

Chapter 5. Abstracts

Abstracts can be used to summarize content that is provided in more detail in the remainder of a document, chapter, or section.

Abstracts are distinct from other reader-friendly tools, such as roadmaps. The goal of a roadmap is principally to explain how a document or chapter is organized. By contrast, the goal of an abstract is to summarize content. Abstracts help readers to absorb important facts that might otherwise be overlooked due to the length or complexity of the document.

Abstracts have been used in a variety of ways in NEPA documents, including the following:

- *Abstract for the entire document.* An abstract (sometimes called a fact sheet or preface) can be included at the beginning of the EIS, typically just after the title page and before the table of contents. In this form, an abstract typically provides a brief description of the proposed action, the structure of the EIS, key points of contact for the project, an overview of the study process, and instructions on how to comment. Unlike the summary chapter, an abstract is short – typically 1 to 3 pages.
- *Abstract for a chapter or section.* An abstract to a chapter or section summarizes the information included in that portion of the NEPA document. One example shown in this chapter includes a short abstract at the beginning of each major section in the impacts chapter. In this form, an abstract can help the reader to quickly grasp the important conclusions, before delving into a detailed discussion.

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Preface, Fact Sheet, or Abstract at Beginning of EIS

- OH: Opportunity Corridor DEIS
- MD: Baltimore Red Line FEIS
- NC: Mid-Currituck FEIS
- WA: I-90 Snoqualmie FEIS

Techniques to note:

- abstract describes proposed action, contents of EIS, study process, and how to comment.

ABSTRACT

The Federal Highway Administration (FHWA) and the Ohio Department of Transportation (ODOT), as joint lead agencies, are proposing the construction of a new arterial roadway (urban boulevard) within the City of Cleveland, Cuyahoga County, Ohio. The purpose of the new roadway is to improve connectivity, access, and mobility within the City of Cleveland. The project is also intended to support the City of Cleveland's planned economic development. The proposed urban boulevard would consist of a four- to five-lane typical section with turn lanes at intersections. It would begin in the west at the I-490-East 55th Street intersection, which is the eastern extent of the Interstate Highway System and the I-77/I-490 system interchange. The proposed boulevard would end at the East 105th Street-Chester Avenue intersection in the east.

The FHWA and ODOT have worked to avoid, minimize and mitigate the potential environmental impacts of the proposed project. This process included extensive efforts to involve the public and stakeholders in the planning and design of the proposed project. The primary environmental impacts of the project are the proposed acquisition, relocation and demolition of residences, commercial businesses, and one church.

Unavoidable impacts to low-income and minority populations would also occur. Several measures will be put into place to mitigate these impacts.

The proposed project is estimated to require a \$331.3 million investment. ODOT is evaluating several potential funding sources to pay for the project, including local, state and federal funds, as well as private funding through a public-private partnership.

This Draft Environmental Impact Statement (DEIS) provides a complete picture of the Cleveland Opportunity Corridor project, from beginning to end. It describes why the transportation project is needed, the alternatives that were studied, the preferred alternative, the potential effects, the efforts to include the public and agencies in the decision-making process, as well as the outcomes of these efforts. The DEIS also identifies proposed mitigation for any unavoidable impacts.

This information is presented in a manner that is intended to facilitate the reading and understanding of this document's findings by all readers, including the public, environmental resource and regulatory agency representatives, and decision-makers.

For readers interested in the details of the studies and activities associated with the preparation of this DEIS, a series of technical reports has been published. The reports are available on the CD that accompanies this DEIS and on the project website at www.BuckeyeTraffic.org/OpportunityCorridor.

Comments on this DEIS should be sent to the individual listed below. Inquiries and requests for information should also be directed or submitted to the attention of the following individual:

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Techniques to note:

- abstract describes proposed action, contents of EIS, study process, and how to comment.

ABSTRACT

This Final Environmental Impact Statement (FEIS) and Draft Section 4(f) Evaluation for the Red Line project describes and summarizes the transportation and environmental impacts for the implementation of a new east-west light rail transit alignment in Baltimore County and Baltimore City, Maryland. The Red Line project is proposed to:

- Improve transit efficiency by reducing travel times for transit trips
- Increase transit accessibility by providing improved transit access to major employment and activity centers
- Provide transportation choices for east-west commuters by making transit a more attractive option
- Enhance connections among existing transit routes
- Support community revitalization and economic development opportunities
- Help the region improve air quality by increasing transit use and promote environmental stewardship

The corridor limits for the study extend from western Baltimore County at the Centers for Medicare & Medicaid Services through the downtown central business district to the Johns Hopkins Bayview Medical Center campus in eastern Baltimore City. The corridor is approximately 14 miles in length.

This FEIS includes a description of the alternatives, as well as a comparative evaluation of the No-Build Alternative and the Preferred Alternative benefits and effects. These alternatives were analyzed for both long-term (operational) and short-term (construction-related) impacts to: public transportation; traffic; parking; freight rail service; neighborhoods and community facilities; environmental justice; property acquisition and displacements; economic activity; land use; parks, recreation, and open space; visual quality; air quality; noise and vibration; energy; hazardous materials; utilities; historic structures and archeological resources; Section 4(f) resources; habitat and species; rare, threatened, and endangered species; surface and groundwater resources; waters of the US including wetlands; floodplains; critical area; safety and security; indirect and cumulative effects; and irreversible and irretrievable resources. Measures to avoid, reduce, or mitigate impacts are identified.

In August 2011, the President issued a memorandum entitled *Speeding Infrastructure Development Through More Efficient and Effective Permitting and Environmental Reviews*, which required federal agencies to identify and expedite a set of priority projects. In October 2011, the Red Line project was selected as one of 14 infrastructure projects around the country for an expedited permitting and environmental review process.

To encourage transparency during the project development process, the Federal Infrastructure Projects Dashboard allows the public to track the progress of each priority project. The dashboard, which is part of the government's performance.gov website, highlights best practices and successful coordination efforts that result in an efficient federal permitting process and review decisions which can benefit all projects. The performance.gov website informs the public of actions that require cooperation between federal agencies for the Red

Line project. It summarizes the substantial public involvement and outreach activities to refine and improve the project.

FOR ADDITIONAL INFORMATION CONCERNING THIS DOCUMENT, CONTACT:

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This FEIS is available for viewing on the project website, located at www.baltimoreddline.com, and may be reviewed at public libraries throughout the project study corridor. A 45-day review period has been established for this document, beginning on the publication date of this FEIS. Comments may be submitted in writing to Henry Kay at the address above, via e-mail at feis@baltimoreddline.com or through the project website. The date of the comment deadline is posted on the project website.

Techniques to note:

- preface describes proposed action, contents of EIS (with roadmap), study process, how to comment, and next steps.

Preface

What is the purpose of a Final Environmental Impact Statement?

The North Carolina Turnpike Authority (NCTA), a division of the North Carolina Department of Transportation (NCDOT), in cooperation with the Federal Highway Administration (FHWA), is evaluating proposed transportation improvements in the Currituck Sound area, including consideration of a Mid-Currituck Bridge.

This Final Environmental Impact Statement (FEIS) is an important milestone in the project planning process. The objective of this FEIS is to provide the public and decision-makers with the appropriate and relevant information used to make an informed decision on a Preferred Alternative to select for implementation. This environmental process is intended to provide all interested parties with the opportunity to contribute to the decision-making process.

The development and evaluation of the transportation improvement alternatives assessed in this FEIS was an iterative process that included coordination with public agencies, elected officials, stakeholders, and members of the public. Alternatives were evaluated for environmental impacts (including the human and natural environments), engineering constraints, transportation benefits, and cost. Environmental study findings were initially presented in a March 2010 Draft Environmental Impact Statement (DEIS), which was distributed for government agency and public review.

What does this FEIS include?

The table of contents presents the overall organization of this FEIS and can direct you to the appropriate page numbers in various chapters and sections in the document. Key findings are presented in the summary section. A full discussion of findings is presented in three chapters:

- Chapter 1 – Purpose of and Need for Action describes the transportation improvement needs in the project area and identifies related project objectives.
- Chapter 2 – Alternatives describes the characteristics of the alternatives considered for implementation, the “detailed study alternatives,” including the Preferred Alternative. This chapter also summarizes other alternatives considered and the reasons why they were not selected for detailed study. The No-Build Alternative also is described.
- Chapter 3 – Affected Environment and Environmental Consequences describes the existing and forecast future environmental conditions, as well as potential short- and long-term beneficial and adverse effects (if any) of the detailed study alternatives on these conditions. Possible mitigation measures are identified, where appropriate.

Also included with this FEIS are several appendices. Attached to the printed version of this FEIS is a compact disc (CD) that contains this FEIS, as well as the supporting technical documentation, including responses to comments made on the DEIS and methods and assumptions that provided the basis for the technical analyses and findings presented in this FEIS. A list of the technical documentation included on the CD and the table of contents for each document is included in Appendix D.

Printed copies of this FEIS and supporting technical documentation are available for public review at public locations listed in Appendix C. Additional copies of the CD are available from NCTA upon request (see the contact information in the summary of this FEIS). All documentation is posted on the NCTA web site at <http://www.ncdot.gov/projects/midcurrituckbridge/>.

FHWA procedures allow for the preparation of an abbreviated version of the FEIS where the only changes needed in the document are minor and consist of factual corrections and/or an explanation of why the comments received on the DEIS do not warrant further response. FHWA also allows the preparation of a condensed FEIS, which includes only new material and references the DEIS for material that did not change between the DEIS and FEIS. Neither of these approaches was used for this FEIS primarily because notable refinements were made to the Preferred Alternative, including mitigation details, between the DEIS and FEIS. It was believed to be important to present those details and associated changes in impact within the context of the comparison of other alternatives rather than asking the reader to compare two separate documents (DEIS and FEIS) in order to understand the differences.

What happens next?

This FEIS identifies NCTA and FHWA's Preferred Alternative. Agencies or the public may review the findings of this FEIS for 30 days after the availability of the FEIS for public review is published in the *Federal Register*. The public can submit comments in writing to the address at the beginning of the summary. After the review period, FHWA will issue a Record of Decision (ROD) that responds to substantive comments on this FEIS and finalizes its decision on the Selected Alternative. With the release of the ROD, the planning process is complete, and final design, right-of-way acquisition, and construction of the Selected Alternative may begin if a build alternative is selected. NCTA expects to continue to have periodic Citizens Informational Workshops and other public involvement opportunities as the project progresses after the release of the ROD.

Techniques to note:

- fact sheet describes proposed action, alternatives considered, agency contacts, and permits and approvals needed.

Fact Sheet

Project Name:

I-90 Snoqualmie Pass East Project

Project Description:

I-90 spans 300 miles in Washington State from the Port of Seattle to the Idaho State line, and then continues east across the United States to Boston, Massachusetts. I-90 is the major east-west transportation corridor across Washington and is vital to the state's economy.

WSDOT proposes to improve a 15-mile portion of I-90, beginning on the eastern side of Snoqualmie Pass at MP 55.1, just east of the Hyak Interchange, and ending at MP 70.3 at the West Easton Interchange near the unincorporated community of Easton.

WSDOT has identified a Preferred Alternative, which combines design decisions at specific locations along the 15-mile route. The first five miles (MP 55.1 to 59.9) of the project is funded through construction. WSDOT considered a range of design alternatives to meet the project needs:

- **Avalanches.** The highway is frequently closed due to avalanches and associated control work. WSDOT considered construction of tunnels, bridges or a new, larger snowshed.
- **Slope instability.** Rock fall from unstable slopes presents an ongoing safety hazard. WSDOT considered tunnels, highway realignment and slope stabilization measures.
- **Structural deficiencies.** The pavement on I-90 is beyond its design life and is deteriorating rapidly. WSDOT considered repair and replacement.
- **Traffic volumes.** Traffic volumes exceed the design capacity of the highway during peak periods, and are continuing to grow.

- **Ecological connectivity.** The highway is the largest barrier to the movement of wildlife between protected federal lands to the north and south.

Project Proponent:

Washington State Department of Transportation

SEPA Lead Agency:

Washington State Department of Transportation
1710 South 24th Avenue, Suite 100
Yakima, Washington 98902

Responsible SEPA Official:

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NEPA Lead Agency:

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Date Document Issued:

August 29, 2008 (Notice of Availability in the Federal Register)

Document Cost and Availability:

A limited number of hard copies or DVDs of the Final EIS may be obtained free of charge by contacting:

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Paper copies of the Final EIS and Appendix A, Comments and Responses to the Draft EIS, are located at selected King County Libraries (Bellevue Regional, Issaquah, Lake Hills, Newport Way, North Bend), Ellensburg Library, Cle Elum Library, Central Washington University Library, Seattle Public Library (Downtown Branch only), and the Washington State Library.

Permits and Approvals:

Highway improvements are subject to federal, state, and local permit processes. The permits, approvals and agreements listed below may be required prior to project implementation on any particular phase of construction.

Permits, Approvals, and Agreements

Agency	Regulation	Permit or Approval
Federal		
US Fish and Wildlife Service/National Oceanic and Atmospheric Administration Fisheries	Endangered Species Act Section 7 Consultation and concurrence (impact to listed species) Magnuson-Stevens Fishery Conservation and Management Act Migratory Bird Act	Consultation and Biological Opinion
US Army Corps of Engineers	Clean Water Act (including demonstration that WSDOT has identified the least environmentally damaging practicable alternative) Section 404(b)(1) Alternatives Analysis	Section 404 Individual permit Jurisdictional Determination for Waters of the US
US Forest Service	Memoranda of Understanding between USFS, FHWA and WSDOT	Consistency determination with the USFS Forest Plan(s)
US Forest Service	Organic Act of 1897, National Forest Management Act of 1976	Access Permit(s) and Special Use Permit(s)
US Bureau of Reclamation	Work in Keechelus Lake	Crossing Permit(s) and/or Use Authorization
State		
Washington Department of Archaeology and Historic Preservation	National Historic Preservation Act Section 106 (impact on historic or cultural properties)	Consultation, Memorandum of Agreement for adverse effects between DAHP, FHWA, and WSDOT.
Washington State Parks and Recreation Commission	Land and Water Conservation Act Section 6(f) (impact on outdoor recreation properties)	Agreement for use of Crystal Springs Sno-Park
Washington State Department of Ecology	Clean Water Act Section 401	Water Quality Certification

Permits, Approvals, and Agreements

Agency	Regulation	Permit or Approval
Washington State Department of Ecology	Clean Water Act Section 402 (RCW 90.48)	National Pollutant Discharge Elimination System Permits for Construction, Sand and Gravel, and possible aquatic spraying
Washington State Department of Ecology	Shoreline Management Act (RCW 90.58)	Consider administrative appeals
Washington State Department of Ecology	Oil Pollution Prevention Program (40 CFR 112)	Spill Prevention, Control and Countermeasure Plan
Washington Department of Fish and Wildlife	Construction Projects in State Waters (RCW 77.55)	Hydraulic Project Approval
Washington Department of Natural Resources	Forest Practices Act (RCW 76.09)	Forest Practices Permit (if project would remove trees on state or private land)
Local		
Kittitas County	County Code Shoreline Management Act (RCW 90.58)	Substantial Development Permit(s) and/or exemption(s)
Kittitas County	County Code	Detour and Haul Road Agreements on county roads
Kittitas County	County Code Title 18.08	Floodplain permit
Kittitas County	County Code Title 18.20 Growth Management Act: RCW 36.70A, Critical Areas: WAC 365-190-080(5)	Growth Management Act Critical Areas Ordinance permit
Kittitas County	County Code Title 17.44.150	Noise regulations
Kittitas County	County Code Title 17	Limited Zoning review

CFR – Code of Federal Regulations

DAHP – Department of Archaeology and Historic Preservation

FHWA – Federal Highway Administration

RCW – Revised Code of Washington

USFS – US Forest Service

WAC – Washington Administrative Code

WSDOT – Washington State Department of Transportation

Summary at Beginning of Each Chapter or Major Section

- NC: Mid-Currituck FEIS
- WA: SR 520 FEIS

Techniques to note:
- brief, one-paragraph summary in italics at the beginning of each section of a chapter.

the future. The presence of a bridge in the mid portion of the sound would be unlikely to substantially alter the existing or future number of waterfowl that may use Currituck Sound because impacts to habitat would be confined to 4.8 acres of SAV habitat (including existing beds) by shading. This impact would be mitigated.

Although evidence of wildlife population declines as a result of roadway mortality has persisted for years, the long-term effects of road avoidance resulting from traffic noise have only recently been studied. Traffic noise is a potential threat to an animal's health, reproductive success, physiology, and behavior (Forman and Alexander, 1998; Radle, 2006). Road avoidance because of noise/human activity has been extensively documented for wildlife species such as black bears (Brody and Pelton, 1989), bobcats (Lovallo and Anderson, 1996), wolves (Thurber et al., 1994), and songbirds (Reijnen et al., 1995; Reijnen et al., 1996; Forman and Alexander, 1998). Some species may become habituated to noise disturbances, but many species display reduced nesting and activity near areas of traffic noise (Fernández-Juricic, 2001) and wildlife populations may become isolated as a result of restricted movement (Donaldson, 2005). For example, black bears frequently avoid habitat within 300 feet of roads (Jones, 2008). Even though road noise has a varying effect on wildlife, it seems to affect substantially avian communities that utilize sound in their basic behaviors (Coffin, 2007). Noise levels as low as those found in a library reading room (42 to 48 decibels) have been found to affect negatively some avian species (reviewed in Forman and Alexander, 1998).

A synthesis of studies on the effects of roads on wildlife found that more information is needed on the relation between road noise and wildlife (Kaseloo and Tyson, 2004). Many studies did not quantify noise levels or left out factors such as landscape variables that may have also contributed to wildlife behavior. However, after their analysis of the publications, Kaseloo and Tyson (2004) concluded that traffic noise does have an effect on wildlife. The effect is variable depending on the species and other factors such as surrounding landscape and type of disturbance. It is unclear in many of the studies if noise is a significant effect, predictor variable, or just a contributing factor. Traffic noise has been shown to interrupt aestivation in spadefoot toads and some waterfowl species such as wood ducks did not become habituated to noise but other species such as black ducks, became habituated to noise (Kaseloo and Tyson, 2004).

3.3.4 How would aquatic wildlife be affected?

Fill, pile placement, shading, and clearing would result directly in the permanent loss or alteration of aquatic habitat and the wildlife that live there. Construction operations could result in temporary impacts. Aquatic impacts would be the greatest with MCB2, MCB4, and the Preferred Alternative because they include a Mid-Currituck Bridge.

3.3.4.1 Aquatic Wildlife

Macroinvertebrate populations of Currituck Sound are composed primarily of burrowing amphipods near the shore, but there is a more diverse population in deeper

center turn lane of US 158 for hurricane evacuation) would result in the smallest increase. The Preferred Alternative, MCB4, and ER2 with a third outbound lane on US 158 would have similar increases in impervious surface area with amounts between MCB2 and ER2 (with reversing the center turn lane). The difference between mainland approach road Option A (included in the Preferred Alternative) and Option B in terms of impervious surface would be minimal (0.4 acre). For the road widening portions of the detailed study alternatives, including the Preferred Alternative, infiltration strips and ditches that would transport water to dry infiltration basins would be implemented to treat highway runoff along NC 12. Along US 158, ditches would be used to transport water to existing outfalls.

The stormwater management plan proposed for the Preferred Alternative is described in Section 2.1.7. NCTA would comply with NC Session Law 2008-211 (An Act to Provide for Improvements in the Management of Stormwater in the Coastal Counties in Order to Protect Water Quality) to the maximum extent practicable for the additional impervious surface area created by this project. A final stormwater management plan for minimizing the potential impact of project pollutants would be developed in association with NCDENR-DWQ and other state and federal environmental resource and regulatory agencies during final design of the alternative selected for implementation and in the process of obtaining related permits.

Additional impacts to water quality could occur from single pollution events such as hazardous spill incidents on proposed bridge structures or widened roadways. Impacts to salinity, water supply and wastewater treatment should not result from any of the detailed study alternatives, including the Preferred Alternative.

3.3.2 How would biotic resources be affected?

The detailed study alternatives, including the Preferred Alternative, would affect a variety of natural and naturalized biotic communities. The impact on natural upland communities would be least with the Preferred Alternative. The fill impact on wetlands would be similar with all of the detailed study alternatives except MCB2/B and MCB4/B, which would have the highest wetland fill impact. A Mid-Currituck Bridge would involve shading and clearing impacts in addition to fill impacts. A Mid-Currituck Bridge would affect aquatic bottom and SAV habitat and potential habitat. All of the detailed study alternatives except the Preferred Alternative would cause a minor amount of permanent shading impacts to streams in the project area, but there would be no fill placed in streams. In general, temporary impacts to biotic communities would be greatest with ER2.

3.3.2.1 Biotic Community Types

Twenty-one biotic community types occur within the project area. Of these 21 communities, seven communities are the result of direct human disturbance, including: man-dominated land, agricultural land, pine forest, shrub/scrub, wetland man-dominated land, wetland pine forest, and wetland shrub/scrub. Fourteen communities can be considered to be relatively natural systems: mixed-pine/hardwood forest,

Techniques to note:
- brief, one-paragraph summary in italics at the beginning of each chapter.



Chapter 7: Cumulative Effects

This chapter describes cumulative effects expected to be associated with the proposed SR 520, I-5 to Medina: Bridge Replacement and HOV Project. The Final Indirect and Cumulative Effects Discipline Report (included in Attachment 7) details analytical methods and other past, present, and reasonably foreseeable future actions that could add to or interact with the direct and indirect effects of the project (discussed in Chapters 5 and 6) to produce cumulative effects. WSDOT does not mitigate cumulative effects because it does not have jurisdiction over the many non-WSDOT projects that contribute to them (WSDOT et al. 2008). However, WSDOT is required to disclose cumulative effects and to suggest practical mitigation options that could be taken by the responsible parties. Consequently, this chapter suggests ways that public agencies and private developers beyond WSDOT's jurisdictional responsibilities could mitigate cumulative effects. For more information, see the Final Indirect and Cumulative Effects Discipline Report.

7.1 What are cumulative effects?

Cumulative effects (also called cumulative impacts) are defined as follows:

... the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or nonfederal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. (40 Code of Federal Regulations [CFR] 1508.7)

A cumulative effect is the project's direct and indirect effects on a particular resource combined with the past, present, and future effects of other human activities on that same resource. The result is the expected future condition of the resource when all of the external factors known or likely to affect it are taken into account.