

CHAPTER 5 • LEVEL II ALTERNATIVES SCREENING

5.1 Roadway Alternatives

This section describes the evaluation procedure utilized and the alternatives considered during the Level II Roadway Screening Analysis. Following the Level I Screening procedure a number of broad categories of alternatives were carried forward. They included:

- Lane Continuity
- Lane Restrictions
- Entrance/Exit Ramps
- Freeway-To-Freeway Interchanges
- Transportation System Management (TSM)
- Transportation Demand Management (TDM)
- Additional Lanes
- Shoulder Modifications
- Parallel Routes
- Aesthetics
- Intelligent Transportation Systems (ITS)

Building on these categories, areas were identified where improvements could be beneficial to mobility and safety in the North South Transportation Initiative Corridor. Conceptual roadway alternatives were developed based on technical information, meetings with the OKI Oversight Committee and the MVRPC Task Force, and public involvement activities. Each of the roadway alternatives considered were divided into three separate categories, design deficiency/safety improvements, capacity improvements and economic development improvements. These categories help to distinguish the alternatives and provide a basis for evaluation.

Design Deficiency/Safety Improvement Alternatives – Alternatives included correcting an existing design deficiency and/or providing measures to alleviate an existing safety hazard. Examples of problems these alternatives would address include: inadequate ramp radii and low design speeds.

Capacity Improvement Alternatives – These alternatives were developed for areas where there is not a design deficiency but improved capacity is needed either for current and/or future growth patterns. Examples include extending ramps or adding lanes.

Economic Development Alternatives – Economic Development Alternatives were developed for areas where there is not a design deficiency or a capacity problem but there is the potential for substantial economic development. Examples include adding a new access point to the interstate.

During the Level II Screening process, information was gathered about each alternative and summarized in the Level II Roadway Screening Sheets (Appendix D). Specific measures in each alternative were developed and refined to quantify and evaluate potential impacts; this information involved both quantitative and qualitative data. The criteria used for the Level II screening included:

Transportation System Performance – The alternative's effect on mobility and accessibility as well as the effect of future growth on capacity

Community Impacts – General overall transportation compatibility with comprehensive, Long Range and Master Plans, right-of-way impacts, and the effect on community cohesion.

Economic Development – Potential to provide economic development opportunities

Environmental Impacts – Impacts to the environment including parks, known wetlands and waters of the United States, floodplains, locations of previously identified threatened and endangered species, locations of known hazardous waste sites, previously identified archaeological and historic sites, and impacts to structures.

Costs - Capital costs based on similar projects and/or information from Long Range Plans

Environmental Justice (EJ) / Equity Analysis – Identification of disproportional benefits and impacts.

Several alternatives were advanced to Level III Screening for further evaluation. A list of these alternatives is presented below.

Kenton & Boone Counties

- Improvements to the I-71/75 Interchange
- Improvements to Richwood Road
- Improvements for access to Weaver Road
- Improvements to the US 42 Interchange
- Improvements to the KY 18 Interchange
- A new connection between Mall Road and Houston Road
- Improvements to the Turfway Road Interchange
- Improvements to the Buttermilk Pike Interchange
- Improvements to the Kyles Lane Interchange
- A new Collector-Distributor System from I-275 to US 42
- A new Collector-Distributor from KY 18 to US 42

Hamilton County

- Achieve 4-Lane Continuity from the Brent Spence Bridge to I-275
- Achieve 4-Lane Continuity and designate a lane from the Brent Spence Bridge to I-275
- A new ramp at Third Street to I-75 northbound
- Improvements to access between Freeman Avenue and Ezzard Charles
- Improvements to the Western Hills Viaduct Interchange
- Transportation System Management Improvements to Central Parkway
- Transportation System Management Improvements to Spring Grove Avenue
- Improvements to the I-74/75 Interchange combined with local roadway improvements
- Improvements to the Mitchell Avenue Interchange
- Improvements to the Norwood Lateral Interchange
- Improvements to modify access at Towne Street
- Improvements to Paddock Road Interchange
- Improvements to the Ronald Reagan Cross County Highway Interchange
- Improvements to access at the Lockland/Davis Road Ramps
- Improvements to the Evendale/Neuman Way Collector-Distributor System
- Improvements to the Glendale-Milford Road Interchange
- Improvements to Sharon Road
- Improvements to the I-75/I-275 Interchange
- Improvements to SR 42
- Improvements to SR 4/SR 747

Butler & Warren Counties

- Achieve 4-Lane Continuity from the Hamilton/Butler County Line to the Warren/Montgomery County Line
- Access Management Improvements to the Tylersville Road Interchange
- An Extension of the Michael A. Fox Highway and a completion of the interchange. An extension of Cox Road would be required with this alternative
- Improvements to Butler-Warren County Line Road
- Improvements to Cincinnati-Dayton Road
- New access to Greentree Road including Frontage roads and/or local access improvements
- Improvements to the SR 122 Interchange
- Improvements to the SR 123 Interchange
- Improvements to the SR 73 Interchange

Montgomery County

- Improvements in Downtown Dayton on the existing alignment
- Achieve 4-Lane Continuity from the Montgomery/Warren County Line to Wagner Ford Road
- Improvements to the I-75/I-675 Interchange

5.2 Transit Alternatives

- Improvements to the South Dixie Interchange
- Improvements to SR 741
- Improvements to access in the Moriane-Kettering Area
- Improvements to the Edwin C. Moses Interchange
- Improvements to the Wagner Ford Interchange
- Improvements to the Needmore Road Interchange
- Improvements to the US40/Northwoods Interchange
- Improvements to North Dixie Highway
- Improvements to the SR 202 Interchange

Miami County

- Achieve 3-Lane Continuity from SR 41 to the Miami/Shelby County Line
- Improvements to the SR 571 Interchange
- Improvements to the CR 25A (Exit 69) Interchange
- Improvements to CR 25A
- Improvements to the SR 55 Interchange
- Improvements to the SR 41 Interchange
- Improvements to the CR 25A (Exit 78) Interchange
- Improvements to Troy-Sidney Road
- Improvements to the US 36/CR 25A (Exit 84) Interchange

The objective of the Level II Transit analysis was to identify only the most promising transit alternatives, and advance them into a highly detailed Level III analysis, which included travel demand (ridership) forecasting, and more refined cost estimates, to be used as input for the Benefit-Cost Analysis.

The criteria used for the Level II screening included:

Transportation System Performance

- Potential Transit Market (based on population, employment and mode split)
- Travel Time
- Compatibility with other Plans

Community Impacts

- Parking Impacts
- Increased Activity Around Stations
- Traffic Impact

Environmental Impacts

- Secondary Source Literature Review

Economic Development

- At Station Locations
- Joint Development Opportunities

Costs

- Required Right-of-Way

Environmental Justice

- Disproportionate Benefits and Impacts

Several alternatives were advanced to Level III Screening for further evaluation. A list of these alternatives, recommended by the OKI Oversight Committee and the MVRPC Task Force, is presented below.

Express Bus Alternatives

- Dayton Express: Dayton-South Dayton-Springboro-Monroe-Cincinnati
- Middletown Express: Middletown-Hamilton-Tri-County-Cincinnati
- College-City Express: Middletown-Hamilton-Tri-County-US/Uptown
- Northern Kentucky-UC Express: Florence-Cincinnati-UC/Uptown
- CVG Airport Express: Tri-County-Cincinnati-CVG Airport
- Piqua Express: Piqua-Troy-Tipp City-Dayton Airport-Dayton-South Dayton
- Dayton International Airport Express: Middletown-Springboro-South Dayton-Dayton-Airport

Intercity/Commuter Rail

- Hamilton Route
- West Chester Route

Intracity (Light Rail Transit/Bus Rapid Transit)

- I-75 Uptown
From Ludlow Avenue to I-275
- NS/CSX Line
Norfolk Southern (NS) Line from Ludlow, cross over to CSX line to I-275
- Norfolk Southern Line
NS line from Ludlow at I-75 northward through the Lockland Split
- Abandoned RR at Norwood
From NS line or I-75 south of the Norwood Lateral, east to the I-71 light rail (LRT) alignment.
- I-275 East of SR 4
I-275 from SR 4 to I-75
- Calhoun Street and McMilian
Calhoun Street at Jefferson Avenue to Clifton Avenue to Ludlow Avenue at I-75.
- Central Avenue
Central Avenue from 3rd Street to Central Parkway to Ludlow Avenue
- Central Parkway
Pete Rose Way at L&N Bridge to Eggleston Ave to Central Parkway at Ludlow Ave

A detailed analysis of each alternative, including mapping, may be found in Appendix D.