



ICE Analysis Training Program

Module 6:

Presentation of ICE Analysis in the Environmental
Documentation





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Introduction

ICE Analysis ORGANIZATION

- **Scoping**
- **Analysis**
- **Conclusions**
- **Mitigation**



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Introduction

SCOPING

- **Describe the rationale for selecting the resources considered in the ICE Analysis.**
 - **Provide background information pertinent to the resource (general description of resources within the ICE Analysis study area and their significance and use).**
 - **Use maps and overlays to present this information clearly in the environmental documentation.**
- **Describe the factors and rationale that serve as the basis for establishing the geographical boundary.**
- **Describe the factors and rationale leading to the selection of the ICE Analysis timeframe.**



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Introduction

ANALYSIS

- **Describe the data sources used in developing the past, present, and future land use scenarios (Cite data sources).**
- **Include meeting summaries with local/county planning agencies, MPO's etc.**
- **Describe the ICE Analysis methodologies (e.g. trends, overlays, matrices and interviews and combinations of these methods).**
- **Describe effects for each resource considered in the ICE Analysis.**



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Introduction

CONCLUSIONS

- Describe how the ICE Analysis conclusions were reached.
- Cite applicable regulatory programs and their relationship to the ICE Analysis conclusions.

MITIGATION

- Document any proposed mitigation efforts applicable to a resource, such as access controls and agreements with resource agencies.

ADDITIONAL SUPPORT INFORMATION

- Include additional support information (Could be included in the appendix) such as:
 - The ICE Analysis resource and methodology matrix
 - Narrative regarding data availability



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ICE Analysis Presentation

KEY POINTS TO REMEMBER

Include the results of the ICE Analysis in a separate section of the Environmental Consequences chapter of the environmental document.

For larger/more complex projects, a separate technical report is encouraged. If a separate report is created, the environmental document should be a summary consistent with the document goals set forth in this module.



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ICE Analysis Presentation

Remember the following when presenting your ICE Analysis:

- **Document resource impacts for each build alternative.**
- **If indirect effects are relevant to the project, then separate indirect and cumulative effects discussions should also appear for each resource within the “Effects” subsection of the ICE Analysis narrative.**
- **Exclude data not used in explaining the indirect and/or cumulative effects to a resource.**



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ICE Analysis Presentation

KEY POINTS TO REMEMBER

In many cases, your effects analysis may be the same for multiple alternatives because they may be similar in alignment and share the same typical section and access controls. In these cases it is only necessary to present your effects analyses once.

For example consider the following outline:

A. ICE Analysis of Cultural Resources

I. Historic Properties

a. Background

b. Trends

I. Alternatives 2 and 2A

- a. Cumulative Effects Analysis - Alternatives 2 and 2A would result in the potential cumulative effects to 2 NRHP eligible properties.**



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ICE Analysis Presentation

KEY POINTS TO REMEMBER

In some cases your effects analysis may differ for multiple alternatives. In these cases it is important to differentiate between each alternative in your effects analysis.

A. ICE Analysis of Cultural Resources

1. Historic Properties

a. Background

b. Trends

1. Alternative 2

a. Cumulative Effects Analysis -

Alternative 2 would result in the potential cumulative effects to 1 NRHP eligible properties.

2. Alternative 2A

a. Cumulative Effects Analysis -

Alternative 2A would result in the potential cumulative effects to 2 NRHP eligible properties.



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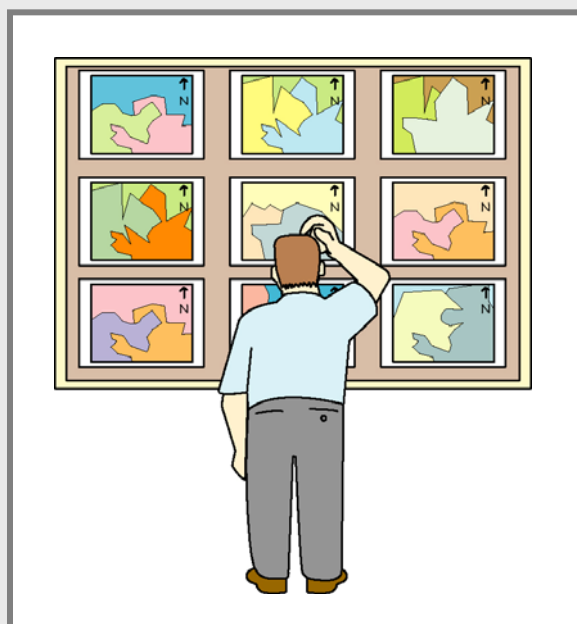
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ICE Analysis Presentation

KEY POINTS TO REMEMBER

Use maps, tables and graphics judiciously in the ICE Analysis write-up to help facilitate agency review.



KEY POINTS TO REMEMBER

Do not include maps, tables and graphics that are not pertinent to the indirect and effects analysis or conclusions.



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ICE Analysis Presentation

At a minimum mapping should be provided for:

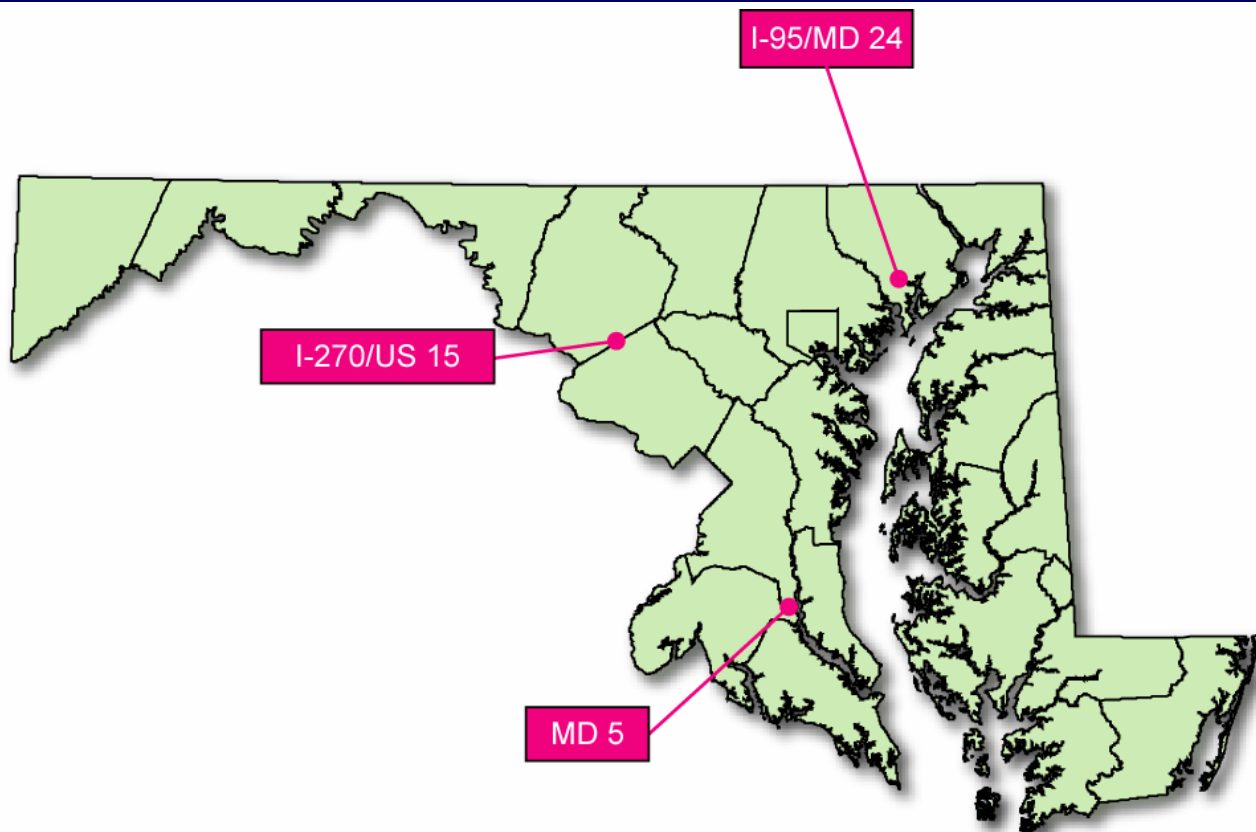
- **ICE Analysis geographical boundary (including support maps such as area of traffic influence, watershed/subwatershed boundaries and census tracts).**
- **Land use for past, present and future time frames.**
- **Location of existing resources within the ICE Analysis geographical boundary .**



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Case Studies

- **MD 5 - Hughesville Transportation Improvement Project**
- **I-270/US 15 Multi-Modal Corridor Study Draft EIS**
- **I-95/MD 24 Improvement Study Categorical Exclusion (CE)**



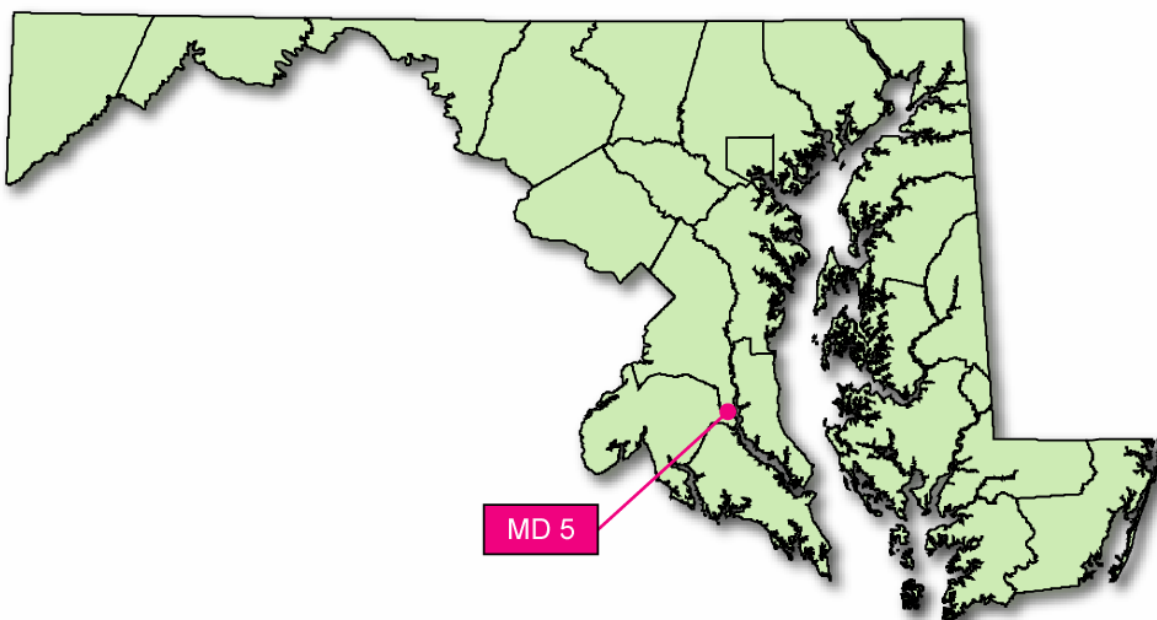
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MD 5 – Hughesville Transportation Improvement Project



PROJECT PURPOSE

The purpose of the MD 5 - Hughesville Transportation Improvement Project was to address and alleviate the following:

- Existing/future congestion at the MD 5/MD 231 intersection; and
- Future congestion along MD 5 in the Hughesville area;
- Existing/future safety at the MD 5/MD 231 intersection and along MD 5 in the Hughesville area.



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MD 5 – Hughesville Transportation Improvement Project

Potential Cumulative Effects

Factors that Should Minimize Cumulative Effects

Surface Water

The cumulative effects of all proposed and/or potential developments (highway and non-highway) to fisheries and water quality of the watershed within the ICE Analysis boundary would be a continued degradation of water quality and watershed stability, especially to Gilbert Creek and Swanson Creek.

Comprehensive implementation of BMP's such as stream buffer protection and enhancement, may partially offset impacts to streams during and after development.

Wetlands

It is anticipated that the percentages of future wetland loss/conversion within the ICE Analysis boundary will be less as compared to the past data trends.

This anticipated decline in future wetland loss is based on the notion that government regulatory programs will minimize wetland destruction in the future.

Floodplains

Implementation of the MD 5 Hughesville Transportation Improvement Project will not adversely affect regulated 100-year floodplains. Future cumulative effects to floodplains are expected to be negligible to none.

This rationale is based on the current County floodplain regulations per the Floodplain Management Ordinance. (1992).

ICE Analysis Conclusions



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MD 5 – Hughesville Transportation Improvement Project

Potential Cumulative Effects

Factors Which Should Minimize Cumulative Effects

Forest Habitat

The estimated potential cumulative forest habitat impact is 1,496 acres. It should be noted that this figure represents the maximum estimated forest impact that would occur, based on the proposed development known at this time.

The cumulative effects of this highway project coupled with other highway or non-highway development projects would likely be that certain species of concern (such as FIDS) would decrease from substantial declines in their populations due to continued loss or fragmentation of habitat. Because of current regulations and standards that protect forests/forest buffer zones, some of the unknown and/or potential forest habitat areas within the proposed development sites will remain undeveloped.

Active Farmland

The estimated potential agricultural land impact due to potential cumulative effects is 334 acres of existing (1994) agricultural land.

This figure represents the maximum impact based on proposed development within the ICE Analysis boundary.

Historic and Archeological Sites

Potential impacts to 3 NRHP eligible properties and 4 sites on the Maryland Inventory of Historic Properties. No archeological grids within the ICE Analysis geographical boundary were identified in areas having valid preliminary subdivision plans.

Section 106 of the National Historic Preservation Act along with Section 4(f) of the Department of Transportation Act will minimize effects to NRHP eligible properties in the project's direct impact area.

ICE Analysis Conclusions (Continued)



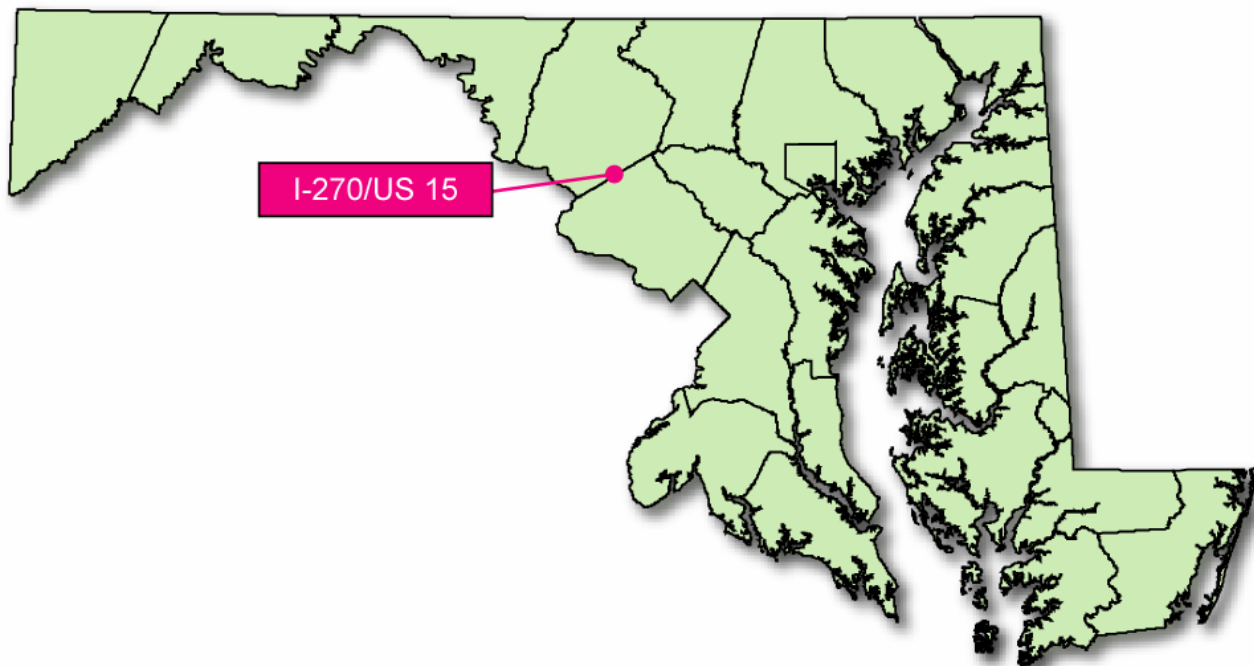
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I-270/US 15 Multi-Modal Corridor Study Draft EIS



PROJECT PURPOSE

The purpose of the I-270/US 15 Multi-Modal Corridor Study is to investigate options to address congestion and improve safety conditions along the I-270/US 15 Corridor.



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I-270/US 15 Multi-Modal Corridor Study Draft EIS

ICE Analysis CONCLUSIONS

- Indirect effects were considered for parklands, cultural resources, surface waters, wild and scenic rivers, floodplains, Waters of the US, terrestrial habitat and farmlands.
- Detailed discussions are included in the conclusion section for both indirect and cumulative effects, summarizing all findings. Factors which should minimize cumulative effects were also documented in the conclusion section of the ICE Analysis.



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I-270/US 15 Multi-Modal Corridor Study Draft EIS

Indirect Effects

Factors Which Should Minimize Cumulative Effects

Parklands

Indirect effects to parklands from the project are not anticipated. However, as mentioned above close oversight should be provided given the unanticipated growth identified by the panel, with special attention to Frederick City Zone #5, Germantown Zone #17, and Gaithersburg Zone #19.

Parklands are protected by the counties through development guidelines and by federal regulations including FHWA Section 4(f).

Cultural Resources

Indirect effects to cultural resources have been addressed through the Section 106 process.

Section 106 process

Wild and Scenic Rivers

Wild and scenic rivers impacted by the project include the Monocacy River. All areas surrounding the Monocacy River and its tributaries are anticipated to experience a substantial increase in both population and employment over the next 25 years. The result of development in this area may negatively impact the river aesthetically, physically, and biologically.

Except for the portion of Seneca Creek that will be impacted directly by the I-270 improvements, no other portion of this body of water are anticipated to be impacted, as the entire portion of Seneca Creek is protected as parkland

Floodplains

Indirect effects to 100-year floodplains are not expected.

State, federal and local regulations discouraging development in 100-year floodplains, and any floodplain encroachment would require authorization by MDE under a Waterways Construction Permit.

Summary of Effects



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I-270/US 15 Multi-Modal Corridor Study Draft EIS

Indirect Effects

Factors Which Should Minimize Cumulative Effects

Waters of the U.S.

Substantial Indirect effects to Waters of the US are not expected to occur as a result of any of the alternates considered.

Most in-stream construction activities associated with the project will occur in areas previously disturbed by development in the project area. The use of Best Management Practices and adherence to established riparian buffer zones by future developers in the ICE Analysis boundary will minimize overall impacts.

Aquatic Habitat

Substantial Indirect effects to aquatic habitats are not expected to occur as a result of any of the alternates considered.

Opportunities for maintaining current aquatic habitats in a healthy status are based in the management of public lands, wetlands, and waters in the ICE Analysis boundary.

Forests

The alternates considered for the project, including the No-Build alternate are not anticipated to have Indirect effects upon forest resources within the ICE Analysis boundary. The project is not anticipated to change current trends in forest area or forest fragmentation.

The mitigation package will help stabilize forest trends in the region. Indirect effects to forest-dependent wildlife are not anticipated to occur as a result of the project. Indirect effects to State Champion Trees are not expected to occur. The majority of Champion Trees within the ICE Analysis boundary occur on sites that are either already developed or protected from future development (i.e. parklands).

Summary of Effects (Continued)



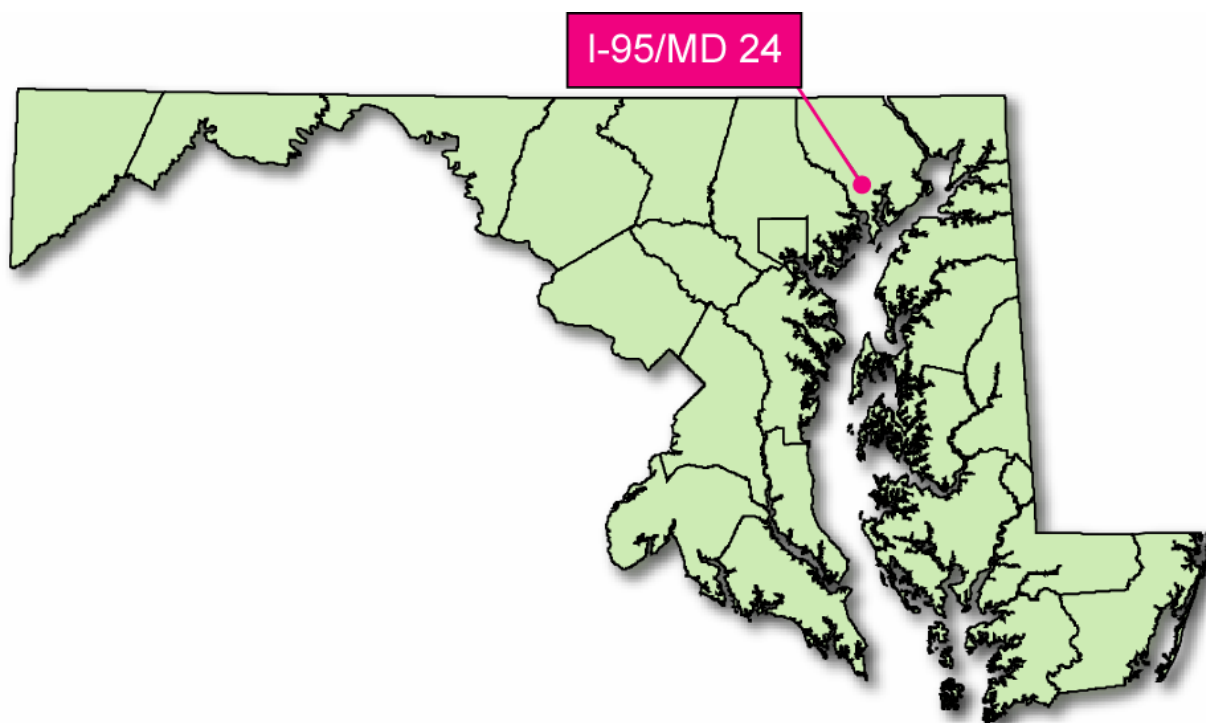
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I-95/MD 24 Improvement Study Categorical Exclusion (CE)



PROJECT PURPOSE

- The purpose of the I-95/MD 24 Improvement Project is to enhance safety conditions, reduce congestion and provide sufficient traffic capacity to serve existing and future development needs in the surrounding area.



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I-95/MD 24 Improvement Study Categorical Exclusion (CE)

Documenting Conclusions

- No secondary and cumulative effects are expected to occur in the ICEA geographical boundary for the future time frame.
- Much of the area within the ICEA boundary has experienced “built-out” conditions. This project will not provide access to any new development areas and will not add to or create any cumulative effects.
- The proposed development in the study area, primarily the Box Hill Corporate Center, will occur regardless of the improvements proposed for this project.
- The proposed project will not have a significant impact on any natural, cultural, recreational, historic or other resource; and is not anticipated to have any secondary or cumulative effects.