

4. Decision Process

The program's Executive Committee oversaw the program's key decisions, from project initiation to the selection of the Preferred Alternative. The decision-making approach was designed to ensure definitive review of all reasonable alternatives for the corridor, including work from previous corridor studies. The three primary decision phases were the Identification Phase, Evaluation Phase and a Recommendations Phase.

Identification Phase



This phase identified corridor issues and examined a great number of potential projects and improvements.

Initial Concepts

Over 300 separate projects and strategies were initially identified for the Program. The ideas were collected from several sources including scoping meetings, meetings with local communities, stakeholder interviews, committee members, previous studies and projects and strategies from corridor cities' transportation plans.

The options varied in complexity, ranging from minor improvements such as adding right turn lanes at intersections, to major projects such as rail or the construction of additional freeway lanes. The projects and strategies considered were grouped in seventeen major categories:

- Basic I-405 Improvement Projects
- I-405 Through-Capacity (additional general-purpose lanes, express lanes)
- Connecting Freeway Capacity
- Arterial Capacity (includes ETP and MTP projects) and Interchange Improvements
- Arterial Interchange Improvements
- Collector Distributor Lanes
- HOV Projects (additional HOV lanes, HOV interchange ramps, arterial HOV lanes)
- Freight Mobility Strategies
- Transportation Systems Management (TSM)
- High Capacity Transit (HCT)
- Transit Headways and Service
- Park-and-Ride Lots and Transit Centers
- Travel Demand Management (TDM) Strategies

- Pedestrian and Bicycle Facilities
- Congestion Pricing
- Land Use
- Other ideas - traveler information system and other intelligent transportation systems (ITS), regional TDM; supporting more telecommuting, and more.

These elements were included in the “themes” developed for the second-level screening. The broad review of potential improvements was essential towards addressing the corridor’s diverse interests. Program partners agreed that no one alternative would solve the variety of existing and future transportation needs.

Screening Process

The screening process, conducted in first and second levels, was used to narrow down the initial list of 300 projects and strategies. The screening process led to the development of the four alternatives examined in the draft environmental impact statement (DEIS).

Two sets of screening criteria were developed for the program, one for each screening level. The screening criteria determined what information was provided to the decision-makers.

The first-level screening criteria were developed to identify projects or strategies with fatal flaws, eliminating them from further consideration. The second-level screening criteria were used to evaluate packages of projects, referred to as “themes.” The second-level screening was more detailed than the first-level screening.

First Level Screening

The first-level screening was used to find fatal flaws determined by any project, idea or concept that did not meet the Program’s purpose and needs or was clearly infeasible. Program cost was not used as a criterion. The majority of initial concepts were considered reasonable. Following the first-level screening, the following modal themes remained under consideration and were later included as key elements of the four alternatives examined in the DEIS:

- **Transportation Demand Management Strategies** designed to reduce the need for road travel, particularly the number of single occupant trips during peak periods, and overall travel demand.
- **Transit/High-Occupancy Vehicle (HOV)** to increase capacity and improve service for transit/HOVs, vanpools and park-and-rides and TDM.
- **High Capacity Transit (HCT)** designed to connect urban centers in the corridor, including service to and from Seattle; improves arterial bus service to feed the HCT system.
- **Arterial** improvements to provide capacity for transit and general-purpose traffic on the arterial system.
- **General Purpose** capacity on I-405 is significantly increased.
- **Express Lanes** managed through control pricing; Transit/HOV, general-purpose traffic and freight use allowed.
- **Roadway Capacity** increased through the widening of I-405 and arterial routes, along with the addition of a parallel corridor route in east King County.

Second-Level Screening

The Program was able to compare a broad range of potential solutions for the corridor using combinations of the modal themes from the first screening level. Analyzing the effects of these themes allowed the partners to compare the modal effects on congestion and mobility in the corridor. The second-level screening criteria identified transportation, financial, social and environmental data to assess how each theme would meet the Program objectives. The criteria were not prioritized.

The second-level screening observed impacts on congestion and mobility in the study area by each modal approach (theme) and its relative costs. Environmental impacts were also identified, providing a comprehensive picture of the benefits and costs for each approach. When viewed by theme, the screening results showed a number of differences in performance. Themes that used strategies to reduce the number of vehicles on the roadway, were less expensive in terms of facility costs, but had minimal overall effects on reducing congestion. The themes that added capacity appeared to have the greatest potential to impact the environment, were quite expensive and would require extensive coordination with I-405 jurisdictions.

Evaluation Phase

The evaluation phase focused on developing and evaluating four action alternatives and a no action alternative. The evaluation phase led to the development of the alternatives analyzed in the environmental process.

Developing Alternatives

Based upon the results of the second-level screening, several projects were deleted from further consideration. The remaining projects and strategies were developed into four alternative approaches, in addition to the required “no action” alternative. Each of the four alternatives emphasized a specific type of travel—such as transit, car, truck—using a combination of some or all of the following:

- Implementing a range of transportation demand management (TDM) measures
- Expanding the capacity of the existing I-405 freeway
- Expanding the capacity and improving the continuity of the adjacent arterial network
- Expanding the capacity of the existing bus system
- Implementing new High-Capacity Transit (HCT) within corridor
- Implementing freight improvements
- Improving bicycle and pedestrian safety

The Alternatives

The four alternatives created a set of feasible approaches to improve mobility in the corridor. The four alternatives ranged from an emphasis on high capacity transit and transportation demand management to a focus on increasing general capacity on the roads in

the corridor. In July 2000 the ideas were packaged into four multi-modal alternatives, each with a set of projects and strategies, crafted to meet the purpose and need of the program.

Alternative 1. High Capacity Transit/Transportation Demand Management Emphasis

- High Capacity Transit connecting urban centers
- Transit service doubled
- Basic I-405 improvements made to reduce congestion at choke points like SR-167
- HOV lanes added to key arterials connecting with I-405
- Added park-and-ride lots and transit centers
- Expanded pedestrian and bicycle facilities
- Transportation Demand Management program to encourage carpool and vanpool use
- Basic safety improvements

Alternative 2. Mixed Mode with High Capacity Transit Emphasis

- High Capacity Transit connecting urban centers
- Transit service doubled
- One general-purpose traffic lane added each direction to fix bottlenecks
- HOV lanes added to key arterials connecting with I-405
- Arterial improvements planned by local agencies
- Added park-and-ride lots and transit centers
- Freight mobility improvements
- TDM program
- Expanded pedestrian and bicycle facilities
- Expanded Intelligent Transportation Systems
- Basic safety improvements

Alternative 3. Mixed Mode Emphasis

- Bus Rapid Transit connecting urban centers
- Transit service doubled
- Two general-purpose lanes added each direction to reduce congestion at choke points
- Arterial improvements planned by local agencies
- HOV and general traffic lanes added to key arterial corridors
- Direct HOV ramps added along I-405
- Added park-and-ride lots and transit centers
- Freight mobility improvements
- Expanded TDM program
- Expanded pedestrian and bicycle facilities
- Expanded ITS systems
- Basic safety improvements

Alternative 4. General Capacity Emphasis

- One additional general-purpose traffic lane added in each direction to reduce congestion at choke points like SR-167

- Two express lanes in each direction
- General traffic lanes added to key arterial corridors
- Bus service increased by 50 percent
- Additional HOV lanes
- Expanded TDM programs
- Expanded ITS systems
- Basic safety improvements

No Action Alternative

The required “no action” alternative included all of the existing committed and funded highway and transit improvement projects in the corridor expected to be implemented over the next six years. Additionally, a limited expansion of state highways was assumed as well as several arterial improvements implemented by local agencies.

Environmental Impact Statement

The four action alternatives along with the “no action” alternative were analyzed in a programmatic environmental impact statement (EIS). The draft environmental impact statement (DEIS), issued in August 2001, focused on broad corridor-wide issues related to travel modes and transportation system performance. This analysis enabled program decisions based on mode choice, corridor selection, general location of improvements and how combinations of improvements would function together as a system to solve corridor-wide transportation problems. The Program did not focus on specific design details or precise footprints for the considered improvements. The DEIS:

- Identifies and describes potentially significant environmental actions of each alternative (both adverse and beneficial);
- Identifies actions to minimize unavoidable adverse impacts;
- Enables decision makers to identify the solution that best meets the purpose of the project; and
- Provides the public and other agencies with an opportunity to review and comment on project actions and proposed alternatives.

The DEIS invited public and agency comments and review on the content and conclusions of the environmental analysis. The comments were considered, responses developed, and corrections and revisions were made to the DEIS before it was finalized and issued as a Final EIS (FEIS) in June 2002.

Evaluation Criteria

The alternatives were compared in terms of their transportation benefits, impacts to the natural and built environment and costs. The alternatives were evaluated using the criteria below and the findings were reported in a series of Expertise Reports listed in Appendix A.

A. Improve Mobility

- Serve as much of the 2020 daily travel demand within the corridor as possible

- Increase share of commuter trips by transit, HOV, bicycle, and pedestrian modes
- Reduce travel times for all modes between major activity centers
- Improve reliability of travel times for all modes
- Provide connections to other regional systems
- Provide spare capacity to accommodate post 2020 demands
- Ensure compatibility with other regional transportation improvement projects

Specific to Roadway/Freeway

- Increase corridor’s freight and person-carrying capacity
- Improve reliability of travel time for general traffic and freight

Specific to Transit

- Increase share of commuter trips by transit
- Reduce travel times on transit within the study area
- Improve reliability of transit travel times

B. Reduce Congestion

- Reduce congestion on study area freeways and arterials
- Reduce or maintain miles traveled (per capita) within the study area and region
- Provide spare capacity to accommodate post 2020 demands

Specific to Roadway/Freeway

- Reduce congestion along I-405
- Reduce congestion on I-405 and other freeways/arterials

Specific to Transit

- Contribute to the congestion reduction within the corridor

C. Improve Livability

- Accommodate planned growth in study area
- Minimize neighborhood impacts

D. Improve Safety of All Modes

- Improve the safety of all modes

E. Environmentally Responsive

- **Air Quality.** Minimize regional emissions of nitrogen oxides (NO_x), carbon monoxide (CO) and volatile organic compounds (VOCs).
- **Land Use.** Accommodate planned land use, development patterns and infill within the study area.
- **Land Use, Transportation Plans and Policies.** Demonstrate consistency with adopted regional and local land use and transportation plans and policies.
- **Environmental Justice.** Avoid potentially high and adverse environmental and/or human health impacts that have the potential to fall disproportionately on minority and/or low-income populations.
- **Economic Effects.** Encourage desired distribution and level of economic activity in study area.

F. Solutions Can Be Implemented

- Total capital and operating costs are within a reasonable range of funding during the next twenty years
- Public support is evident

Results from the Alternative Analysis

Key differences found among the alternatives, as documented in the Transportation Expertise Report (DEA and Mirai Associates, August 2001), are shown in Figures 4-1 through 4-3.

Effects on the Environment

Each alternative includes steps for improved levels of service and reducing congestion and generally result in slight reductions in emissions of several air pollutants, which could improve regional air quality. The proposed removal of existing barriers to fish passage and implementation of storm water treatment under the alternatives could benefit aquatic habitat.

Final Recommendation Phase

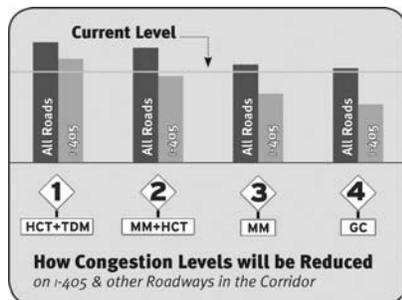


Figure 4-1: Mobility Improvement

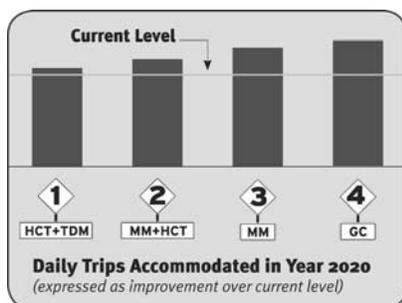


Figure 4-2: Congestion Reduction

Following the completion of the DEIS, the Program moved into the preferred alternative recommendation phase.

Development of Preferred Alternative

In January 2001, the I-405 Corridor Program Executive Committee endorsed a Preliminary Preferred Alternative (PPA) representing the direction the committee was moving towards for the Program. The PPA was a non-binding consensus point based on public input, guidance from the Steering and Citizen committees and information provided in the draft expertise reports. The DEIS was not yet complete at his time.

The PPA was based on Alternative 3, the Mixed Mode Emphasis. Using this guidance, a number of issues were evaluated during the EIS process before selecting the Preferred Alternative.

Selection of Preferred Alternative

In November 2001, the Executive Committee recommended a Preferred Alternative (PA) for analysis in the FEIS. The PA, or the I-405 Plan, consists of a set of projects and actions to meet the varied needs of corridor users - commuters, businesses, freight and Eastside residents. The I-405 Plan, was finalized based upon public hearings, comments on the DEIS, analysis of the preferred alternative in the Final EIS and recommendations from the other program committees. The performance of the PA was measured by the same criteria used to evaluate Alternatives 1 to 4. The details of the PA analysis, as well as the analysis of Alternatives 1 to 4, is included in the FEIS.

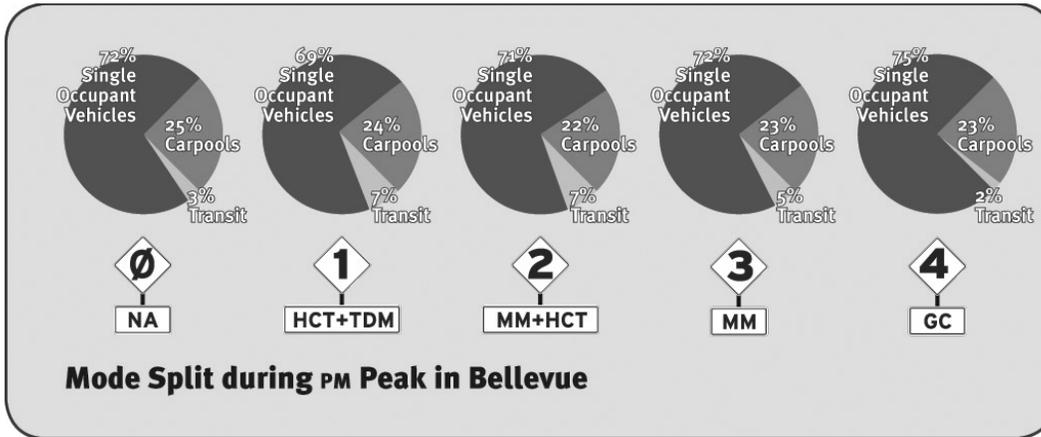


Figure 4-3: Mode Split Improvement

Highlights

The I-405 Plan includes more than 150 multi-modal projects and actions to improve mobility in the corridor. The I-405 Plan provides a three-tiered transit system to move riders efficiently throughout the day. Service will be provided via Bus Rapid Transit (BRT) on I-405, regional express buses and all day BRT on select and connecting arterials. Local bus service throughout Eastside neighborhoods will provide connections to express and BRT transit. Park-and-ride lots, BRT stations, transit centers and HOV freeway-to-freeway ramps at interchanges will be added to support the expanded services. In addition, the I-405 Plan calls for implementing one of the most comprehensive Transportation Demand Management (TDM) programs in the country to reduce the number of vehicles on the roads.



To accommodate the remaining planned growth in the area, the I-405 Plan includes up to two additional general-purpose lanes on I-405, along with new collector-distributor and hill climbing lanes to increase mobility. The I-405 Plan fixes choke-points along I-405, such as SR-167, I-90 and SR-520 interchanges. New interchanges will be designed to handle growing travel demands, while advanced technology will promote more efficient traffic flows and provide up-to-date traffic information to travelers. Pedestrian and bicycle improvements are included throughout the corridor to provide safe crossings of I-405 and to complete regional trail links.

In Step with Other Local and Regional Plans

Strategies and projects within the I-405 Plan respond to the forecasted growth under existing jurisdictional plans and are expected to be adopted into the programs. The I-405 Plan also conforms to the Puget Sound Regional Council's VISION 2020 while a number of projects and strategies have been adopted into its Destination 2030.

Costs

The Plan is projected to cost between \$9.1 to \$10.9 billion in capital costs (year of expenditure dollars). Capital cost estimates included preliminary engineering, right-of-way, construction, construction management and contingencies. In January 2002, Washington State Governor Gary Locke proposed funding for transportation projects throughout Washington, with significant funds slated for the I-405 Corridor. Key elements of the multi-billion dollar package of investments developed by the I-405 Program will face voter approval in the Fall of 2002.