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459.01 Introduction

Most people primarily experience their environment through visual cues, so visual perception is an important topic when analyzing environmental quality. Highway projects can impact visual quality through changes to the relationship between people and their surrounding physical environment. Public concern over adverse visual impacts could be a major source of project opposition, so evaluating and openly communicating changes with the affected population is very important to a project's success.

The location, design, and maintenance of highway, ferry, rail, and aviation facilities may adversely or positively affect the visual features of the landscape that are experienced by people. This chapter focuses on highway projects, but the same, or similar, requirements apply to other transportation modes and facilities (see [Section 459.02](#)).

Because of the public nature and visual importance of transportation projects, both negative and positive visual impacts must be adequately assessed and considered during project development. Understanding the sensitivity of viewer groups is as important as understanding the physical environment and the proposed project actions.

In discussing and reviewing the visual impacts of a highway project, the Landscape Architect should consider both the view *from* the road and the view *toward* the road. Research has shown that the view from the road is the basis for much of what people know about the everyday environment and their mental image of their surroundings. Visual cues can also contribute to traffic calming and stress reduction for motorists. However, the project should balance the desire for pleasing vistas for travelers with protecting views from surrounding homes or vantage points. The designer must carefully plan to ensure the facility blends into the community and its environment. (For related information on historic and cultural resources, (see [Chapter 456](#)).

459.02 Applicable statutes, regulations, executive orders, and agreements

459.02(1) Federal

- **National Environmental Policy Act** – The National Environmental Policy Act (NEPA), [42 USC 4321](#), Section 101(b)(2) states that it is the “continuous responsibility” of the federal government to “use all practicable means” to “assure for all Americans safe, healthful, productive, and esthetically and culturally pleasing surroundings.” For details on NEPA procedures (see Chapters [400](#) and [412](#)).

Federal implementing regulations are at [23 CFR 771](#) (FHWA) and [40 CFR 1500-1508](#). According to the Council on Environmental Quality implementing regulations, environmental analysis is to consider impacts on urban quality, historic and cultural resources, and the design of the built environment” ([Section 1502.6](#)). Agencies shall “identify methods and procedures . . . to insure that presently unquantified environmental amenities and values may be given appropriate consideration” ([Section 1507.2](#)).

- **Highway Beautification Act** – The Highway Beautification Act of 1965 was enacted to provide effective control of outdoor advertising and junkyards, protect public investment, promote the safety and recreational value of public travel, and preserve natural beauty, and provide landscapes and roadside development reasonably necessary to accommodate the traveling public. Implementing procedures are set forth in [23 CFR 750](#), [751](#), and [752](#).
- **National Historic Preservation Act** – Implementing regulations for Section 106 of the National Historic Preservation Act of 1966 (see [Section 456.02](#)), adopted in 1976, define criteria of adverse effect ([36 CFR 800.5](#)) to include the “introduction of visual, atmospheric, or audible elements that diminish the integrity of the property’s significant historic features.”
- **DOT Act, Section 4(f)** – This act declares a national policy to make a special effort to preserve the natural beauty of the countryside and public park and recreation sites, wildlife and waterfowl refuges, and historic sites.” For details on Section 4(f) see Chapters [400](#), [455](#), and [457](#).
- **Wild and Scenic Rivers Act** – This act, as amended, directs that “each component of the national wild and scenic rivers system shall be administered in such manner as to protect and enhance the values which caused it to be included, without, insofar as it is consistent therewith, limiting other uses that do not substantially interfere with public use and enjoyment of these values. In such administration, primary emphasis shall be given to protecting its esthetic, scenic, historic, archaeological, and scientific features.” For information on wild and scenic rivers in Washington (see [Chapter 455](#)).

459.02(2) State

- **State Environmental Policy Act** – The State Environmental Policy Act (SEPA), requires that all major actions sponsored, funded, permitted, or approved by state and/or local agencies undergo planning to ensure environmental considerations such as impacts related to aesthetics and visual quality are given due weight in decision making. State implementing regulations are in [WAC 197-11](#) and [WAC 468-12](#).
- **Highway Beautification Act** – Washington’s Highway Beautification Act ([RCW 47.40.010](#)), adopted in 1961, declared improvement and beautification of any state highway right of way to be a “proper highway purpose.” The act specifically mentions the following improvements: “planting and cultivating of any shrubs, trees, hedges or other domestic or native ornamental growth; the improvement of roadside facilities and viewpoints; and the correction of unsightly conditions.”

- **Open Space Land Preservation** – In [RCW 84.34](#), the legislature declared that “it is in the best interest of the state to maintain, preserve, conserve and otherwise continue in existence adequate open space lands for the production of food, fiber and forest crops, and to assure the use and enjoyment of natural resources and scenic beauty for the economic and social well-being of the state and its citizens.” Open space was defined as including any land area that would preserve visual quality along highway, road, and street corridors or scenic vistas. One of the criteria to be used in determining open space classification for current use or conservation futures is whether granting this classification would preserve visual quality along highway, road, and street corridors or scenic vistas ([RCW 84.34.037](#)).

459.03 Considerations during project development

A Visual Impact Assessment (VIA) is intended to provide decision makers with information on both the positive and negative visual quality impacts that may result from a project. The assessment, along with mitigation recommendations, provides designers with information on minimizing negative impacts on visual quality, and concepts to enhance existing visual quality and community aesthetics within the scope of the project.

459.03(1) Planning

Complex or controversial projects that may trigger the need for a more thorough evaluation should consider the public involvement approach to help define visual quality within the area of visual effect. The public involvement approach is explained in Section 5.4 Visual Quality, [Guidelines for the Visual Impact Assessment of Highway Projects](#) (FHWA, 2015). Information about visual preferences gathered from public workshops will provide the VIA author important information to better understand what the public values visually within the project corridor.

459.03(2) Scoping

A project’s scoping document defines the geographic extent of the project. It also establishes the topics explored in the project’s environmental review process. Preparers should participate in the scoping process, both to inform the scope of the project and to better understand the scope of the anticipated VIA and use the findings of the scoping document and any public scoping comments for an initial understanding of anticipated impacts on visual resources or viewers. Public scoping comments may identify visual resources that neighbors consider essential to the visual identity of their community, or it may identify visual resources that travelers consider essential to their traveling experience.

459.03(3) Design

Conceptual design studies and preliminary design plans illustrate the proposed project and help to identify potential impacts to visual resources and viewers. The level of detail available during the early stages of the design will vary and can include the area of potential effect to alternative alignments, the number of lanes, the location of intersections and interchanges, and the potential for bridges, retaining walls, and other structures. In addition to providing a rough understanding of the visual character of the proposed project, early studies and plans often include features proposed for demolition, vegetation removal limits, existing and proposed grading, and other proposed project features. Authors should use these early studies and plans to understand the extent to which existing features would be removed and where new or modified landforms, pavement, structures, or utilities would occur. Sometimes

these early studies and plans even include proposed aesthetic design treatments, such as ornamental lighting or architectural enhancements, included in the project to mitigate adverse impacts.

459.03(4) Construction

Construction timing (time of year, duration, phasing, and nighttime construction activities), methods of construction, equipment needed, even erosion control or re-vegetation measures, if known, may be useful background information for the VIA author.

After Design, Construction carries out the mitigation strategies that address visual impacts resulting from a project. It is important to ensure that the Project delivers these mitigation strategies and carefully manage any proposed changes that come via Design-Bid-Build or Design-Build Contracts. Design Build is a method of project delivery in which WSDOT executes a single contract with one entity (the Design-Builder) for design and construction services to provide a finished product. Design-Bid-Build is the traditional form of project delivery in which WSDOT provides the complete design documents and the Contractor builds the design after the bidding process. Changes during construction for Design-Bid-Build are in the form of change orders where modifications to the agreed upon work is documented. Design changes may occur during the design build process as well. It is important to communicate what these changes are and how these changes may affect what was originally assessed in the VIA. For example, when an Alternative Technical Concept is proposed, decision makers should consider the visual aspects of the change and understand how the visible change(s) would affect sensitive viewer groups or views toward sensitive resources.

459.03(5) Maintenance and Operations

During the preliminary design phase of a project, many design features that will affect visual resources, viewers, and visual quality are being determined. Mitigation measures and opportunities for enhancement are also likely to have been introduced. Visual impacts caused by operations and maintenance activities that will affect the project design, mitigation, or enhancement elements will need to be assessed to confirm that these design features, which may be critical to the public's acceptance of a project, remain effective indefinitely. Operational features that may affect visual quality include functional and ornamental lighting in the corridor, vehicular headlights, changeable message signs, vegetation removal, and glare from reflective materials. Maintenance issues typically are related to use of nighttime lights to perform roadwork on the facility.

459.04 Analysis and documentation requirements

This section describes analysis and documentation requirements based on regulatory requirements. Determine level of detail based on complexity/size of project, expected severity of impacts, and potential for public controversy.

459.04(1) Analysis and documentation for NEPA

WSDOT uses Federal Highway Administration (FHWA) VIA guidance. For more information on VIA methodology and procedures, see the Environmental disciplines web page for [Visual & RCAs](#). Visual assessments must be sized appropriately to anticipated project impacts (see [Chapter 300](#) for project classifications). The following are guidelines for the level of analysis necessary:

- For projects that are **Categorically Excluded (CE)**, the visual analysis and minor documentation is done within the Environmental Classification Summary (ECS). It is assumed that, when projects follow WSDOT roadside policy and environmental permit conditions, visual impacts will be minimized and mitigated to an acceptable level.
- For projects with **Documented Categorical Exclusion (DCE)**, the visual analysis should be abbreviated but a discussion of the visual aspects should be adequately covered in a memo, to be attached to the Environmental Review Summary (ERS) or the Environmental Classification Summary (ECS).
- **Exceptions requiring a VIA that might not otherwise be indicated by lower level permitting** – Projects where sensitive viewers will experience noticeable changes but which only require low-level documentation, will benefit from a more in-depth review of visual impacts. Issues such as removing screening vegetation or providing more visibility to lighting or the highway fall into this category. Other aspects that may trigger the need for a more thorough evaluation include projects:
 - On a State or National Scenic Byway or an All-American Road
 - Along a designated Wild and Scenic River or within a National Scenic Area
 - On Tribal, U.S. Forest Service, or National Park land
 - Adjacent to a public park, recreation area, wildlife and waterfowl refuge, and public or private historical sites (Section 4(f) or 6(f) area – any visual analysis would be in coordination with the Section 4(f) or Section 6(f) technical study)
 - In a rural community that values its view of stars and the night sky if new or brighter lighting is being proposed

People viewing from these locations can be especially sensitive to visual changes.

Documentation must include an analysis of viewer sensitivity and potential impacts and may be in the form of a memo or short report depending on the degree of impacts found in the analysis.

For an **Environmental Impact Statement (EIS)**, a VIA must be completed where the project changes the roadside or facility character. These are typically the projects with large areas of cut or fill, new or larger structures, or new or greatly expanded alignments. Project examples include:

- Changes in road alignment
- Expansion of the roadway and/or addition of major structures
- New interchanges
- Changes to historic buildings or other structures
- Ferry terminal improvements
- Increased lighting
- Removal of screening or large areas of vegetation
- Substantial grade changes

The VIA shall follow the methodology either in *the Visual Impact Assessment for Highways Projects* (FHWA Office of Environmental Policy, 1988) or *Guidelines for the Visual Impact Assessment of Highway Projects* (FHWA, 2015). These two guidance documents evaluate similar aspects of visual quality but use slightly different terms. The 1988 document and the associated training manual provide more technical clarity for the user as to how to look at visual impacts and describe them. The 2015 document places more emphasis on collaborative approaches to find out the preferences and sensitivity of viewers and incorporate that into

the assessment. This emphasis on capturing what the community wants as an aesthetic environment provides additional support on statements that a project would have adverse, neutral or beneficial impacts.

- During project development, visual impacts, including aesthetics, light, glare, and night sky impacts, shall be considered for all project alternatives. The views from the road or facility and views toward the road or facility that will be in existence during the construction phase and the operational phase must be evaluated.
- The VIA is documented within the Environmental Review process, the EA, or the EIS after a detailed analysis of potential viewers, their sensitivities and the project area. A photographic log of the affected viewshed is part of that documentation. The documentation must include an analysis of all representative views from and toward the facility throughout the project length.
- The VIA, using the newer guidance would engage the public to understand in depth the expected changes to the visual environment.

The number of views needed depends upon the geographic extent of the project; setting in the landscape; the extent of change or impact to resources expected in a particular location; the effects on the identified viewer groups; and the viewers' sensitivity to changes in the view. If there is more than one landscape unit within the project limits, analyze a minimum of one viewpoint per landscape unit as viewed from the project and as viewed towards the project.

Project alternatives will need to be sufficiently developed prior to completing the analysis in order to completely describe the changes each alternative will have on the visual environment. Describe and analyze any large cuts or fills, walls, bridges, changes to character due to extensive vegetation removal or addition of structures, and horizontal and vertical alignments with respect to their influence on views toward or from the project. When projects are completed by Design-Build methods, visual outcomes can be somewhat uncertain. The use of design guidelines can reduce uncertainty of the final project visual outcomes. The VIA should include a discussion of the flexibility in outcomes.

459.04(2) Non Road Project Requirements

Environmental documentation for aviation, ferry, or rail projects must address aesthetics and visual issues during the environmental review process, including specific details about lighting; height, size, and location of structures; and alignment and use of the facility that might impact viewers.

Federal agencies follow different methodologies, but all include the requirement for a visual assessment. For example, the Federal Rail Administration, The Federal Aviation Administration, the U.S. Forest Service, and the Bureau of Land Management have their own methodologies, which vary slightly from the FHWA methodology. Projects must determine and follow the appropriate methodology for their project type.

Non-road projects often affect the visual environment differently than highway projects. Analyze the temporary or permanent nature of the visual impacts, such as the presence of flights overhead at intervals throughout the day, addition of beacon lights or ferries docked within a terminal periodically.

459.05 External engagement

Refer to Section 3.2.1 Public and Private Interests of [Guidelines for the Visual Impact Assessment of Highway Projects \(FHWA HEP 15-029\)](#) to learn more about the importance of external engagement to capture both public and private interests during visual impact assessment.

459.06 Internal roles and responsibilities

All visual analyses are to be performed and written by, or coordinated through, the Region Landscape Architect, or through the Headquarters (HQ) Roadside and Site Development Section for regions without a Landscape Architect.

459.07 Applicable permits and approval process

Although there are no permits or approvals associated with Visual Impacts, the VIA is part of a larger environmental review process, which in turn is part of a still larger highway project development process. As part of this process, the VIA is intended to provide decision makers with information on the adverse and beneficial impacts on visual quality that can influence the selection of a preferred project alternative. The VIA provides designers with the information they need to most effectively mitigate adverse impacts on visual quality while implementing concepts to enhance existing visual quality.

459.08 Mitigation

Provide mitigation measures and opportunities to avoid or minimize visual impacts in the report. Assume the baseline of [Context Sensitive Design](#) principles during design, and restoration according to the [Roadside Policy Manual](#) M 3110.

The WSDOT roadside policy is found in the [Roadside Policy Manual](#) M 3110. It covers the requirements for roadside restoration, which is the baseline that can be assumed for addressing a project's visual impacts within the roadside.

Mitigation for visual impacts may also be in the form of public art as identified in the NEPA/SEPA process and through good faith negotiations with the affected community. See [Chapter 950](#) of the [Design Manual](#) M 22-01 for guidance regarding public art and community identified mitigation on WSDOT facilities and within its rights of way.

459.09 Abbreviations and acronyms

Abbreviations and acronyms used in this chapter are listed below.

CE	Categorically Excluded
DCE	Documented Categorical Exclusion
EA	Environmental Assessment
ECS	Environmental Classification Summary
EIS	Environmental Impact Statement
ERS	Environmental Review Summary
FHWA	Federal Highway Administration
NEPA	National Environmental Policy Act
RCW	Revised Code of Washington
SEPA	State Environmental Policy Act
VIA	Visual Impact Assessment

459.10 Glossary

Landscape Unit – An area or volume of distinct landscape character that forms a spatially enclosed unit at ground level, differentiated from other areas by its slope and its pattern of land cover. A unique segment of the landscape. Not all projects will have multiple landscape units.

Scenic Byway – Public road having special scenic, historic, recreational, cultural, archaeological, and/or natural qualities that have been recognized as such through legislation or some other official declaration for its scenic, historic, recreational, cultural, archaeological, or natural qualities. Washington State Scenic Byways are designated in [RCW 47.39.020](#).

Viewer Group – Classes of viewers differentiated by their activity, awareness, and values.

Viewer Sensitivity – The viewer's variable receptivity to the elements within the environment they are viewing. Sensitivity is affected by viewer activity and awareness, exposure to the project, and cultural and community values. Indication of viewer sensitivity can be found in local zoning codes, planning documents, laws, and advocacy groups such as Scenic Byway organizations.

Viewshed – All the surface areas visible from an observer's viewpoint.

Visual Function – The component of a transportation project that is designed and experienced primarily from a visual perspective; includes positive guidance and navigation, distraction screening, corridor continuity, roadway and adjacent property buffering, and scenic view preservation.

Visual Quality – Character of the landscape, which generally gives visual value to a setting.