquire property, and relocate utilities.
- **Construction:** State departments of transportation award construction contracts, oversee construction, and accept the completed project.

Local, state, and federal governments all have a role in the planning, designing, and construction of federally financed highway projects. Local governments carry out many transportation planning functions, such as scheduling improvements and maintenance for local streets and roads. State departments of transportation are typically the focal point for transportation project planning and construction and are responsible for setting the transportation goals for the state, planning safe and efficient transportation, designing most projects, identifying and mitigating

environmental impacts, acquiring property for highway projects, and awarding and overseeing construction contracts. At the federal level, FHWA is the primary agency providing funding, training, approving state transportation plans, and certifying that states have met requirements related to environmental protection and historical preservation.

Many of the organizations with a role in highway project completion have concluded that completing major highway construction projects takes too long—in some cases about 20 years.⁴ The construction of highway projects using federal funds can be complicated and time consuming because state departments of transportation must adhere to a number of federal laws pertaining to transportation, the environment, and historic preservation and involve multiple stakeholders representing all levels of government and the public; and for some controversial projects, this could involve litigation.

As a condition of receiving federal funds for highway projects, state departments of transportation must comply with the National Environmental Policy Act of 1969 (NEPA), which requires that federal agencies consider the potential impacts on environmental resources when considering approval of a proposed action. FHWA is responsible for ensuring that state departments of transportation identify, assess, and, if necessary, mitigate impacts to the natural and human (e.g., health) environment and historic properties that may result from the construction of a highway project. In this regard, state departments of transportation involve federal agencies with environmental responsibilities (called resource agencies), such as the Army Corps of Engineers, Fish and Wildlife Service, Environmental Protection Agency, and Advisory Council on Historic Preservation, in addition to FHWA and state resource agencies when assessing the potential impacts of a highway project in order to comply with NEPA and other federal and state environmental requirements. Along with NEPA, state departments of transportation must comply with other federal statutes that may apply to a highway project, including:

- **The Clean Water Act of 1977.** The Clean Water Act of 1977 was designed to restore and maintain the chemical, physical, and biological integrity of the nation's waters through the prevention and elimination of pollution. Any project, including the construction of a highway

⁴[GAO-03-398](#).

project, that involves the discharge of pollutants into waters of the United States must comply with the Clean Water Act. The act generally prohibits the discharge of pollutants into the waters of the United States without obtaining a permit from the Environmental Protection Agency, or in the case of discharges involving dredge or fill material, from the Army Corps of Engineers under section 404.

- **The Federal-Aid Highway Act of 1966.** Section 15(a) of the act, popularly known as section 4(f),⁵ was designed to preserve publicly owned natural resources, such as parklands, recreation areas, waterfowl and wildlife refuges, and significant historic sites. Publicly owned lands may be used for federal highways only if there is no prudent and feasible alternative to using that land; and the program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site from the use. Each highway proposal developed by the state departments of transportation must include avoidance and mitigation alternatives for publicly owned lands that may be affected by the project. The Departments of the Interior, Agriculture, and Housing and Urban Development and state or local agencies have jurisdiction over natural resources. State historic preservation offices and the Advisory Council on Historic Preservation have jurisdiction over historic sites.
- **The National Historic Preservation Act.** Section 106 of the National Historic Preservation Act requires that federal agencies consider the effect that a project may have on a property (e.g., districts, sites, buildings, structures, and objects) that is included in, or eligible for inclusion in, the National Register of Historic Places.
- **The Endangered Species Act of 1973.** Section 7 of the Endangered Species Act requires federal agencies to ensure that actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of threatened or endangered species (including fish, wildlife, and plants facing extinction) or result in the destruction or adverse modification of critical habitat for these species. In some cases, FHWA and state departments of transportation work with the Fish and Wildlife Service, National Marine Fisheries Service, and state resource agencies to ensure compliance with the act.

⁵From section 4(f) of the Department of Transportation Act, which contained similar language.

Environmental Reviews Become More Complex the Greater the Expected Impact on the Environment

Environmental review of federally funded highway projects typically begins when state departments of transportation, in consultation with FHWA, determine that a proposed project may or will affect the quality of the environment. For projects that state departments of transportation demonstrate are likely to have minimal environmental impacts or in situations in which the existence of significant environmental impacts is initially unclear, FHWA provides for a simplified and less structured review of environmental impacts.⁶ More extensive and structured environmental review is required from FHWA for projects in which significant environmental impacts are anticipated. This report describes environmental review activities that states carry out to meet NEPA and other federal environmental laws. States may carry out other environmental review activities to meet state environmental requirements.

Projects with Minimal or Initially Unclear Environmental Impacts Require Limited Environmental Review

A highway project that is expected to have minimal environmental impacts may qualify for limited federal environmental review (called a categorical exclusion) under FHWA regulations implementing NEPA.⁷ These projects are limited in scope—and some are so routine (such as installation of traffic signals) as to be preapproved by FHWA—and seldom add new miles of road to the road system. According to FHWA, approximately 91 percent of approximately 31,000 federally funded highway projects (representing

⁶According to Council on Environmental Quality regulations, the magnitude or significance of environmental impacts should be considered in the context of (1) society as a whole, the affected region, or the locality and (2) the intensity or severity of impacts, including the degree to which the project affects public health or safety; unique characteristics of the geographic area; resources listed in or eligible for listing in the National Register of Historic Places; an endangered species or threatened species or their habitat; or establishes a precedent for future actions with significant effects; level of controversy; relationship to other actions with cumulative impacts; presence of unique or unknown risks; or potential to threaten a violation of federal, state, or local law or requirements imposed for the protection of the environment.

⁷Under these regulations, states may determine that a project falls within a class or category of projects that do not have significant environmental impact. These determinations are called categorical exclusions. FHWA regulations define categorical exclusions as actions, which based on past experience with similar actions, do not induce significant impacts to planned growth or land use for the area; require the relocation of significant numbers of people; have a significant impact on any natural, cultural, recreational, historic or other resource; involve significant air, noise, or water quality impacts; have significant impacts on travel patterns; or otherwise, either individually or cumulatively, have significant environmental impacts.

about 76 percent of the \$17.6 billion in federal funding distributed to states for highway projects in fiscal year 2001) received categorical exclusions in 2001.

In an informal survey conducted by FHWA in 1999, its division staff reported that it took an average of 6 months to complete the environmental review of projects that qualified for a categorical exclusion in 1998.⁸ FHWA officials reported that it takes even less time, sometimes as little as several days, to complete categorical exclusions for projects that FHWA has preapproved for limited environmental review (for example, landscaping or installation of road signs). In a survey conducted for the American Association of State Highway and Transportation Officials in 2000, state transportation officials estimated that it took an average of 8 months to complete the activities involved in environmental review of categorical exclusion projects that they had classified as not delayed.⁹ However, these state transportation officials also reported that, for projects they selected for the survey, it took an average of 22 months to complete activities involved in environmental review for categorical exclusion projects that they had identified as delayed. There is no standard method for measuring length of time for environmental review.

Some of the projects that qualify for a categorical exclusion are considered by FHWA to be routine—with little or no environmental impact such as bus and rail car rehabilitation, construction of bike paths, landscaping, installation of traffic signals, ride-sharing activities, or improvements to existing rest areas—and have been preapproved by FHWA for limited environmental review. For preapproved projects, state department of transportation need only to sufficiently establish that there are no significant impacts. State departments of transportation do not need to identify mitigation measures, address public and agency concerns, or gain

⁸FHWA officials told us that these results should be considered as a general exploration of time frames, rather than a definitive assessment.

⁹The researchers defined delay to mean the amount of time beyond what state officials estimated was a reasonable length of time for completing environmental review. State department of transportation officials were asked to estimate what would be a reasonable length of time for environmental review and also report the actual time for environmental review of two projects that typified delays their state had experienced with categorical exclusions. In total, 51 projects that qualified for categorical exclusions were identified. TransTech Management, Inc., *Environmental Streamlining: A Report on Delays Associated with the Categorical Exclusion and Environmental Assessment Process* (Washington, D.C.: October 2000).

FHWA's approval of the state's assessment of environmental impacts. Other projects—such as bridge rehabilitation, construction of bus or rail storage or maintenance facilities, or adding shoulders—have somewhat greater potential for environmental impact but may also qualify for a categorical exclusion. However, because of the greater potential to cause significant environmental impacts or generate substantial controversy, they are not preapproved by FHWA. Instead, for these types of projects, FHWA advises state departments of transportation to conduct environmental review activities commensurate with the level of impact, including (1) identifying environmental features that will be affected by the project (if any); (2) assessing the environmental impacts caused by the project to the extent that it is clearly established that impacts are minor; (3) addressing public, federal, and state resource agency concerns where adverse impacts are likely to occur; (4) gaining FHWA's approval for classification as a categorical exclusion; and (5) obtaining permits, if needed, to clearly establish that there is little potential for significant impacts and that the project's classification as a categorical exclusion is appropriate. (See table 1.)

Table 1: Attributes of Categorical Exclusions and Environmental Assessments for Federally Funded Highway Projects

| Activity | Categorical exclusion | Environmental assessment |
|---------------------------------|---|---|
| Identify environmental features | Identify environment features that may require additional environmental review. | Identify environment features that may require additional environmental review. |
| Evaluate alternatives | Not required. | Consideration of alternatives is required and must include the impact of not building the project, but need not evaluate all reasonable alternatives. |
| Assess impacts | Projects that involve no construction or limited construction may automatically qualify for limited environmental review; for other projects, the level of analysis should be sufficient to clearly establish that impacts are minor. | For each alternative considered, determine the severity of impacts and any mitigation to reduce or eliminate unavoidable impacts, but need only address those features that have a reasonable possibility for significant impacts. |
| Involve public | Where adverse impacts are likely to occur, public concerns should be addressed. | Environmental assessments do not need to be circulated for comment, but must be made available for public inspection and invite comments from the public. |
| Obtain FHWA approval | Not required for most categorical exclusion projects. However, for unusual circumstances, including significant impacts or substantial controversy, FHWA approval is needed to determine whether the classification is proper. | FHWA must approve the environmental assessment before it is made available to the public. FHWA will either find that the project has no significant impact on the environment or that the impact is significant and an environmental impact statement must be prepared. |
| Consult with resource agencies | Where adverse impacts are likely to occur, resource agency concerns should be addressed. | Obtain feedback from resource agencies on the scope of project, which aspects of the project have the potential for environmental impact, identify alternatives, and measures to mitigate. |
| Obtain permits, if needed | Required. | Required. |

Source: GAO analysis of FHWA regulations and technical guidance on preparing environmental documents.

If it is initially unclear whether a transportation project will have a significant impact on the environment, then FHWA requires that the state department of transportation prepare an environmental assessment. According to FHWA, projects that qualify for environmental assessments do not typically add new miles of road to the road system. FHWA estimates that approximately 6 percent of approximately 31,000 federally funded roadway projects (representing about 15 percent of the \$17.6 billion in federal funding distributed to states for highway projects in fiscal year 2001) required an environmental assessment in 2001. In an informal survey conducted by FHWA in 1999, its division staff reported that it took an average of 18 months to complete the activities involved in an environmental assessment in 1998. In a survey conducted for the American Association of State Highway and Transportation Officials in 2000, state transportation officials estimated that it took an average of 14 months to complete the review of environmental assessment projects that they

classified as not delayed. However, state transportation officials also reported that, for projects they selected for the survey, it took an average of 41 months to complete the review of environmental assessment projects that they classified as delayed.¹⁰

For projects that will likely require an environmental assessment, such as road widening or interchange construction projects, the state department of transportation, in consultation with FHWA, must conduct more extensive environmental review activities than are required for projects that receive a categorical exclusion, commensurate with the potential for significant environmental impact. For an environmental assessment, the state department of transportation must (1) identify environmental features that will be affected by the proposed project; (2) evaluate one or more alternatives (but need not evaluate all reasonable alternatives); (3) assess impacts to the environment caused by the project or any of its alternatives and determine measures to mitigate unavoidable environmental impacts; and (4) invite comments and obtain feedback from the public and interested federal, state, and local agencies. Additionally, states must obtain permits if required by other environmental laws. FHWA must approve the environmental assessment and it must be made available for public inspection. If FHWA determines that no significant environmental impacts have been identified, then it will issue a finding that there is no significant impact. If at any point during the assessment, FHWA determines that the project is likely to have a significant impact on the environment, then an environmental impact statement will be required.

Significant Expected Environmental Impacts Require Substantial Environmental Review

NEPA requires federal agencies to prepare an environmental impact statement for all actions (including federally funded highway projects) that are likely to significantly affect the environment. An environmental impact statement is a public document that discusses the purpose of and need for the project, alternatives to the project, the affected environment, the impacts of the alternatives to the affected environment and public and agency comments received. While the requirements for the information included in an environmental impact statement are consistent across states, the steps taken in the environmental review of projects requiring an environmental impact statement are not the same in all states, and there exists no common model among states for undertaking the review

¹⁰In total, 50 projects that qualified for environmental assessments were identified.

activities that are required to produce an environmental impact statement. Federally funded highway projects that are likely to require an environmental impact statement include the construction of a new segment of controlled access freeway or fixed rail, or projects which make it likely that there will be significant environmental effects. Typically, state departments of transportation are responsible for coordinating the activities of environmental review involving environmental impact statements.

According to FHWA, approximately 3 percent of approximately 31,000 federally funded highway projects (representing about 9 percent of the \$17.6 billion in federal funding distributed to states for highway projects in fiscal year 2001) required an environmental impact statement in 2001. According to FHWA, projects requiring an environmental impact statement and for which FHWA approved the environmental impact statement in 2001, environmental review took an average of approximately 5 years to complete.¹¹ While FHWA reports that the average time to complete an environmental review for these projects decreased by about 8 months between 1999 and 2001, it nevertheless still takes approximately twice as long to complete environmental review as it did in the 1970s.¹² A report prepared for FHWA stated that for projects constructed in the last 30 years, environmental review for projects requiring an environmental impact statement accounted for 3.6 years, or approximately 28 percent of the overall time for project completion.¹³

In this section of the report, we describe the steps that two states, Maryland and North Carolina, typically take in identifying and assessing significant environmental impacts and gaining concurrence for major transportation projects. (See app. II for a flow chart depicting these activities.) These two state departments of transportation typically carry

¹¹This duration is measured using formal FHWA decision points. States, such as Maryland and North Carolina, may conduct some environmental review activities before or after these decision points, such as early identification of expected impacts and obtaining permits from federal agencies with responsibilities for such things as water quality and wetlands that extend this duration.

¹²In 2002, the average time to complete an environmental review for projects requiring an environmental impact statement was 6.5 years, according to FHWA.

¹³Federal Highway Administration, *Evaluating the Performance of Environmental Streamlining: Development of a NEPA Baseline for Measuring Continuous Performance* (Washington, D.C.: May 8, 2001).

out environmental review activities in four phases: (1) developing an understanding of the extent to which the project is expected to affect the environment, (2) identifying alternatives and assessing environmental impacts, (3) gaining approval on draft environmental impact statement and selecting the preferred alternative, and (4) gaining final approval for environmental analysis. Resource agencies, the public, and other stakeholders provide input at each of these phases. However, these states may carry out some environmental activities even before the first phase, such as considering whether environmental impacts are likely when they develop their state transportation improvement plan. Further, attention to environmental impacts may occur even after FHWA and permit agencies approve the project if the environmental analysis is challenged in court.¹⁴

Developing an understanding of expected environmental impacts. In this phase, the Maryland and North Carolina departments of transportation develop the scope and purpose of and need for the proposed transportation project. To determine the potential for environmental impacts, the state department of transportation incorporates existing environmental information and feedback from stakeholders about the project that may have been obtained through the development of the state's transportation improvement plan.¹⁵ In addition, Maryland and North Carolina departments of transportation identify preliminary information on environmental features and resources including wetlands, floodplains, historic sites, parklands, and endangered species, as well as the area to be affected by the proposed project. FHWA notifies the public through the *Federal Register* that detailed environmental review is needed for the proposed highway project (called a notice of intent). In addition, Maryland and North Carolina departments of transportation invite local officials, federal, state, and local agencies with environmental responsibilities, and the public at large to discuss the purpose and need, the proposed scope, environmental features identified, and substantial issues related to the project. In addition to environmental review activities required by NEPA, permits or consultation required by other environmental laws may be needed (e.g., coastal

¹⁴Federal law allows court challenges within 6 years of final federal approval of an environmental impact statement.

¹⁵States are statutorily required to undertake a continuous transportation planning process which, among other things, considers the environmental effects of transportation decisions to develop a transportation improvement program which identifies and prioritizes only those transportation projects proposed that are reasonably expected to have funding available.

resources). For projects in Maryland or North Carolina that require a permit under section 404 of the Clean Water Act, the state department of transportation will also normally obtain concurrence on the purpose of and need for the proposed project from the Army Corps of Engineers, the Environmental Protection Agency, the Fish and Wildlife Service, and FHWA. Other states may not obtain concurrence. In addition, Maryland and North Carolina state departments of transportation may also obtain concurrence from the National Park Service, the Coast Guard, the Forest Service, and/or the National Marine Fisheries Service, if the project is in the vicinity of a geographic area for which an agency has jurisdiction.

Identifying alternatives and assessing environmental impacts. This phase typically begins with Maryland and North Carolina state departments of transportation identifying alternatives to the proposed project. Following guidance from the Council on Environmental Quality, FHWA requires that the state department of transportation consider a reasonable range of alternatives that accomplish its objectives, including an alternative of not building the project.¹⁶ For each alternative, state departments of transportation must identify the environment that will be affected. Maryland and North Carolina departments of transportation then obtain feedback on the alternatives they have developed from the public and from federal, state, and local agencies that have environmental responsibilities. Maryland and North Carolina state departments of transportation evaluate comments from the public and agencies and select a subset of alternatives for more detailed study. For alternatives selected for detailed study, Maryland and North Carolina state departments of transportation conduct detailed engineering and environmental analyses of the impacts to natural, socioeconomic, and cultural resources, including historic resources and endangered species, and begin identifying measures to avoid, minimize, or mitigate impacts. The last activity in identifying alternatives and assessing environmental impacts is to invite the public, local officials, and federal, state, and local agencies with environmental responsibilities to discuss the rationale and issues related to the subset of alternatives selected. For projects in Maryland or North Carolina that require a permit under section 404 of the Clean Water Act, the state department of transportation will also

¹⁶According to the Council on Environmental Quality, which developed regulations implementing NEPA, reasonable alternatives are those that are practical or feasible from the technical and economic standpoint, rather than simply desirable from the standpoint of the agency. For example, reasonable alternatives for a major urban highway project could include considering options such as fringe parking, ridesharing, high occupancy vehicle lanes, and mass transit.

normally obtain concurrence on the criteria for alternative selection and the alternatives to be evaluated from the Army Corps of Engineers, the Environmental Protection Agency, Fish and Wildlife Service, and FHWA. Other states may not obtain concurrence. In addition, Maryland and North Carolina state departments of transportation may also obtain concurrence from the National Park Service, the Coast Guard, the Forest Service, and/or the National Marine Fisheries Service, if the project is in the vicinity of a geographic area for which an agency has jurisdiction.

Gaining approval on draft environmental impact statement and selecting the preferred alternative. In this phase, Maryland and North Carolina state departments of transportation attempt to gain approval from FHWA on preliminary efforts to meet environmental requirements and concurrence from resource agencies on selecting the preferred alternative. If FHWA is satisfied that the state department of transportation has adequately identified all reasonable alternatives to the proposed action and discusses the reasons why other alternatives were eliminated from detailed study, then FHWA will provide approval of the state's preliminary efforts in meeting environmental requirements. After receiving FHWA's approval, state departments of transportation will obtain and analyze comments from the public and from resource agencies to help the state department of transportation in selecting the preferred alternative.¹⁷ After Maryland and North Carolina state departments of transportation select the preferred alternative, they develop additional avoidance and mitigation efforts, if needed. Finally, Maryland and North Carolina state departments of transportation will obtain feedback from the public and agencies on its selection of the preferred alternative and address any concerns in the final environmental impact statement. For projects in Maryland or North Carolina that require a permit under section 404 of the Clean Water Act, the state department of transportation will also normally obtain concurrence on the preferred alternative from the Army Corps of Engineers, the Environmental Protection Agency, the Fish and Wildlife Service, and FHWA. Other states may not obtain concurrence. In addition, the state department of transportation may also obtain concurrence from the National Park Service, the Coast Guard, the Forest Service, and/or the

¹⁷According to the Council on Environmental Quality, the preferred alternative is the alternative which the state department of transportation believes would best fulfill its statutory mission and responsibilities, giving consideration to economic, environmental, technical, and other factors.

National Marine Fisheries Service, if the project is in the vicinity of a geographic area for which an agency has jurisdiction.

Gaining final approval for environmental analysis and permits. In this phase, the state department of transportation attempts to gain final approval from FHWA on its efforts to meet environmental review requirements. If FHWA is satisfied that the state department of transportation has adequately identified the preferred alternative; evaluated all reasonable alternatives considered; and complied, to the extent possible, with all applicable environmental laws and executive orders; or has provided reasonable assurance that these requirements can be met, then FHWA issues final approval on the state's efforts in meeting environment review requirements. The state department of transportation will then circulate the final environmental impact statement for public and agency comment. The state department of transportation will respond to comments and FHWA will issue its decision (called a record of decision).¹⁸

In addition to the activities described above, state departments of transportation may need to undertake additional activities to consult with or obtain permits or approvals from federal, state, and local agencies before they can begin construction when a project may impact coastal resources, air quality, wetlands, historic and cultural resources, floodplains, ecosystems, national park lands, and endangered species, among others in order to complete environmental review. Finally, the environmental review process may have to be reopened in situations such as when a project does not move forward because of funding shortages and stakeholders believe that possible environmental impacts have changed and in cases of successful lawsuits involving environmental issues associated with the project. Only after lawsuits, funding, or other environmental issues have been resolved will Maryland and North Carolina state departments of transportation typically allocate funding to begin construction.

¹⁸FHWA cannot issue its decision until 30 days have elapsed from when the public and resource agencies had an opportunity to comment on the final environmental impact statement.

Stakeholders' Views Differed on Which Aspects Frequently Add Undue Time to Environmental Reviews

Stakeholders of highway construction projects we contacted identified 43 aspects that they said added undue time (more time than what stakeholders viewed as necessary to complete the review) to environmental reviews of federally funded highway projects. A majority of stakeholders with primary responsibilities for environmental and historical preservation issues, and those with primary responsibilities for transportation improvement, identified five aspects as occurring frequently; but there was no agreement across groups about which aspects add undue time. (See table 5 in app. III for how stakeholders rated each of the 43 aspects.)

The stakeholders we contacted indicated that aspects adding undue time to environmental reviews generally occurred at about the same frequency, regardless of whether the type of environmental review was a categorical exclusion, environmental assessment, or environmental impact statement. While the stakeholders we contacted identified various aspects of environmental reviews as adding undue time, generally, they could not estimate how much time these aspects add to environmental reviews.

Environmental and Transportation Improvement Stakeholders Differed in Their Views of Which Aspects Frequently Add Undue Time

While stakeholders with similar responsibilities or interests identified several aspects as frequently adding undue time to environmental reviews, no agreement existed across groups. For the most part, environmental stakeholders, such as resource agencies, state historic preservation agencies, and environmental advocacy organizations, told us that state departments of transportation waited too long to consider environmental impacts and involve important stakeholders. On the other hand, transportation improvement stakeholders, such as state departments of transportation, FHWA division offices, and transportation advocacy organizations, identified aspects related to environmental laws and staffing adequacy.

Of the 43 aspects identified by all stakeholders, a majority of the environmental stakeholders identified 2 aspects as frequently adding undue time to environmental reviews.¹⁹ (See table 2.)

¹⁹Stakeholders rated each aspect according to the following scale: 1 = almost never or never; 2 = less than half of the time; 3 = about half of the time; 4 = more than half of the time; 5 = all or almost all of the time. Stakeholders also could indicate that they did not know or that the aspect was not relevant.

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- **Impacts not considered early enough.** Seventy percent of the environmental stakeholders (7 of 10) who provided a rating for this aspect, told us that undue time is frequently added to environmental reviews because state departments of transportation generally do not consider environmental and historic preservation impacts early enough in the environmental review.²⁰ An official with the Council on Environmental Quality, which oversees federal agency implementation of the environmental impact assessments, stated that when environmental activities related to NEPA are not considered during the planning phase of a highway project, agreements made during the planning phase must be revisited once a NEPA review starts, thus unduly adding time to environmental reviews. In contrast, 12 percent of transportation improvement stakeholders (2 of 16) cited this aspect as occurring frequently.
 - **Important stakeholders not included early.** Sixty-four percent of the environmental stakeholders (7 of 11) who provided a rating for this aspect told us that undue time is frequently added to environmental reviews because state departments of transportation generally do not include important stakeholders early in the environmental review. For example, a state historic preservation officer said that the state historic preservation office often was involved too late in the environmental review, leading to time delays on the project. The state department of transportation had spent time and money developing projects prior to allowing the state historical preservation office to review project plans. When the state historical preservation office had a concern with a project, the state department had to change or redesign its plans causing cost increases and time delays. In contrast, 19 percent of the transportation improvement stakeholders (3 of 16) cited this aspect as frequently adding undue time to reviews.

²⁰Not all stakeholders rated each aspect. At least 25 stakeholders (89 percent) responded to every aspect.

Table 2: Aspects Identified by a Majority of Environmental Stakeholders

| Aspect cited by stakeholders | Percent of stakeholders rating aspect as occurring frequently (number of stakeholders in parentheses) | | |
|--|---|---|------------------|
| | Environmental stakeholders | Transportation improvement stakeholders | All stakeholders |
| State departments of transportation do not consider environmental and historic impacts early enough in the environmental review. | 70 (7 of 10) | 12 (2 of 16) | 35 (9 of 26) |
| State departments of transportation do not include important stakeholders early in the environmental review. | 64 (7 of 11) | 19 (3 of 16) | 37 (10 of 27) |

Source: GAO analysis of responses from 28 stakeholders.

Note: Includes only those aspects identified by a majority of the environmental stakeholders as occurring frequently. Percentages are based on the number of stakeholders rating each aspect.

Of the 43 aspects identified overall, a majority of transportation improvement stakeholders identified 3 aspects as frequently adding undue time to environmental reviews. (See table 3.)

- State departments and federal resource agencies lack sufficient staff.** Sixty-nine percent of transportation improvement stakeholders (11 of 16) who provided a rating for this aspect told us that undue time is frequently added to environmental reviews because state departments of transportation and federal resource agencies lack sufficient staff to handle their responsibilities in a timely manner. This aspect was cited as occurring frequently by a majority of the transportation improvement stakeholders and by half of the environmental stakeholders (5 of the 10) who provided ratings for this aspect. According to FHWA, state departments of transportation are using different methods to attempt to provide sufficient staff to carry out environmental reviews, such as hiring consultants to complete environmental analyses when their own staff resources are limited. In addition, according to FHWA, 34 states are funding additional staff at state and federal environmental agencies to facilitate environmental reviews and approval. In a recent report, stakeholders identified this latter approach as a promising approach

that states are using to reduce the overall time it takes to complete federally funded highway projects.²¹

- **Section 4(f) historic preservation requirement considered burdensome.** Fifty-six percent of the transportation improvement stakeholders (9 of 16) told us that section 4(f) adds undue time to environmental reviews because it is inflexible and, therefore, burdensome to comply with. Section 4(f) prohibits the Department of Transportation from approving any highway project that uses, among other things, publicly owned land of an historic site of national, state, or local significance unless it finds that (1) there is no prudent and feasible alternative that avoids such resources or causes less harm to them and (2) the project includes all possible planning to minimize harm to those resources. In April 2003, we reported that many stakeholders consider these reviews as burdensome and inflexible and that alternative approaches could protect historic properties and take less time to reach resolution.²² In that report, a large majority of the stakeholders we contacted indicated that historic property protections under section 106 of the National Historic Preservation Act of 1966 (which requires that projects subject to federal agency jurisdiction or licensing consider the effects on any properties included in, or eligible for inclusion in, the National Register of Historic Places) offered a flexible mediation process that brings all parties into discussion and allowed for more productive outcomes that preserve the goals of the transportation project, while creating meaningful protections of historic properties. In contrast, 30 percent of the environmental stakeholders (3 of 10) who provided a rating for this aspect cited it as occurring frequently, resulting in undue time being added to environmental reviews.
- **Obtaining wetlands permits considered time consuming.** Fifty-six percent of the transportation improvement stakeholders (9 of 16) told us that section 404 of the Clean Water Act, which requires that projects receive a permit from the Army Corps of Engineers if water impacts exist, frequently adds undue time to environmental reviews. These stakeholders described a variety of issues, including that section 404 adds undue time because the Corps requires extensive alternative analysis, even for minor projects, to demonstrate that there is no

²¹[GAO-03-398](#).

²²[GAO-03-398](#).

practicable alternative to building on wetlands. None of the environmental stakeholders rated this aspect as occurring frequently in adding undue time to environmental reviews.

Table 3: Aspects Identified by a Majority of Transportation Improvement Stakeholders

| Aspect cited by stakeholders | Percent of stakeholders rating aspect as occurring frequently (number of stakeholders in parentheses) | | |
|---|---|----------------------------|------------------|
| | Transportation improvement stakeholders | Environmental stakeholders | All stakeholders |
| State departments of transportation and federal resource agencies lack sufficient staff to handle their responsibilities in a timely manner. | 69 (11 of 16) | 50 (5 of 10) | 62 (16 of 26) |
| The section 4(f) requirement that the state department of transportation prove there is no prudent and feasible alternative is burdensome. | 56 (9 of 16) | 30 (3 of 10) | 46 (12 of 26) |
| Section 404 causes delays since it values water resources over other resources leading state departments of transportation to complete time-consuming analysis. | 56 (9 of 16) | 0 (0 of 10) | 35 (9 of 26) |

Source: GAO analysis of responses from 28 stakeholders.

Note: Includes only those aspects identified by a majority of the transportation improvement stakeholders as occurring frequently.

In our April report on stakeholders' perceptions of the most promising approaches for reducing highway project completion time (covering all aspects of a highway project from planning through construction), stakeholders identified 13 most promising approaches. Nine of these approaches involved environmental review, such as funding specialized staff at resource agencies and unifying section 404 and NEPA reviews. Four of the five aspects that stakeholders told us add undue time to environmental reviews relate specifically to promising approaches cited in the April report. These are approaches for increasing resource agency staff, providing early consideration of environmental impacts by state departments of transportation, inclusion of important stakeholders early in

environmental review, and handling the exacting requirements of section 4(f). In our April report, we recommended that FHWA consider the benefits of the 13 most promising approaches and act to foster the adoption of the most cost effective and feasible approaches. FHWA generally agreed with this recommendation and stated that most, if not all, of the promising approaches coincide with the streamlining activities that the department and its partners, such as state departments of transportation and resource agencies, have been developing and implementing under section 1309 of the Transportation Equity Act for the 21st Century. We believe that acting on that recommendation will address some of the concerns identified by the environmental and transportation improvement stakeholders in this report.

Agency Comments and Our Evaluation

We provided the Departments of Transportation and Interior with a draft of this report for their review and comment. The Department of Transportation responded that it had no comments, and the Department of Interior did not provide a response to our request for comments. We also provided Maryland and North Carolina with the portion of the draft report dealing with environmental review activities in their states. Maryland offered several technical comments, which we have incorporated into this report. North Carolina did not provide a response to our request for comments.

As arranged with your office, unless you publicly announce its contents earlier, we plan no further distribution of this report until 30 days after the date of this letter. At that time, we will send copies of this report to congressional committees with responsibilities for highway and environmental issues; the Secretary of Transportation; the Secretary of Defense; the Secretary of the Interior; the Administrator, Federal Highway Administration; and the Director, Office of Management and Budget. We will also make copies available to others upon request. This report will be available at no charge on our home page at <http://www.gao.gov>.

If you or your staff have any questions about this report, please contact either James Ratzenberger at ratzenbergerj@gao.gov or me at siggerudk@gao.gov. Alternatively, we may be reached at (202) 512-2834. Key contributors to this report were Samer Abbas, Michelle Dresben, Brandon Haller, Hiroshi Ishikawa, Gail Marnik, Kristen Massey, and James Ratzenberger.

Sincerely yours,

A handwritten signature in black ink that reads "Katherine Siggerud". The signature is written in a cursive style with a large, looping "S" for the first letter of the last name.

Katherine Siggerud
Acting Director, Physical Infrastructure Issues

Scope and Methodology

To perform our work, we reviewed laws and regulations governing environmental reviews of federally funded highway projects. We discussed the activities involved, the time it takes to complete environmental reviews, and aspects that may increase the time it takes to complete such reviews with officials from the Federal Highway Administration (FHWA), state departments of transportation, federal resource agencies, transportation advocacy organizations, environmental advocacy organizations, and historic preservation agencies. We also reviewed federal, state, and private studies on environmental reviews of transportation projects.

To determine the activities required to complete environmental reviews of federally funded highway projects and the stakeholders involved in the reviews, we obtained information from FHWA, the Maryland Department of Transportation, and the North Carolina Department of Transportation. We chose these states because officials we interviewed identified these states as those that have studied their environmental review procedures and taken steps to improve the timeliness of environmental reviews. While the general requirements for an environmental impact statement (identify environmental features, evaluate alternatives, assess impacts, involve the public, etc.) are the same for all states, each state may implement the requirements differently.

To determine stakeholders' views on the aspects that frequently add undue time to environmental reviews of federally funded highway projects, we contacted 51 organizations with a role or interest in highway project environmental reviews. (See table 4.) Of these 51 organizations, officials from 39 agreed to participate in interviews, including federal and state agencies with responsibilities relating to the construction of federally funded roads, federal agencies with responsibilities relating to the protection of the environment, transportation engineering organizations, transportation professional associations, environmental organizations, and historic preservation organizations. To identify the 51 organizations, we initially contacted agencies and organizations that have a role or interest in highway project environmental reviews or that have been vocal on the issue. We asked these officials to identify, for subsequent interviews, other agencies or organizations undertaking or knowledgeable about environmental reviews. We continued to ask for names from the subsequent organizations until we began getting duplicate referrals.

Table 4: Organizations Contacted

Organizations

| |
|--|
| Advisory Council on Historic Preservation |
| American Association of State Highway and Transportation Officials |
| American Highway Users Alliance |
| American Road and Transportation Builders Association |
| American Society of Civil Engineers |
| ARCADIS |
| Association of Metropolitan Planning Organizations |
| Binghamton Metropolitan Transportation Study |
| California Department of Transportation |
| Colorado Department of Transportation |
| Connecticut Department of Transportation |
| Conservation Law Foundation |
| Council for Environmental Quality |
| Defenders of Wildlife |
| Denver Regional Council of Governments |
| East-West Gateway Coordinating Council |
| Endangered Species Coalition |
| Environmental Defense |
| Federal Highway Administration – Connecticut Division |
| Federal Highway Administration – Texas Division |
| Federal Highway Administration – Virginia Division |
| Florida Department of Transportation, Environmental Management Office |
| Indiana Department of Natural Resources |
| Institute of Transportation Engineers |
| Kentucky State Historical Preservation Office |
| Kentucky Transportation Cabinet ^a |
| Louisiana Department of Transportation and Development, Environmental Section |
| Maryland State Highway Administration, Project Planning Division |
| Metroplan |
| National Coalition to Defend NEPA |
| National Conference of State Historic Preservation Officers |
| Natural Resources Defense Council |
| National Trust for Historic Preservation |
| New Hampshire Department of Transportation, Environmental Bureau |
| North Carolina Department of Transportation, Planning and Environmental Office |

(Continued From Previous Page)

Organizations

Ohio Department of Transportation, Office of Environmental Services

Oregon Department of Transportation, Environmental Services Section

Parsons Brinckerhoff

Puget Sound Regional Council

R.J. Behar & Company, Inc.

South Carolina Department of Transportation

Surface Transportation Policy Project

Texas Department of Transportation, Environmental Affairs Division

U.S. Army Corps of Engineers, New Orleans District

U.S. Environmental Protection Agency

U.S. Fish and Wildlife Service, Division of Federal Program Activities

U.S. Fish and Wildlife Service, Pennsylvania Ecological Services Field Office

U.S. Institute for Environmental Conflict Resolution

Vermont Agency of Transportation, Technical Service Unit

Vermont Division for Historic Preservation

Washington State Department of Transportation

Source: GAO.

^aThe official from the Kentucky Transportation Cabinet participated as part of a group of officials from the American Association of State Highway and Transportation Officials in the semi-structured interview to identify aspects and individually in rating the frequency of aspects.

Using a semi-structured interview, we asked knowledgeable stakeholders at each of the 39 organizations to provide information about the aspects of laws, stakeholders' behaviors, resource availability, or project management approaches, if any, that unduly add time to environmental reviews. We used these categories because they are related to components of the environmental review process. For each aspect cited, we asked stakeholders to provide information on (1) how the aspect leads to an undue increase in review time; (2) the positive and negative outcomes, if any; (3) at what stage in the review the aspect occurred; (4) an example and the amount of time it added to the review; and (5) the type of environmental review (e.g., categorical exclusion, environmental assessment, or environmental impact statement) where the aspect occurred. We did not define the term undue time but relied on the stakeholders' professional judgment to determine which aspects added time that would not be added ordinarily. Most stakeholders did not provide estimates of the amount of time the aspect added to the review.

To determine how frequently the aspects occur, we compiled a list of 43 aspects identified by stakeholders as adding unnecessary time to

environmental reviews and asked each of the 39 stakeholders we interviewed to rate how frequently each aspect adds undue time to environmental reviews for highway projects involving categorical exclusions, environmental assessments, and environmental impact statements using a scale of 1 to 5.¹ Twenty-eight stakeholders agreed to participate in this segment of our work. The 11 stakeholders who did not participate in this segment chose not to do so for a variety of reasons. At least 25 stakeholders (89 percent) rated each of the 43 aspects. We identified the most significant aspects as those where a majority of the stakeholders responding to the question indicated it occurred frequently (more than half to all or almost all the time).

Stakeholders made a significant distinction by type review in less than 8 percent of all responses. We defined a significant distinction as a response that had a greater than 1 point difference (on the 1-5 scale) between the rating of either the categorical exclusion, environmental assessment, and environmental impact statements from the rating averages of responses for a given aspect.

We did not attempt to corroborate whether or not particular aspects actually occur or the reasons why stakeholders rated individual aspects as occurring more or less frequently. We conducted our work from November 2002 through May 2003 in accordance with generally accepted government auditing standards.

¹1 = almost never or never; 2 = less than half of the time; 3 = about half of the time; 4 = more than half of the time; 5 = all or almost all of the time. Stakeholders could also indicate that they did not know or that the aspect was not relevant.

Environmental Reviews of Projects in Maryland and North Carolina Requiring an Environmental Impact Statement

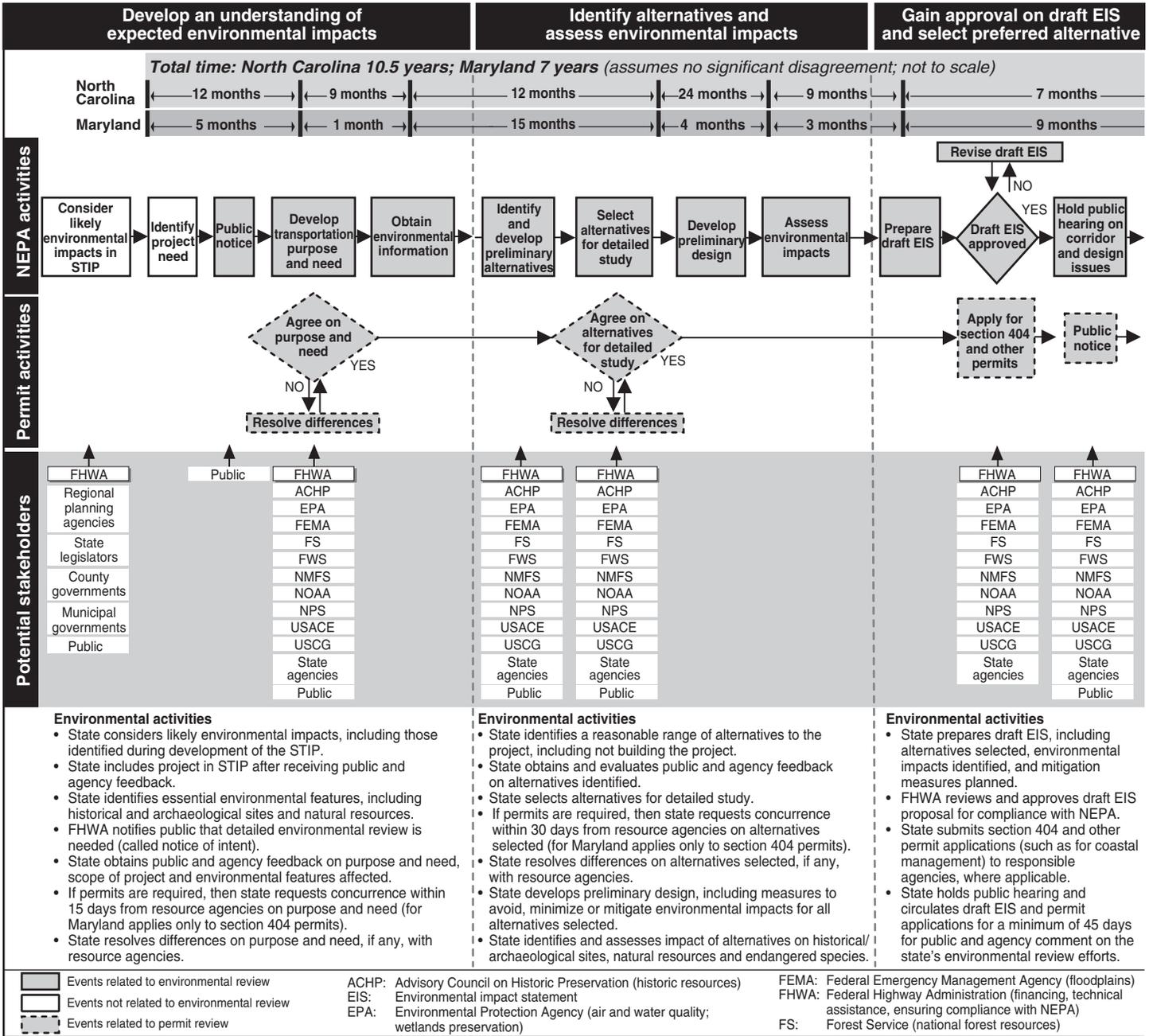
Figure 3 depicts the types and duration (assuming no significant disagreements with stakeholders at key decision points) of all federally required, environmental-related review activities (including those that may be undertaken prior to notice of intent and after record of decision) involved in the environmental review of federally funded highway projects in Maryland and North Carolina requiring an environmental impact statement.¹ State requirements are not depicted. The flowchart depicts Maryland and North Carolina departments of transportation undertaking permit-related activities early in the process. Other states may not do so.

Maryland and North Carolina carry out some environmental activities even before the first phase, such as considering whether environmental impacts are likely when they develop their state transportation improvement plan. Further, attention to environmental impacts may occur even after FHWA and permit agencies approve the project if the environmental analysis is challenged in court.

¹The duration of environmental reviews involving environmental impact statements is typically determined by measuring the length of time between when FHWA notifies the public that detailed environmental review of a project is needed (notice of intent) to when FHWA issues its decision that projects have complied with environmental laws (record of decision). FHWA reports that for highway projects requiring an environmental impact statement and for which FHWA signed a record of decision in 2001, environmental review took an average of approximately 5 years from notice of intent to record of decision. The flowchart should not be interpreted as suggesting that environmental review of projects (as measured from notice of intent to record of decision) in Maryland and North Carolina typically takes 7 years or more.

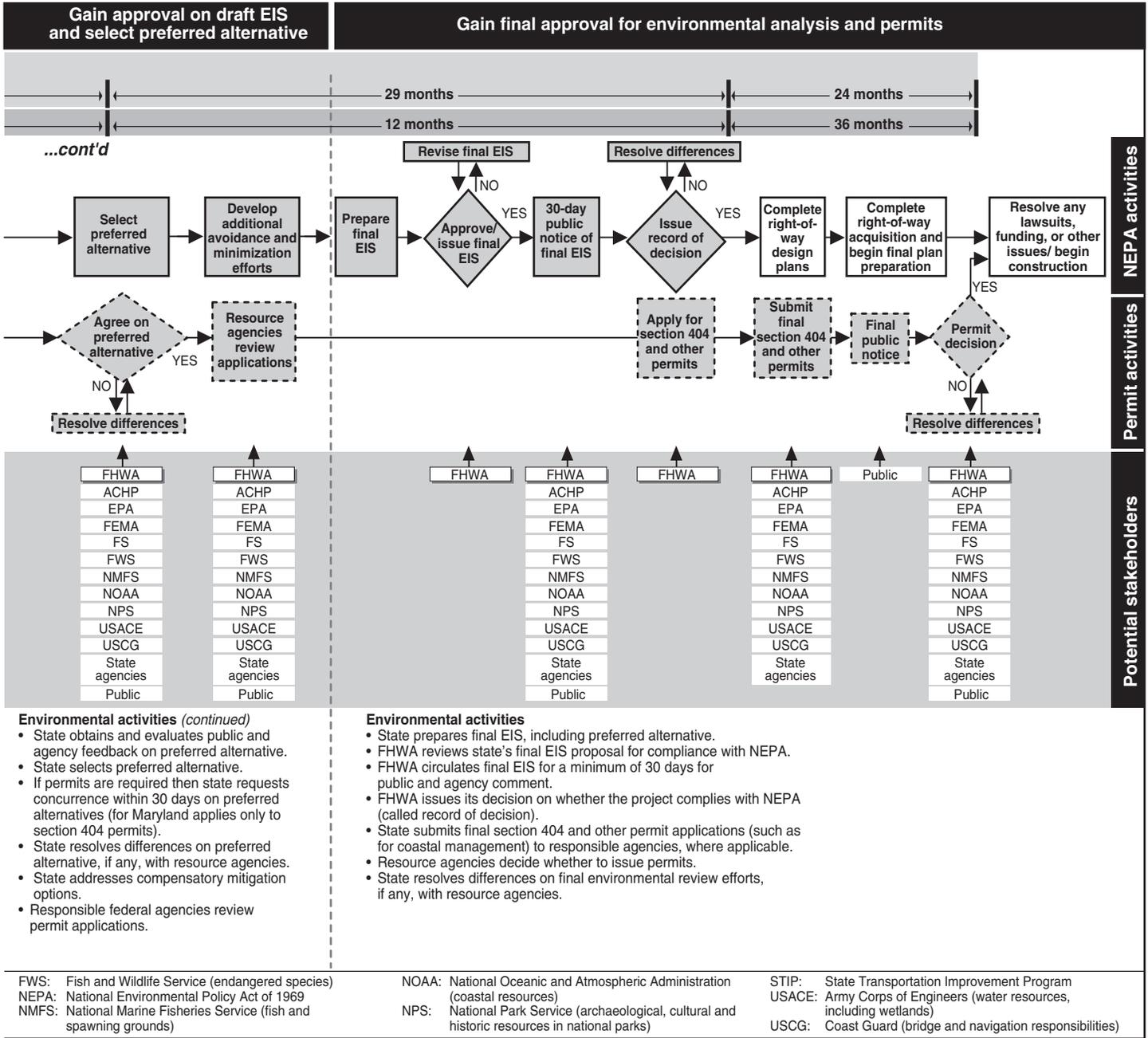
**Appendix II
Environmental Reviews of Projects in
Maryland and North Carolina Requiring an
Environmental Impact Statement**

Figure 3: Activities Involved in Completing Environmental Reviews of Projects in Maryland and North Carolina Requiring Environmental Impact Statements



Source: GAO's analysis of data from Maryland and North Carolina departments of transportation.

**Appendix II
Environmental Reviews of Projects in
Maryland and North Carolina Requiring an
Environmental Impact Statement**



Appendix II
Environmental Reviews of Projects in
Maryland and North Carolina Requiring an
Environmental Impact Statement

Note: Activities not related to environmental review were compressed and can take a significant amount of time. According to FHWA, it typically takes between 9 to 19 years to plan, gain approval for, and construct a new, major federally funded highway project that has significant environmental impacts.

Aspects Identified by Stakeholders as Unduly Adding Time to Environmental Reviews

Stakeholders with different primary interests or responsibilities typically had divergent views about aspects that unduly add time to environmental reviews. (See table 5.)

Table 5: Frequency of Occurrences of Aspects That Unduly Add Time to the Environmental Review, as Identified by Stakeholders, by Rating and Type of Stakeholder

| Aspects identified by stakeholders | Number of stakeholders primarily affiliated with environmental and historic preservation issues ^a indicating that aspect occurs: | | | | Number of stakeholders primarily affiliated with transportation improvement issues ^b indicating that aspect occurs: | | | | Total |
|--|---|---------------------|----------------------------------|----------------------------|--|---------------------|----------------------------------|----------------------------|-------|
| | More than half the time | About half the time | Less than half the time or never | Did not know /not relevant | More than half the time | About half the time | Less than half the time or never | Did not know /not relevant | |
| State departments of transportation and federal resource agencies lack sufficient staff to handle their responsibilities in a timely manner. | 5 | 1 | 3 | 1 | 11 | 3 | 2 | 0 | 26 |
| The section 4(f) requirement that the state departments of transportation prove there is no prudent and feasible alternative is burdensome to a state department of transportation | 3 | 0 | 6 | 1 | 9 | 1 | 6 | 0 | 26 |
| State departments of transportation go to great lengths to avoid a project on public lands because they regard section 4(f) as too difficult to accommodate. | 4 | 0 | 4 | 2 | 8 | 2 | 6 | 0 | 26 |
| National Environmental Policy Act of 1969 and federal and state environmental and historic preservation laws are not administered concurrently. | 4 | 1 | 5 | 0 | 7 | 3 | 5 | 1 | 26 |
| State departments of transportation lack the ability to absorb budget increases from the Transportation Equity Act for the 21 st Century. | 3 | 0 | 2 | 5 | 8 | 3 | 4 | 1 | 26 |
| FHWA has changed its role from being a “leader” to being a “facilitator.” | 2 | 1 | 4 | 3 | 8 | 2 | 6 | 0 | 26 |

**Appendix III
Aspects Identified by Stakeholders as Unduly
Adding Time to Environmental Reviews**

(Continued From Previous Page)

| Aspects identified by stakeholders | Number of stakeholders primarily affiliated with environmental and historic preservation issues ^a indicating that aspect occurs: | | | | Number of stakeholders primarily affiliated with transportation improvement issues ^b indicating that aspect occurs: | | | | Total |
|---|---|---------------------|----------------------------------|----------------------------|--|---------------------|----------------------------------|----------------------------|-------|
| | More than half the time | About half the time | Less than half the time or never | Did not know /not relevant | More than half the time | About half the time | Less than half the time or never | Did not know /not relevant | |
| Section 4(f) standards do not associate requirements with the level of impact a project has on a historic resource. | 2 | 1 | 5 | 2 | 8 | 3 | 5 | 0 | 26 |
| State departments of transportation do not include important stakeholders early in the environmental review. | 7 | 1 | 3 | 0 | 3 | 2 | 11 | 0 | 27 |
| State historical preservation offices are not able to complete surveys of state historic resources and/or maintain database of historic properties due to resource constraints. | 4 | 2 | 2 | 3 | 6 | 1 | 6 | 3 | 27 |
| State departments of transportation do not consider environmental and historic impacts early enough in the environmental review. | 7 | 0 | 3 | 0 | 2 | 1 | 13 | 0 | 26 |
| Section 404 causes delays since it values water resources over other resources leading state departments of transportation to complete time-consuming analysis. | 0 | 3 | 3 | 4 | 9 | 3 | 4 | 0 | 26 |
| State departments of transportation and federal resource agencies are unable to maintain institutional expertise due to staff turnover. | 3 | 1 | 4 | 2 | 6 | 4 | 5 | 1 | 26 |
| State departments of transportation underestimate project costs and the review stalls while state seeks funding. | 5 | 0 | 2 | 3 | 3 | 2 | 11 | 0 | 26 |
| State departments of transportation and resource agencies do not provide agency comments in a timely manner. | 1 | 2 | 6 | 1 | 7 | 1 | 8 | 0 | 26 |

**Appendix III
Aspects Identified by Stakeholders as Unduly
Adding Time to Environmental Reviews**

(Continued From Previous Page)

| Aspects identified by stakeholders | Number of stakeholders primarily affiliated with environmental and historic preservation issues ^a indicating that aspect occurs: | | | | Number of stakeholders primarily affiliated with transportation improvement issues ^b indicating that aspect occurs: | | | | Total |
|---|---|---------------------|----------------------------------|----------------------------|--|---------------------|----------------------------------|----------------------------|-------|
| | More than half the time | About half the time | Less than half the time or never | Did not know /not relevant | More than half the time | About half the time | Less than half the time or never | Did not know /not relevant | |
| Federal environmental protection laws do not accommodate local transportation needs so additional coordination required to consider local needs. | 1 | 1 | 6 | 1 | 6 | 1 | 8 | 1 | 25 |
| A resource agency's antitransportation agenda leads it to use permitting authority as a means of delaying transportation projects. | 0 | 1 | 8 | 0 | 7 | 5 | 4 | 0 | 25 |
| Advocacy groups use environmental laws as means to delay or stop projects even when their disagreement is not over environmental issues. | 1 | 1 | 7 | 0 | 6 | 3 | 6 | 1 | 25 |
| FHWA does not delegate approval authority to state departments of transportation for projects involving lower levels of environmental review. | 2 | 0 | 3 | 5 | 5 | 1 | 8 | 2 | 26 |
| Resource agencies wait until permitting requires their action to express concerns and opinions about a proposed project. | 2 | 0 | 8 | 0 | 5 | 4 | 6 | 1 | 26 |
| State departments of transportation and resource agencies interpret laws and regulations differently. | 2 | 2 | 5 | 0 | 4 | 4 | 7 | 1 | 25 |
| State laws protecting certain resources conflict with section 404 regulations. | 2 | 1 | 5 | 2 | 4 | 1 | 10 | 0 | 25 |
| State departments of transportation and resource agency leaders follow personal agendas to the point where each decision must be elevated to headquarters for resolution. | 0 | 0 | 8 | 1 | 6 | 2 | 7 | 1 | 25 |

**Appendix III
Aspects Identified by Stakeholders as Unduly
Adding Time to Environmental Reviews**

(Continued From Previous Page)

| Aspects identified by stakeholders | Number of stakeholders primarily affiliated with environmental and historic preservation issues ^a indicating that aspect occurs: | | | | Number of stakeholders primarily affiliated with transportation improvement issues ^b indicating that aspect occurs: | | | | Total |
|---|---|---------------------|----------------------------------|----------------------------|--|---------------------|----------------------------------|----------------------------|-----------|
| | More than half the time | About half the time | Less than half the time or never | Did not know /not relevant | More than half the time | About half the time | Less than half the time or never | Did not know /not relevant | |
| Issues are revisited because state departments of transportation and resource agencies back out of agreements or do not follow through on promises made. | 0 | 1 | 7 | 1 | 6 | 3 | 7 | 0 | 25 |
| Groups opposing a transportation project do not use public hearings to express concerns with a project but wait until after the environmental review is completed to file lawsuits. | 1 | 2 | 5 | 1 | 5 | 1 | 10 | 0 | 25 |
| Section 404 evaluates created and natural wetlands similarly so state departments of transportation must complete similar environmental reviews, regardless of environmental value. | 0 | 1 | 5 | 4 | 6 | 1 | 9 | 0 | 26 |
| State departments of transportation may have to wait up to a year or more for the appropriate season to demonstrate existence of species. | 2 | 0 | 3 | 4 | 3 | 6 | 6 | 1 | 25 |
| The permit application process is sequential. | 1 | 2 | 3 | 4 | 4 | 0 | 10 | 2 | 26 |
| Inadequate staff at FHWA division offices and state departments of transportation leads to inadequate environmental analysis. | 3 | 0 | 3 | 4 | 2 | 3 | 10 | 1 | 26 |
| State departments of transportation and resource agencies lack way to resolve disagreements about traffic models. | 3 | 2 | 5 | 1 | 2 | 3 | 10 | 1 | 27 |

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Aspects Identified by Stakeholders as Unduly
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(Continued From Previous Page)

| Aspects identified by stakeholders | Number of stakeholders primarily affiliated with environmental and historic preservation issues ^a indicating that aspect occurs: | | | | Number of stakeholders primarily affiliated with transportation improvement issues ^b indicating that aspect occurs: | | | | Total |
|--|---|---------------------|----------------------------------|----------------------------|--|---------------------|----------------------------------|----------------------------|-------|
| | More than half the time | About half the time | Less than half the time or never | Did not know /not relevant | More than half the time | About half the time | Less than half the time or never | Did not know /not relevant | |
| State departments of transportation and resource agencies do not work to resolve technical and analytical differences. | 0 | 3 | 8 | 0 | 5 | 3 | 7 | 1 | 27 |
| The National Environmental Policy Act of 1969 process does not readily accommodate unexpected issues during existing reviews. | 1 | 1 | 5 | 2 | 3 | 1 | 12 | 0 | 25 |
| Resource agency centralization of permit approval adds another level of review. | 1 | 0 | 3 | 6 | 3 | 2 | 9 | 2 | 26 |
| Environmental reviews are held-up because changes in state or local political leadership alters project's priority and funding. | 3 | 0 | 5 | 2 | 1 | 2 | 13 | 0 | 26 |
| State departments of transportation fail to consult with Native American tribes during the environmental process. | 3 | 1 | 3 | 3 | 0 | 1 | 12 | 3 | 26 |
| FHWA division offices do not adequately verify state departments of transportation environmental categorization or oversee state review process. | 3 | 2 | 4 | 1 | 0 | 1 | 15 | 0 | 26 |
| Resource agencies and state departments of transportation are unable to communicate due to a lack of common understanding of technical terms. | 2 | 2 | 4 | 2 | 1 | 1 | 13 | 1 | 26 |
| Federal resource agencies' lack of technical resources hampers their analytic performance. | 1 | 4 | 3 | 2 | 2 | 5 | 8 | 1 | 26 |

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Aspects Identified by Stakeholders as Unduly
Adding Time to Environmental Reviews**

(Continued From Previous Page)

| Aspects identified by stakeholders | Number of stakeholders primarily affiliated with environmental and historic preservation issues ^a indicating that aspect occurs: | | | | Number of stakeholders primarily affiliated with transportation improvement issues ^b indicating that aspect occurs: | | | | Total |
|---|---|---------------------|----------------------------------|----------------------------|--|---------------------|----------------------------------|----------------------------|-----------|
| | More than half the time | About half the time | Less than half the time or never | Did not know /not relevant | More than half the time | About half the time | Less than half the time or never | Did not know /not relevant | |
| State departments of transportation find it difficult to resolve conflicting criteria inherent in projects covered under section 4(f) and section 106. | 1 | 0 | 9 | 1 | 2 | 4 | 10 | 0 | 27 |
| State departments of transportation misclassify level of environmental review. | 2 | 1 | 5 | 2 | 0 | 1 | 15 | 0 | 26 |
| FHWA will require the state departments of transportation to conduct additional analysis of project alternatives that a state department of transportation has already discarded. | 0 | 1 | 5 | 4 | 2 | 3 | 10 | 1 | 26 |
| Resource agency field offices do not consult with headquarters to resolve disputes. | 0 | 0 | 3 | 7 | 2 | 2 | 9 | 3 | 26 |
| Metropolitan planning organizations and state departments of transportation struggle over leadership. | 0 | 0 | 3 | 7 | 1 | 0 | 13 | 1 | 25 |
| State departments of transportation don't prioritize projects by size. | 0 | 0 | 2 | 8 | 1 | 1 | 11 | 3 | 26 |

Source: GAO analysis of Responses from 28 stakeholders.

^aEnvironmental stakeholders include federal resource agencies, environmental advocacy organizations, and state historic preservation agencies.

^bTransportation improvement stakeholders include transportation advocacy organizations, state departments of transportation, and FHWA division offices.

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