CHAPTER II
Strategies and Conceptual Corridors

The goals of this First Tier EIS are to define the general concept and scope of the best improvement strategy to meet the future transportation needs of the I-70 Study Corridor. The physical and operational characteristics of each strategy need to be defined in sufficient detail to support the decision-making process through the differentiation of the individual qualities and attributes of each competing improvement strategy. The benefits and costs of each improvement concept need to be sufficiently defined to inform decision-makers of the tradeoffs of each strategy. Furthermore, sufficient detail definition of the preferred strategy and its characteristics is needed to allow for the defendable identification of the next steps within the tiered process and the limits and scope of the second tier studies.

This chapter of the First Tier EIS provides a description of the potential strategies identified (i.e., initial strategies) and evaluated to address the transportation needs identified in the previous chapter. The Draft First Tier EIS described the cursory assessment of the initial strategies performed to assess the ability of each strategy, as a stand-alone improvement concept, to meet the goals of the study as defined in the purpose and need (see Chapter I – Purpose and Need). Based on this assessment, the Draft First Tier EIS documents a set of strategies (i.e., reasonable strategies) that could reasonably be expected to solve the defined needs of the I-70 corridor. Each of these independent strategy concepts were then evaluated through a coordinated assessment of their respective engineering, environmental and socio-economic attributes to develop a recommendation for a preferred strategy. This process of screening the initial strategies through testing of the purpose and need and then a more detailed evaluation of the reasonable strategies was coordinated with the public and agency coordination program (see Chapter V – Comments and Coordination). Through collaboration of the study's public and agency involvement, and the engineering and environmental impact evaluation, a general consensus of the potentially affected public and review agencies formed in support of the preferred strategy recommendation (i.e., Strategy No. 3 – Widen Existing I-70).

In review of the comments received from the Draft First Tier EIS and public hearings, no new information relating to the strategies and conceptual corridors was made evident that necessitates new descriptions or evaluations. Consequently, the Draft First Tier EIS is referenced by this Final First Tier EIS.

A. Summary of Strategies and Conceptual Corridors

Based on an understanding of the current and projected transportation needs of the I-70 corridor, as defined in the purpose and need, the following strategies were identified for potential application to the I-70 corridor. Each of these strategies was defined and discussed in Chapter II – Strategies and Conceptual Corridors, contained in the Draft First Tier EIS.

1. STRATEGY NO. 1 ("NO-BUILD")

The "No-Build" Strategy refers to the future baseline conditions if no capacity improvements on I-70 were implemented. It does, however, include projects at other locations that are expected

to be completed and could influence travel characteristics on I-70. This strategy provides a basis of comparison for the analysis of the benefits of the other improvement strategies.

2. STRATEGY NO. 2 (TSM/TDM)

Transportation System Management generally includes low-cost traffic-flow improvements to manage congestion. The term TSM is used to encompass a wide range of strategies aimed at making efficient use of existing transportation facilities.

3. STRATEGY NO. 3 (WIDEN EXISTING I-70)

This strategy involves the improvement and total reconstruction of the existing I-70 roadway along the existing freeway alignment. Future 2030 travel demands dictate that six lanes be provided in the rural areas and eight lanes through Columbia and in the metropolitan areas of Kansas City and St. Louis. The eight-lane section in metropolitan Kansas City would likely extend from Concordia to the I-470 interchange. Considerations would need to be given to the continuation of these lanes through the I-470 interchange to the west as part of the ongoing I-70 Major Investment Study, which is currently being conducted by MoDOT for I-70 in Jackson County. Similarly, in the St. Louis area eight lanes would need to be provided from Warrenton to the east, into the St. Louis metropolitan area. Continuation of these lanes into the St. Louis area east of the US 40/61 Interchange would need to be considered.

In coordination with the FHWA, it has been determined that there is insufficient space within the existing 40-foot (12.2 m) median to widen the existing four-lane roadway section to the inside and maintain compliance with current federal roadside standards. To widen the existing I-70 pavement in compliance with federal standards would require additional widening on the outside of the existing lanes in conjunction with closing the median with a median barrier. Other influencing factors include the need to minimize delays to motorists during construction.

4. STRATEGY NO. 4 (NEW PARALLEL FACILITY)

This strategy involves the construction of a new parallel facility across the state, located in close proximity to existing I-70. The basis of this concept is to provide improved and superior service to the long distance, interstate traveler. This new facility would connect to the existing I-70 roadway within the metropolitan areas of Kansas City and St. Louis and its alignment and operation would be totally independent of the existing I-70 roadway. The new facility could potentially accommodate the interstate auto or truck through higher speed and safer service. With this concept, access would be very limited; interchanges would likely be limited to five or six intermediate points across the state. Even though the new facility would be independent, it would function in tandem with the existing I-70 to provide improved system capacity and operation. Longer distance travel would utilize the new facility, thereby freeing up capacity along the existing I-70 for more local travel.

5. STRATEGY NO. 5 (NEW PARALLEL TOLL ROAD)

This strategy involves the construction of a new parallel toll road across the state, located in close proximity to and parallel to existing I-70. The basis of this concept is to provide improved and superior service to the long distance, interstate traveler, and then capture that benefit through the collection of tolls. Toll revenue could offset partially or as a whole the cost of construction and additional maintenance. The toll road would connect to the existing I-70 roadway within the metropolitan areas of Kansas City and St. Louis and its alignment and operation would be totally independent of the existing I-70 roadway. The new facility could

potentially accommodate the interstate auto or truck through higher speed and safer service. Access would be very limited; interchanges would likely be limited to five or six intermediate points across the state. Even though the new facility would be independent, it would function in tandem with the existing I-70 to provide improved overall system capacity and operation. Longer distance travelers could realize greater travel benefits, and thereby be more willing to pay for the travel benefits. By diverting long distance I-70 travel to the new toll road, capacity along the existing I-70 would be available for more local travel.

6. STRATEGY NO. 6 (HIGH-OCCUPANCY VEHICLE (HOV) LANES)

HOV lanes are freeway lanes designated for preferential treatment for high-occupancy vehicles (i.e., vehicles with more than one occupant). Priority treatments for high occupancy vehicles are generally intended to help maximize the ability to move people along a roadway by increasing the system's overall vehicle occupancy rate. This is done to provide buses, vanpools and carpools with a travel time reduction relative to the non-HOV lane users as an attraction to convert motorists from single-occupant to multiple-occupant vehicles. The HOV lane needs to provide a significant travel time advantage in order to induce individuals to choose the rideshare or transit mode and therefore increase the roadway's person moving capacity. HOV facilities are appropriate in urban corridors where significant traffic congestion is observed or forecast, affinities for ridesharing and transit use are rather high, and an opportunity exists to provide a preferential means of circumventing congestion.

To create HOV lanes, it would not be practical to convert existing travel lanes for exclusive HOV use. Consequently, it was assumed that the existing four-lane roadway would be widened to the outside, adding a new lane in each direction, and the existing inside lanes would then be converted to HOV use. The outside two lanes would be restricted to mixed use, including freight trucks. This strategy would not provide a reconfiguration of I-70's roadway section, nor would localized I-70 alignment adjustments be provided.

7. STRATEGY NO. 7 (HIGH-SPEED RAIL)

Improved high-speed passenger rail service would be provided between Kansas City and St. Louis by either upgrading existing tracks or by constructing a new rail corridor. Passenger rail service within a corridor paralleling I-70 between St. Louis and Kansas City has been studied as part of two recent passenger rail initiatives. The evaluation of passenger rail service between Kansas City and St. Louis was completed as part of an evaluation study prepared for MoDOT in December, 1998. The study was entitled *Evaluation of Passenger Service: St. Louis to Kansas City*. The purpose of the report was to provide information regarding future options for passenger rail service provided by Amtrak across the State of Missouri.

A second ongoing intercity rail transit planning effort is the Midwest Regional Rail Initiative. The purpose of the initiative is to examine how to develop an improved regional rail system serving nine midwestern states. The proposed Midwest Regional Rail System would utilize a 3,000-mile (4,828-km) long existing track system to connect rural, small urban and large urban areas. The system would provide a hub and spoke system with a major hub in Chicago. The proposed system would improve existing Amtrak rail lines across Missouri to achieve travel speeds of 80 mph (128.7 km/hr) connecting Kansas City with St. Louis and then to the major Chicago hub. Current Amtrak service between Kansas City and St. Louis utilizes the existing Union Pacific Railroad tracks roughly located along US 50 and the Missouri River, with stations in Independence, Lee's Summit, Warrensburg, Sedalia, Jefferson City, Hermann, Washington and the large urban areas.

B. Clarification of Draft First Tier EIS

The following issues or questions were raised during the review of the Draft First Tier EIS that warrant clarification or further elaboration:

- **Incident Detection and Management Systems** - Caltrans is the California Department of Transportation. (Page II-4, Draft First Tier EIS.)

- **ITS Improvements (ITS-CVO)** – Additional costs outside of the I-70 project would be borne by the State for the development of the statewide CVISN database. (Page II-93, Draft First Tier EIS.)

- **ITS Improvements (System Integration)** – Using an estimate for integration of 10 percent of capital cost, the approximate integration cost would be $3,000,000. (Page II-96, Draft First Tier EIS.)