I-205 Toll Project

MEMORANDUM

Date	February 11, 2021
To	Lucinda Broussard, Mandy Putney, Magnus Bernhardt, Ben White, and Michael Holthoff (ODOT)
From	Ryan Weston, WSP
Subject	Visual Quality Methodology Memorandum – Draft #4
CC	

INTRODUCTION

This memorandum describes the methods that will be used in the I-205 Toll Project (Project) Environmental Assessment (EA) analysis to evaluate visual quality impacts of the Project alternatives. The analysis and results will be documented in a technical memorandum and summarized in the EA that will be developed to comply with federal guidelines and regulations, including the National Environmental Policy Act (NEPA) and local and state policies, standards, and regulations.

The visual quality analysis will evaluate impacts from the construction, operations, and maintenance of the Project and will identify mitigation measures as needed. Specifically, this analysis will focus on the visual impacts associated with the proposed toll gantries as they would be the main tolling improvements likely to result in changes to visual resources.

LEGAL REGULATIONS AND STANDARDS

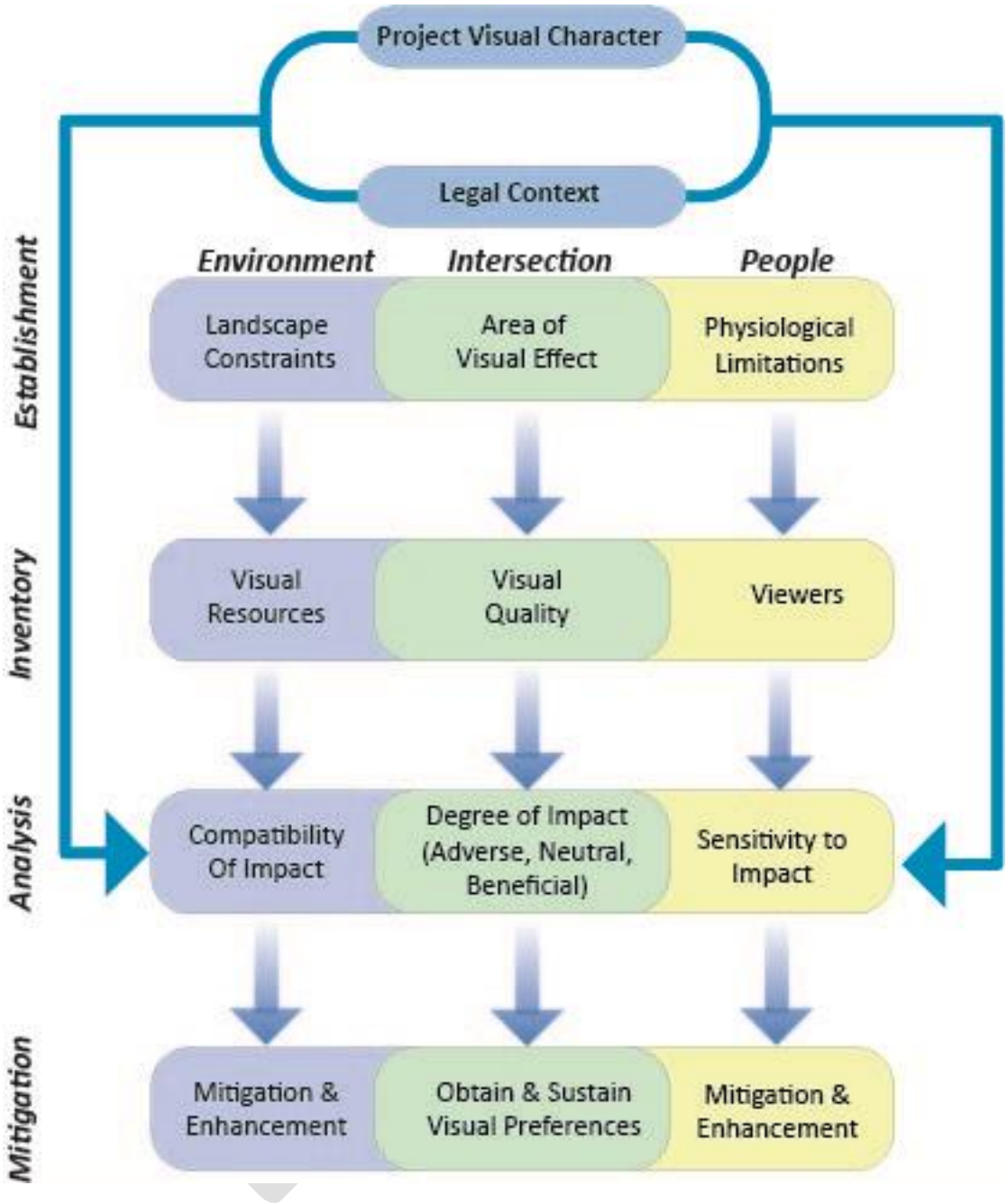
Laws, Plans, Policies, Regulations, and Guidance

The following is a list of federal, state, and local laws, regulations, plans, policies, and guidance that guide or inform the assessment of visual quality.

Federal

The Project will use FHWA's Guidelines for the Visual Impact Assessment of Highway Projects (FHWA 2015) hereafter referred to as the "VIA guidelines." The VIA guidelines are a widely accepted approach to analyzing visual impacts, particularly for transportation projects. The VIA guidelines use changes in visual character and viewer group sensitivity to assess changes in visual quality. The VIA process is performed in four phases: Establishment, Inventory, Analysis, and Mitigation in which visual effects occur as a result of an interaction between viewers and the environment that surrounds them. These guidelines provide a framework of phases for the visual impact assessment process, as shown in Figure 1.

Figure 1. Visual Impact Assessment Process



The VIA guidelines provide direction on determining the appropriate level of assessment for projects with visual impacts; from no analysis for projects with no noticeable physical changes to expanded VIAs for projects with highly adverse physical impacts. This Project is likely to have the following characteristics:

- Project components are expected to result in negligible changes to the physical characteristics of the existing environment within the I-205 corridor.

- Project components would be expected to be compatible with the existing visual character of the I-205 corridor.
- Conventional mitigation, such as architectural treatments, could be potentially used to address visual changes.
- Because Project components are expected to create negligible changes to the existing environment, direct and indirect impacts from the Project to visual resources are anticipated to be minimal, so the Project is not anticipated to contribute to adverse cumulative impacts to visual resources.
- Project components are expected to be compatible with local aesthetic guidelines and permit requirements.

A completed VIA Scoping Questionnaire is included as Attachment A. The Project would likely pose minor physical changes with little to no adverse physical impacts; therefore, the Project would result in an Abbreviated VIA that briefly describes project features, impacts, and mitigation requirements.

State

The following is the state regulatory context for this abbreviated VIA:

- Oregon Transportation Plan
- Oregon Statewide Planning Goal 5: Natural Resources, Scenic and Historic Areas, and Open Spaces

Regional

The following is the regional regulatory context for this abbreviated VIA:

- Clackamas County Comprehensive Plan (updated 2001)

Local

The following is the local regulatory context for this abbreviated VIA:

- City of West Linn Comprehensive Plan (updated 2017)
- City of Gladstone Comprehensive Plan (adopted 2006)
- City of Oregon City Comprehensive Plan (adopted 2004)

ESTABLISHMENT PHASE

The primary purpose of the establishment phase is to build an understanding of the visual character of the project and to define the Area of Visual Effect (AVE; see next section). This phase starts by understanding the Project's visual character and reviewing planning documents to determine if the community has any defined visual preferences. Federal, state, and local planning documents and engineering plans will be reviewed to determine guidelines and establish community visual preferences.

Published Sources and Databases

Data used in the 2018 Documented Categorical Exclusion (DCE) prepared for the I-205 Improvements Project will be reviewed to confirm its relevancy and applicability to this study. The following is a list of the data that will be used to determine and describe visual resources/existing conditions for the Visual Quality Technical Memorandum:

- Information obtained from Google and Bing maps, Google and Bing street views, satellite mapping, transportation data, CAD and GIS software, and analysis from other tasks
- Photography to capture existing landscape characteristics and document key views
- Plan and profile drawings of alternatives (vertical and horizontal relationships) to determine location and relationship to visual resources
- Land-use policies, regulations, maps, and reports related to scenic resources for Clackamas County and the Cities of Oregon City, West Linn, and Gladstone; these materials will help to identify neighborhood goals and the range of existing recommendations or requirements needed to maintain or enhance visual quality.

Contacts and Coordination

If additional information is needed on regulations and requirements for visual resources, the following agencies may be contacted:

- Metro Planning and Development
- Clackamas County
- City of Oregon City
- City of West Linn
- City of Gladstone

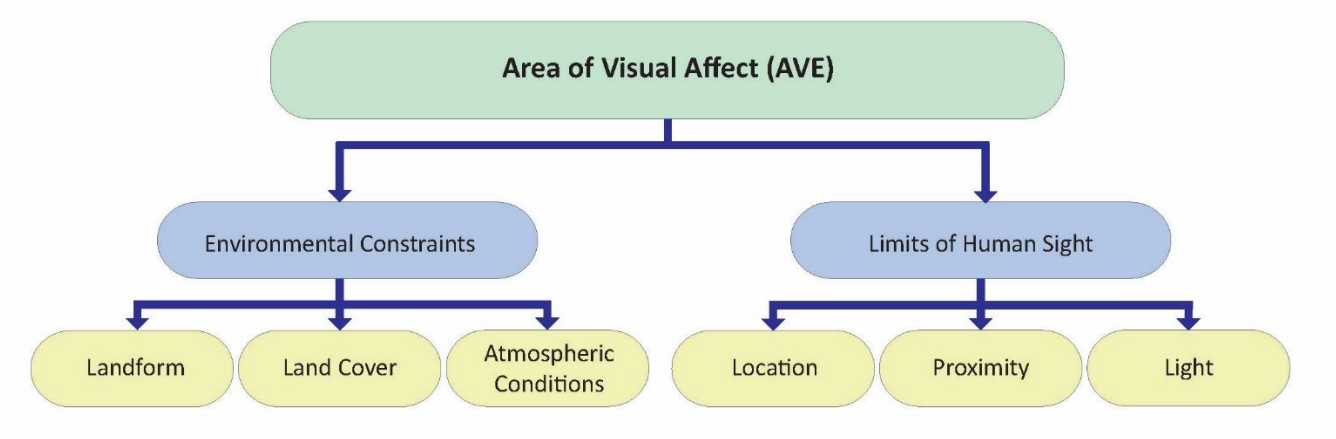
Visual Character

Using the published sources and databases mentioned above, supplemented by discussions with contacts the report will develop a general idea of the primary visual attributes and character of the project. Attributes of the basic nature of the proposed projects physical environment, highway, major structures, and other associated design elements will be documented. This character will be used to assess impacts in the analysis phase of the VIA to assess

AREA OF VISUAL EFFECT

The project's study area, or what the FHWA terms as the Area of Visual Effect (AVE), is the area people can see in the landscape. It is determined by the physical constraints of the environment and the physiological limits of human sight. These concepts are described below and illustrated in the diagram in Figure 2.

Figure 2. Components of the Resource Study Area (AVE)



Physical Constraints

The visual environment is physically constrained by landform, land cover, and atmospheric conditions.

- Landform: Landform is the topographic features of the project. Mountains, hills, valleys, and plains provide visual perspective for some viewers and obscure views for other viewers. It is the visual element least likely to change with the project.
- Land cover: Land cover is vegetation and human-made structures that exist on the landform. Land cover often determines the physical constraints of the visual environment. It can either obscure views (fences, walls, and trees) or enhance them (decks or viewing platforms).
- Atmospheric conditions: Atmospheric conditions can obscure or reduce project visibility. Atmospheric conditions typical of the Pacific Northwest include precipitation, low clouds, fog, filtered light, and haze (dust or smoke), which can obscure visual elements; however, atmospheric conditions generally affect distant objects the most.

Physiological Constraints

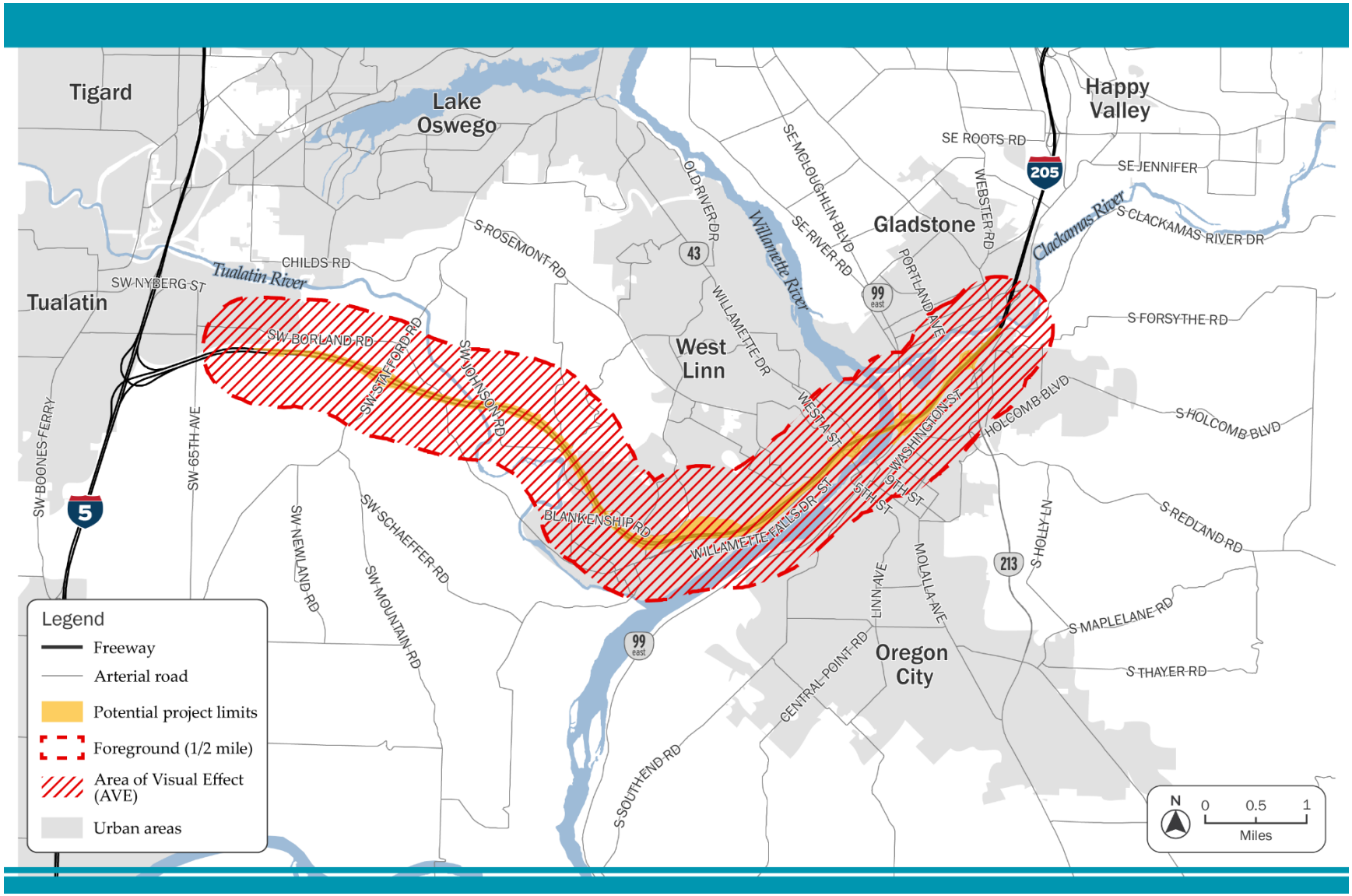
Viewers are constrained by the physical elements around them as discussed above, but the area is also constrained by the limits of human sight. For this abbreviated VIA, views will be evaluated for daytime light conditions around project alternatives. Distance (or proximity) also defines what a viewer can see. In general, there are three distance zones:

- Foreground: Comprises views from 0 miles (project amenities) to one-half mile. Changes to the visual environment are mostly discernible in this zone. Foreground views tend to be the most affected by changes in visual quality, and views are generally not limited by atmospheric conditions. Views of the project will primarily consist of views from the foreground distance zone. Specific foreground views will be identified in the establishment phase.

- Middle-ground: Comprises views from 0.5 mile to 3.0 miles. In the middle ground, changes in visual details may be discernible but most views are generally restricted by landform (hills and mountains), land cover (buildings, structures, fences, signage, and other physical objects), and existing vegetation that limits the line of sight for viewers. Some views of the project may be available from elevated locations but may be obscured or restricted by atmospheric conditions.
- Background: Comprises views beyond 3.0 miles. Project details and changes to visual quality are generally difficult to discernible from this distance, and atmospheric conditions can easily affect or obscure views.

Roadway signage, traffic movement and congestion, lane configuration, and other improvements associated with the project may constitute visual change; however, they would be viewed within the existing interstate freeway context and would be similar to existing signs and are not anticipated to change the overall viewing environment; therefore, the AVE for the Project would be defined as the area within which viewers would likely have clear views of the Project elements (i.e., toll gantries) and would potentially be close enough to visually distinguish Project elements such as materials types, colors and shapes, architectural components such as light fixtures, and signs. Considering the physical and physiological constraints of the surrounding landform and land cover, no views of Project alternatives are anticipated from the background distance zone. Views based on landform within the middle-ground distance zone may be available in some locations; however, land cover such as vegetation, buildings, fences, walls, signs, and other structures would likely obscure most views where available.

Figure 3. Preliminary Area of Visual Effect (AVE) and Foreground Distance Zone

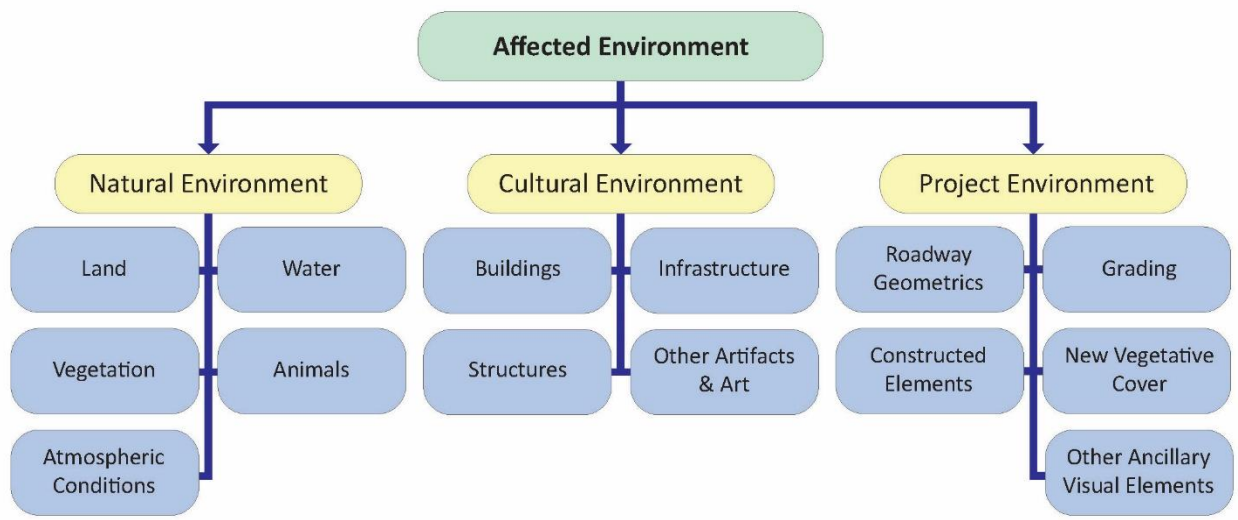


INVENTORY PHASE

The purpose of the inventory phase is to examine what people like or dislike seeing in the AVE. Visual quality is a relationship between viewers and their environment. To carry out this phase, preparers will first identify the components and visual character of the AVE through review of planning documents, an electronic desktop review (Google Earth, Google Street View, ArcView GIS, and other digital programs) and existing conditions site photos. This review will help to establish the natural, cultural and project environments, as shown in Figure 4.

- **Natural**: Land, water, vegetation, animals, and atmospheric conditions (devoid of build environment) determine the natural environments. Viewers evaluate if the environment is harmonious or inharmonious.
- **Cultural**: Buildings, infrastructure, structures, artifacts, and art determines cultural environments. Viewers evaluate if the environment is orderly or disorderly.
- **Project**: Constructed elements, highway geometrics, grading, vegetation, and ancillary visual elements associated with the project development. Viewers evaluate if the environment is coherent or incoherent.

Figure 4. Components of the Affected Environment



Affected Population

The inventory phase will identify the composition of the affected population and then consider the relationship between viewers in the affected population. There are two distinct groups of viewers within the Project's AVE: neighbors and travelers. Within the neighbor viewer group, potential types of neighbors may include residential neighbors, recreational neighbors, institutional neighbors, civic neighbors, retail neighbors, commercial neighbors, and industrial neighbors. Within the traveler viewer group, the potential types of travelers may include commuting travelers, touring travelers, and shipping travelers. Travelers may also be subdivided by mode of travel (pedestrian, bicycling, and motoring).

The tasks described in Chapter 5 of FHWA's guidance, summarized below, will be completed to support an abbreviated VIA:

- Inventory the natural, cultural, and project environments and the visual character of the AVE.
- Perform site and context analysis studies of existing baseline conditions at toll gantries relative to the urban public realm including visual resources (immediate and distant), multimodal transportation access, and public open spaces both publicly and privately owned.
- Describe and document the neighbors' and travelers' views in the AVE that the Project would affect
- Define viewer preferences, or what people like and dislike, about the visual character of the AVE by reviewing visual preferences and scenic goals and objectives in planning documents or through querying visual preferences during public engagement activities and online surveys.
- Establish key views for each project alternative through collaboration with ODOT and local agencies.

Finally, during the inventory phase, the existing visual quality of the AVE will be defined. FHWA considers visual quality to be a result of the interactive experience between viewers and their environment. Standard viewer preferences of the project's viewer groups will be identified, and the existing visual quality (considering natural harmony, cultural order, and project coherence) will be synthesized to describe the landscape composition and vividness of the AVE.

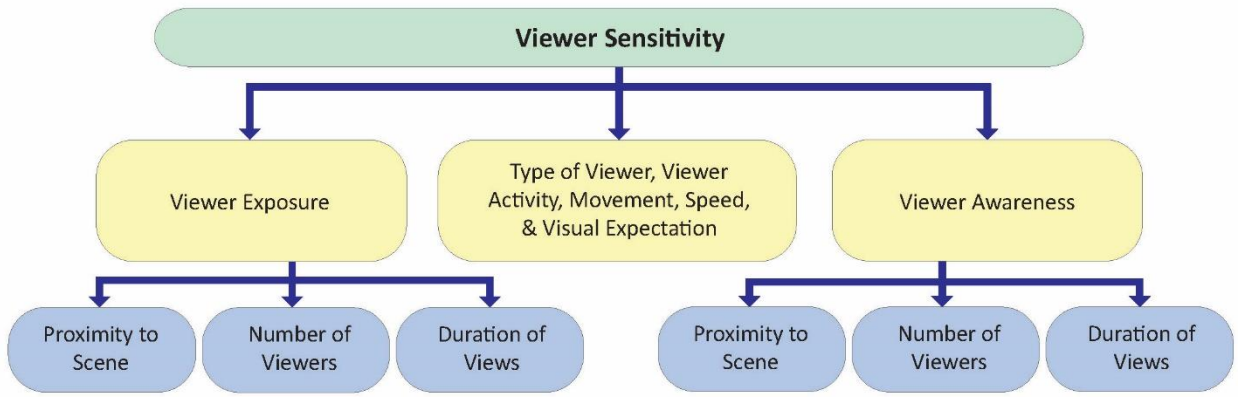
ANALYSIS PHASE

The purpose of the VIA is to provide information to the public, regulators, designers, and decisionmakers of the visual consequences of the proposed action. (FHWA 2015) The purpose of the analysis phase is to assess how changes to the environment associated with the proposed project impact on visual quality and how compatible those changes are with the existing visual character of the AVE. The impact will be identified by the following:

- **Compatibility**: The compatibility will be defined as the ability of the environment to absorb the resulting visual character and will be considered either compatible or incompatible.
- **Sensitivity**: The sensitivity of viewers to the impacts is the ability to see and care about changes in the visual environment. Sensitivity will be dictated by viewer Exposure (proximity, extent, duration), Awareness (attention, focus, protection), and Movement (dynamic views), as identified in Figure 5. Viewers will be categorized as either sensitive or insensitive.

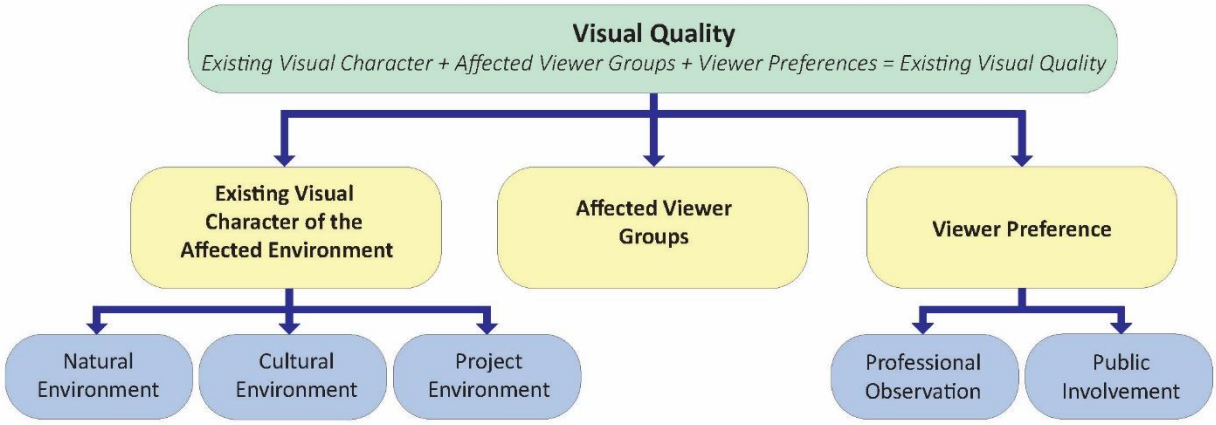
- **Visual Impacts**: The visual impacts will be defined as beneficial, adverse, or neutral to visual quality to the natural, cultural, and project environments.

Figure 5. Components of Viewer Sensitivity



The resulting visual quality will be evaluated on the degree of impacts based on viewer sensitivity. The visual quality will be an adverse, beneficial, or neutral effect on the natural, cultural, and project environments, as outlined in Figure 6. Narratives, tables, and photographs will be used to document and illustrate the visual quality analysis of each alternative.

Figure 6. Components of the Visual Quality Analysis



MITIGATION PHASE

Mitigation is the final phase of the VIA that identifies opportunities to reduce the overall impact of the Project through avoidance, minimization, rectification, reduction, or compensation. Mitigation may not fully eliminate adverse impacts but may serve to lessen the overall effects or may even help to create beneficial impacts. If there are impacts to visual quality that result from the Project, ODOT would coordinate with local agencies to identify appropriate mitigation measures, consistent with their plans and regulations.

PERFORMANCE MEASURES

1 presents a preliminary list of performance measures identified to evaluate how the alternatives compare in terms of impacts and benefits to visual quality.

Table 1. Visual Quality Performance Measures

Performance Measure	Tool and/or Data Source used for Assessment of Measure
Change in visual quality resulting from installation of toll gantries	Visual quality will be evaluated by comparing proposed project elements to existing visual conditions and documenting how visual impacts would affect viewers. Visual impacts will be based on data and process provided in the FHWA Guidelines for visual impact assessment.

Additional performance measures may be identified during the course of analysis.

REFERENCES

City of Gladstone. 2006. City of Gladstone Comprehensive Plan. https://www.ci.gladstone.or.us/community/page/comprehensive-plan Accessed May 13, 2020.

City of Oregon City. 2004. City of Oregon City Comprehensive Plan. https://www.orcity.org/planning/comprehensive-plan Accessed May 13, 2020.

City of West Linn. 2015. City of West Linn Comprehensive Plan. https://westlinnoregon.gov/planning/comprehensive-plan-and-neighborhood-plans Accessed May 13, 2020.

Clackamas County. 2001. Clackamas County Comprehensive Plan. https://www.clackamas.us/planning/comprehensive.html Accessed May 13, 2020.

Federal Highway Administration (FHWA). 2015. Guidelines for the Visual Impact Assessment of Highway Projects. https://www.environment.fhwa.dot.gov/env_topics/other_topics/VIA_Guidelines_for_Highway_Projects.pdf Accessed May 31, 2020.

ATTACHMENT A. VISUAL IMPACT ASSESSMENT SCOPING QUESTIONNAIRE

Federal Highway Administration

Visual Impact Assessment Scoping Questionnaire

Project Name: I-205 Toll Project	Virtual Site Visit Date: 05/08/2020
Location: Clackamas County Oregon	Time: 11:30 a.m.
Special Conditions/Notes:	Conducted By: Ryan Weston

Environmental Compatibility

1. *Will the project result in a noticeable change in the physical characteristics of the existing environment?* (Consider all project components and construction impacts - both permanent and temporary, including landform changes, structures, noise barriers, vegetation removal, railing, signage, and contractor activities.)

☐ High level of permanent change (3) ☒ Moderate level of permanent change (2)
☐ Low level of permanent or temporary change (1) ☐ No Noticeable Change (0)

2. *Will the project complement or contrast with the visual character desired by the community?* (Evaluate the scale and extent of the project features compared to the surrounding scale of the community. Is the project likely to give an urban appearance to an existing rural or suburban community? Do you anticipate that the change will be viewed by the public as positive or negative? Research planning documents, or talk with local planners and community representatives to understand the type of visual environment local residents envision for their community.)

☐ Low Compatibility (3) ☐ Moderate Compatibility (2)
☒ High compatibility (1)

3. *What level of local concern is there for the types of project features (e.g., bridge structures, large excavations, sound barriers, or median planting removal) and construction impacts that are proposed?* (Certain project improvements can be of special interest to local citizens, causing a heightened level of public concern, and requiring a more focused visual analysis.)

☐ High concern (3) ☒ Moderate concern (2)
☐ Low concern (1) ☐ Negligible Project Features (0)

Visual Impact Assessment Guidelines –Update C-2 January 2015

4. *Is it anticipated that to mitigate visual impacts, it may be necessary to develop extensive or novel mitigation strategies to avoid, minimize, or compensate for adverse impacts or will using conventional mitigation strategies, such as landscape or architectural treatment adequately mitigate adverse visual impacts?*

☐ Extensive Non-Conventional Mitigation Likely (3)
☐ Some non-conventional Mitigation Likely (2)
☒ Only Conventional Mitigation Likely (1)
☐ No Mitigation Likely (0)

5. Will this project, when seen collectively with other projects, result in an aggregate adverse change (cumulative impacts) in overall visual quality or character? (Identify any projects [both state and local] in the area that have been constructed in recent years and those currently planned for future construction. The window of time and the extent of area applicable to possible cumulative impacts should be based on a reasonable anticipation of the viewing public's perception.)

☐ Cumulative Impacts likely: 0-5 years (3)
☐ Cumulative Impacts likely: 6-10 years (2)
☒ Cumulative Impacts unlikely (1)

Viewer Sensitivity

1. *What is the potential that the project proposal may be controversial within the community, or opposed by any organized group?* (This can be researched initially by talking with the state DOT and local agency management and staff familiar with the affected community's sentiments as evidenced by past projects and/or current information.)

☐ High Potential (3)
☒ Moderate Potential (2)
☐ Low Potential (1)
☐ No Potential (0)

2. *How sensitive are potential viewer-groups likely to be regarding visible changes proposed by the project?* (Consider among other factors the number of viewers within the group, probable viewer expectations, activities, viewing duration, and orientation. The expected viewer sensitivity level may be scoped by applying professional judgment, and by soliciting information from other DOT staff, local agencies and community representatives familiar with the affected community's sentiments and demonstrated concerns.)

☐ High Sensitivity (3)
☒ Moderate Sensitivity (2)
☐ Low Sensitivity (1)

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3. *To what degree does the project's aesthetic approach appear to be consistent with applicable laws, ordinances, regulations, policies or standards?*

☐ Low Compatibility (3) ☐ Moderate Compatibility (2)
☒ High compatibility (1)

4. *Are permits going to be required by outside regulatory agencies (i.e., Federal, State, or local)?* (Permit requirements can have an unintended consequence on the visual environment. Anticipated permits, as well as specific permit requirements - which are defined by the permitter, may be determined by talking with the project environmental planner and project engineer. Note: coordinate with the state DOT representative responsible for obtaining the permit prior to communicating directly with any permitting agency. Permits that may benefit from additional analysis include permits that may result in visible built features, such as infiltration basins or devices under a storm water permit or a retaining wall for wetland avoidance or permits for work in sensitive areas such as coastal development permits or on Federal lands, such as impacts to Wild and Scenic Rivers.)

☒ Yes (3) ☐ Maybe (2)
☐ No (1)

5. *Will the project sponsor or public benefit from a more detailed visual analysis in order to help reach consensus on a course of action to address potential visual impacts?* (Consider the proposed project features, possible visual impacts, and probable mitigation recommendations.)

☐ Yes (3) ☐ Maybe (2)
☒ No (1)

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Federal Highway Administration

Determining the Level of Visual Impact Assessment

Total the scores of the answers to all ten questions on the Visual Impact Assessment Scoping Questionnaire. Use the total score from the questionnaire as an indicator of the appropriate level of VIA to perform for the project. Confirm that the level suggested by the checklist is consistent with the project teams' professional judgments. If there remains doubt about whether a VIA needs to be completed, it may be prudent to conduct an Abbreviated VIA. If there remains doubt about the level of the VIA, begin with the simpler VIA process. If visual impacts emerge as a more substantial concern than anticipated, the level of VIA documentation can always be increased.

The level of the VIA can initially be based on the following ranges of total scores:

☐ ***Score 25-30***
An *Expanded VIA* is probably necessary. It is recommended that it should be proceeded by a formal visual scoping study prior to beginning the VIA to alert the project team to potential highly adverse impacts and to develop new project alternatives to avoid those impacts. These technical studies will likely receive state-wide, even national, public review. Extensive use of visual simulations and a comprehensive public involvement program would be typical.

☐ ***Score 20-24***
A *Standard VIA* is recommended. This technical study will likely receive extensive local, perhaps state-wide, public review. It would typically include several visual simulations. It would also include a thorough examination of public planning and policy documents supplemented with a direct public engagement processes to determine visual preferences.

☒ ***Score 15-19***
An *Abbreviated VIA* would briefly describe project features, impacts and mitigation requirements. Visual simulations would be optional. An Abbreviated VIA would receive little direct public interest beyond a summary of its findings in the project's environmental documents. Visual preferences would be based on observation and review of planning and policy documents by local jurisdictions.

☐ ***Score 10-14***
A *VIA Memorandum* addressing minor visual issues that indicates the nature of the limited impacts and any necessary mitigation strategies that should be implemented would likely be sufficient along with an explanation of why no formal analysis is required.

☐ ***Score 6-9***
No noticeable physical changes to the environment are proposed and no further analysis is required. Print out a copy of this completed questionnaire for your project file to document that there is no effect. A *VIA Memorandum* may be used to document that there is no effect and to explain the approach used for the determination.

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