

4.0 ALTERNATIVES

The Draft Environmental Impact Statement (DEIS) described all alternative transportation solutions that were considered from the beginning of the study up to preparation and circulation of the DEIS. Alternatives evaluated for public and agency review and comment were described in detail in Chapter 4 of the DEIS. They include the No-Build Alternative, the Enhanced No-Build Alternative, and the DEIS Build Alternative. This chapter describes the DEIS Build Alternative modifications developed in response to comments received on the DEIS and Recommended Alternative.

The process of evaluating and selecting the Recommended Alternative shown in the Final EIS will be followed by the Issuance of a Record of Decision that concludes the National Environmental Policy Act (NEPA) process with the Recommended Alternative and approved by FHWA, final design, right-of-way acquisition, and construction may follow, subject to funding availability.

4.1 Alternatives Considered and Dismissed in the DEIS

The alternatives evaluated and the status of each alternative at the time of the DEIS was circulated were described in detail in Chapter 4 of the DEIS. As a key part of the decision-making process, the alternatives were presented to the Interagency Coordination Committee (ICC) for its review and deliberation. Some alternatives were eliminated from the study in the early stages because they did not meet the purpose and need of the study. Others meeting the goals, purpose, and need were retained for further study. Some alternatives could not, by themselves, meet the goals or purpose and need; however, they contained elements that could enhance other alternatives retained for further study. As a result, the set of Practical Alternatives in the DEIS was a combination of independent alternatives and desirable elements from other alternatives.

4.2 No-Build Alternative

The No-Build Alternative would maintain I-94 between I-96 and Conner Avenue in its existing configuration, alignment, and location. No immediate changes would be made. Bridges and pavement would be replaced on an as-needed basis. The No-Build Alternative is retained as a basis of comparison for the DEIS Build Alternative and modifications. This alternative does not address the problems and deficiencies described in Chapter 2.

4.3 Enhanced No-Build Alternative

The Enhanced No-Build Alternative includes:

- Reconstruction of existing lanes;
- Adding auxiliary lanes, acceleration-deceleration lanes, and shoulders where able to do so without purchasing additional right-of-way; and
- Replacement of all bridge structures, ramps, and pavement without major changes to the design of I-94 and its M-10 and I-75 interchanges.

This alternative reconstructs the entire I-94 facility within the project area in the same basic configuration that currently exists. It addresses only the physical condition of the facility and does not address the other problems or deficiencies noted in Chapter 2. Some minimal improvements would be made, where possible, within the existing right-of-way. These would include improvements to acceleration-deceleration lanes, auxiliary lanes, and shoulders. While these improvements would change this section of I-94 for the better, they do not address the larger problems of outdated design, inadequate capacity, discontinuous service drives, system continuity, or accommodation of growing freight traffic.

The Enhanced No-Build Alternative responds to comments suggesting that I-94 should be rebuilt without expansion. Additional details are included in Chapter 4 of the DEIS.

4.4 DEIS Build Alternative

The DEIS Build Alternative provides:

- A general purpose driving lane in each direction;
- A reserved space in the median to accommodate future transportation needs;
- Auxiliary and acceleration-deceleration lanes;
- Three-lane continuous service drives on each side of I-94;
- New pavement, bridges, retaining walls, and ramps;
- The continuous three-lane service drives consist of two 12-foot lanes and a 16-foot lane. The 16-foot lane could be used for transit, buses, bicycles, or other transportation purposes;
- State-of-the-art interchange designs for the M-10 and I-75 interchanges; and
- New sidewalks along all service drives to enhance pedestrian and bicycle traffic.

The reconstruction of the M-10 and I-75 interchanges would include new service drives that continue through the interchanges and thus contribute to better access and circulation in the interchange areas. The reconstructed interchanges would (1) eliminate left-hand exits and entrances and (2) improve access to and from adjacent streets.

Pedestrian mobility would be enhanced with continuous sidewalks adjacent to the service drives throughout the project and new pedestrian crossings over I-94, either on pedestrian-only bridges or in combination with vehicular bridges. Additional details are included in the DEIS Chapter 4.

4.5 Development of Modifications to the DEIS Build Alternative

Only the DEIS Build Alternative was determined to satisfy the purpose and need of the project. As a result of public and agency review and comments received on the DEIS, modifications were made to the DEIS Build Alternative. These modifications were directly responsive to public and agency input. The modifications reduce the median width and/or the service drive width resulting in an overall width reduction of 20 to 40 feet. Each of the modifications is a small variation on the DEIS Build Alternative and do not constitute a new alternative in and of themselves. The main elements of the DEIS Build Alternative remain unchanged, including:

- Use of the existing alignment;
- Four lanes in each direction of the I-94 freeway mainline;
- Continuous service drives; and
- All new updated design.

Modifications of the DEIS Build Alternative will result in a lessening of adverse environmental impacts and will not result in any new impacts.

As noted above, modifications to the DEIS Build Alternative were developed as a design response to comments received on the DEIS. The comments indicated that a narrower cross-section was desired to reduce impacts on neighboring properties and minimize displacements to the extent practical. Comments also were received about the three lane service drives being too wide and encouraging high speeds.

In addition, the SEMCOG adopted a regional transit plan (*Improving Transit in Southeast Michigan: A Framework for Action*, October 2001) as an amendment to the RTP on October 25, 2001. That transit plan considered the I-94 corridor, but I-94 was not included in the recommended system. As a result, the adopted RTP does not include I-94 as a transit corridor. This led to the conclusion that the reserved space in the median could be eliminated without adversely affecting future transit opportunities.

As the I-94 corridor was not included in the transit system, the width of the service drives could be reduced. Instead a wider third lane was included in part to accommodate a variety of transit options on the service drives. The 2025 traffic analyses indicated that the three-lane service drives could be reduced to two-lane service drives with an 8-foot shoulder and still satisfy the purpose and need of the project. However, a three-lane eastbound service drive would be needed between M-10 and I-75.

Several combinations of narrower median and service drive options were evaluated with the DEIS Build Alternative. Each modification resulted in a narrower footprint than the DEIS Build Alternative.

- Modification 1 included both a narrower median (no reserved space for future transportation needs) and reduced the service drives to a continuous two-lane configuration.
- Modification 2 retained the reserved space in the median; however, it reduced the service drives to a continuous two-lane configuration.

- Modification 3 eliminated the reserved space in the median; while it retained the three-lane service drive configuration.

The DEIS Build Alternative along with the three modifications above represented all possible combinations of wide and narrow medians as well as two- and three-lane service drives. Please refer to Appendix L for a more detailed description.

Selection of the Recommended Alternative

The factors that influenced the decision regarding the selection of a Recommended Alternative were identified through an extensive public involvement process pursued throughout the development of this project, comments received on the DEIS document, and through discussions with the city of Detroit, the public, the ICC and the MDOT. Refer to Appendix L for a summary of the evaluation results.

Modification 1 of the DEIS Build Alternative was selected as the Recommended Alternative based on an evaluation of the factors noted above. It provides a modern design appropriate for a high-volume, urban interstate highway and benefits over the no-build alternatives. The no-build alternatives primarily address the physical condition of the roadway and not the capacity issues along the corridor.

The Recommended Alternative will: 1) increase capacity to meet future transportation demands within the corridor, 2) separate local traffic from through traffic, 3) provide a modern design, 5) improve safety, and 6) improve pedestrian and bicycle mobility. The Recommended Alternative also is designed to incorporate aesthetic enhancements. Additionally, it will improve lighting and provide a new drainage system.

The continuous two-lane service drives will:

- Improve traffic circulation on surface streets, easing travel for residents and businesses; and
- Enhance the potential for transit service along the service drives by providing a continuous roadway for bus operation throughout the 6.7 miles of the project. There also will be opportunities for signal preemption, shelters, turn-outs, and other features to facilitate transit operations.

4.6 Description of the Recommended Alternative and Refinements

The DEIS Build Alternative Modification 1 was chosen as the Recommended Alternative based on engineering and planning criteria and updated information obtained during preparation of the FEIS. The Recommended Alternative has improved highway design geometry including:

- Add one lane in each direction and replace the bridges;
- Redesigned interchanges with M-10 and I-75;
- Adequate acceleration-deceleration lanes; and
- Auxiliary lanes for weaving (lanes for traffic merging on and off the freeway).

The median will include a 14-foot inside shoulder in each direction of travel, and a 6- to 10-foot variable strip in which to place a concrete barrier. All bridges will be built to current design

standards and appropriate underclearances. The service drive will include two 11-foot travel lanes and an 8-foot shoulder except in the location between M-10 and I-75 on the south side of the I-94 freeway where three lanes will be provided. A new storm water drainage system will be implemented. In summary, the Recommended Alternative:

- Satisfies the purpose and need for the project;
- Most effectively addresses public, stakeholder, and agency concerns among all alternatives considered; and

The Recommended Alternative – includes the following refinements:

- Wider (14-foot) inside shoulders (originally proposed at 12-feet) on the I-94 mainline;
- A third eastbound service drive lane, south side of I-94, between M-10 and I-75; and
- An 8-foot shoulder on the continuous service drives, instead of an 8-foot multi-use lane or parking lane.

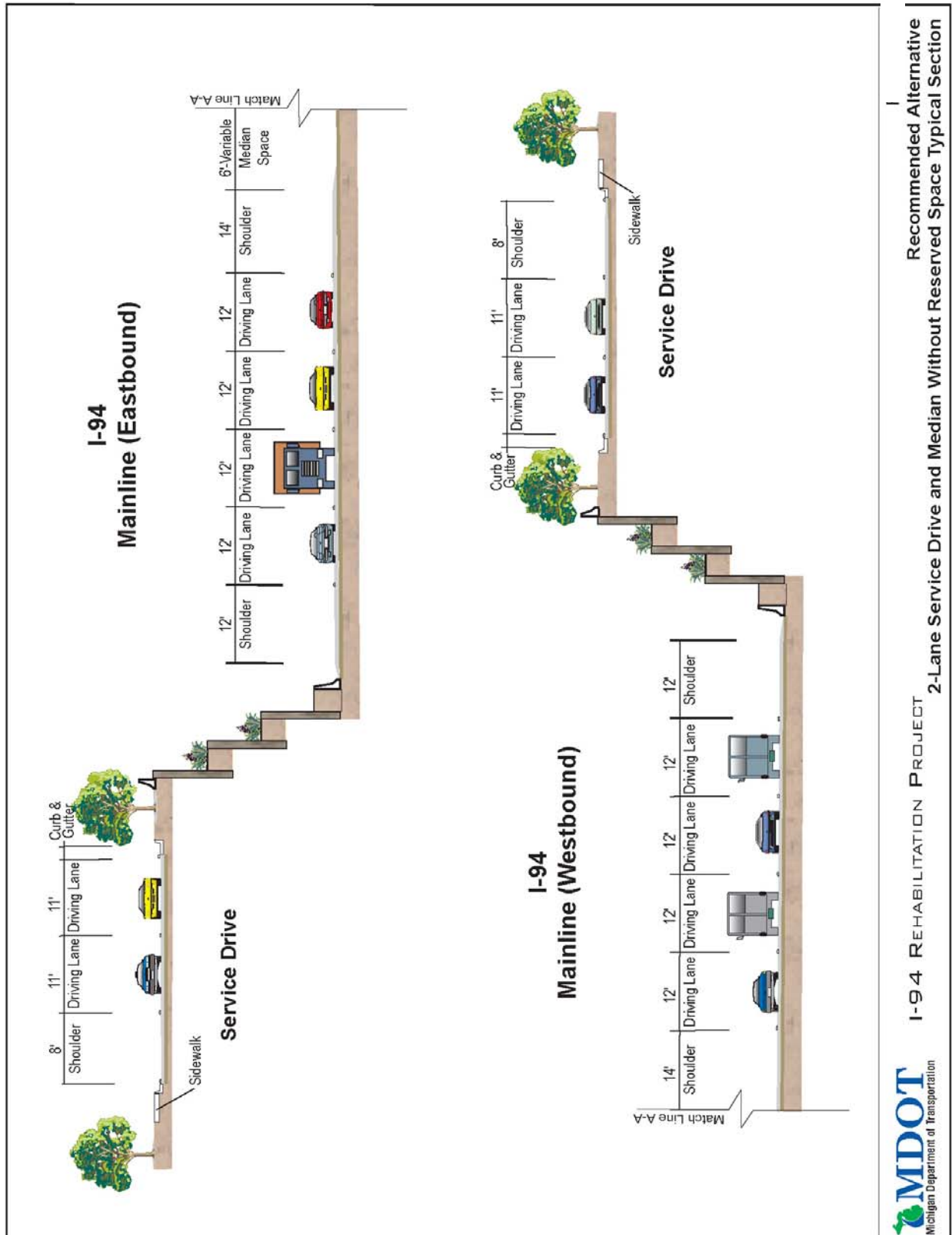
The wider inside shoulder improves safety. The third eastbound service drive, south side of I-94, between M-10 and I-75 addresses the 2025 traffic analysis results that indicate a need for additional traffic capacity along the service drive. Providing an 8-foot shoulder on the continuous service drives matches the width of the existing service drives, provides safety to motorists, and accommodates the transportation demand of the service drives.

The Recommended Alternative is based on the most current information with additional geometric detail from field surveys for new development in the area.

4.7 Potential for Project Staging Associated with the Recommended Alternative

As discussed earlier, bus transit is compatible with the Recommended Alternative. Ongoing discussions with the Detroit Department of Transportation (DDOT) indicate that a bus route is feasible if there are continuous service drives along I-94. The 8-foot shoulder on the service drive in each direction could provide bus turnouts and other accommodations to facilitate east-west service. Actual implementation of the route would be at the discretion of the DDOT as they are the local transit agency and not a part of the I-94 project. However, coordination will continue to occur with DDOT and their plans throughout the design process of the project. Pedestrian access and safety will be compatible with the Recommended Alternative since the service drives are continuous with sidewalk facilities.

Figure 4-1: Recommended Alternative - Typical Section



4.8 Cost of the Recommended Alternative

Cost estimates for implementation of the Recommended Alternative is shown in Table 4-1. These estimates are based on concept design quantities and unit prices. The Recommended Alternative addresses a variety of issues and benefits the immediate community, the city of Detroit, southeast Michigan, and the entire state. Chapter 5 has a more extensive discussion of the full range of benefits that are expected to result from implementation of the Recommended Alternative.

Table 4-1: I-94 Rehabilitation Project-Recommended Alternative Cost Estimate (In Millions, 2004 Dollars)

Activity	Recommended Alternative
Construction	\$946
Right-of-Way	\$50
Design and Construction Engineering	\$185
Total	\$1,181M