



I-65 Corridor Feasibility Study

Executive Summary

Introduction

The Interstate 65 (I-65) corridor is a critical north/south route serving metropolitan Birmingham. The MAGIC 65 Feasibility Study is exploring transportation improvement options extending through the metro area for a distance of over 45 miles. The study area passes through Jefferson and Shelby counties, and abuts the Birmingham city center, as well as numerous neighboring municipalities, including Gardendale, Fultondale, Homewood, Hoover, Vestavia Hills, Pelham, Alabaster, and Calera. The MAGIC 65 study area extends from the location of the future Northern Beltline near Gardendale to State Route 25 in Calera. This Final Report for the I-65 Corridor Feasibility Study presents a summary of findings for the I-65 corridor that involve I-65 and US 31, a parallel route throughout the corridor.

The purpose of the MAGIC 65 study was to conduct an initial feasibility analysis of highway and/or transit capacity improvements in the I-65 corridor to promote **M**obility, **A**ccessibility, economic **G**rowth, **I**nnovation and improve **C**apacity along I-65 and US 31. Transportation options that were screened for feasibility include High Occupancy Vehicle (HOV) lanes, Express Bus lanes, High Occupancy Toll (HOT) lanes, Bus Rapid Transit (BRT), Managed lanes and Truck-only lanes. This preliminary examination of options is intended to identify potential issues/challenges with the potential highway and transit improvements that may be studied in more detail in an Alternatives Analysis phase. The evaluation of these options includes operational, physical, and environmental criteria as well as an evaluation of potential funding sources, policy considerations and public acceptance.

The study criteria have been separated into four broad categories for analysis; Facility Treatment Criteria, Physical Characteristics Criteria, Policy Criteria and Funding Criteria. Each category provides a specific approach and application for determining the most feasible option for the I-65 corridor.

Fatal Flaws Analysis Summary

Based on the screening analysis completed for this MAGIC 65 study, no “fatal flaws” were identified that would prevent the implementation of High Occupancy Vehicle (HOV) lanes or Bus Rapid Transit (BRT) on I-65 or prevent the implementation of BRT on US 31. Some segments of I-65 and US 31 along the corridor are more viable than others for HOV lanes and/or BRT, but the MAGIC 65 study has concluded that the entire I-65 corridor should be considered for the next phase of analysis. The next phase of analysis would involve an Alternatives Analysis (AA) and Environmental Impact Statement (EIS). It is important to note that the MAGIC 65 study is an initial phase in a multi-phase process. The conclusions and recommendations of this study will be refined as the project is moved forward into the next phases of study.

Recommended Actions for HOV Lanes and Bus Rapid Transit on I-65

Based on the planning level screening analysis, *before* construction/capital cost and right-of-way impacts are considered, a preliminary priority level was developed for the potential implementation of HOV lanes and Bus Rapid Transit (BRT) on I-65. The recommendations for HOV lanes and BRT on I-65 are the same, since the screening criteria that are used to determine the feasibility of each are similar. These priority time periods are estimates and continued study of the conditions will determine the actual time that the project would be viable.

- **Immediate Feasibility** (Feasible today) – I-65 from Valleydale Road to Lakeshore Drive and from Lakeshore Drive to I-20/59 are recommended as immediately feasible based on the planning level screening for HOV and BRT.
- **Near Future Feasibility** (Feasible in ten to fifteen years) – I-65 from SR 25 in Calera to US 31 in Alabaster, from US 31 to Valleydale Road and from I-20/59 to US 31 in Fultondale have been classified as being feasible in the near future.
- **Long Term Feasibility** (Feasible in 30 years) – I-65 from US 31 in Fultondale to the Proposed Northern Beltline is categorized as a long term plan for HOV lane and BRT implementation.

Recommended Actions for Bus Rapid Transit on US 31

A preliminary priority level was also developed for the potential implementation of Bus Rapid Transit (BRT) on US 31 based on the planning level screening analysis, *before* capital costs and right-of-way impacts are considered. These priority time periods are estimates and continued study of the conditions will determine the actual time that the project would be viable.

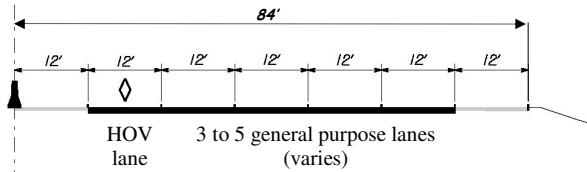
- **Immediate Feasibility** (Feasible today) – US 31 from Valleydale Road to Columbiana Road at I-65 and Columbiana Road/Green Springs Highway from I-65 to University Boulevard are recommended as immediately feasible.
- **Near Future Feasibility** (Feasible in ten to fifteen years) – Montevello Road (just north of US 31 crossing I-65) to Valleydale Road and from I-20/59 to Walker Chapel Road have been classified as being feasible in the near future.
- **Long Term Feasibility** (Feasible in 30 years) – SR 25 to Montevallo Road and from Walker Chapel Road to the proposed Northern Beltline are categorized as a long term plan for BRT implementation.

US 31 in the downtown Birmingham area was eliminated from further evaluation, although it was deemed feasible in the analysis, because the BRT options in this area should be coordinated and integrated with recommendations of the on-going study of BRT in downtown Birmingham.

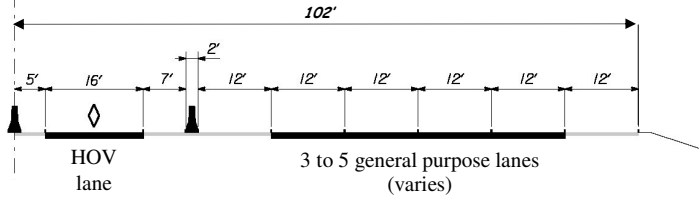
Potential High Occupancy Vehicle Lanes for I-65

Based on the screening analysis, two typical section options were recommended for I-65:

- Median Concurrent Striped, one lane each direction

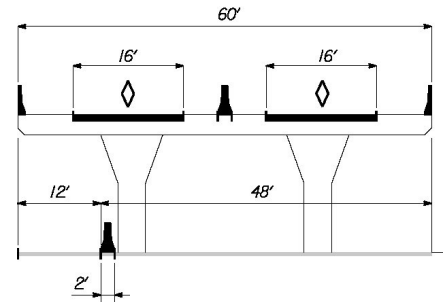


- Median Concurrent Barrier, one lane each direction



These two typical sections were assumed to run the entire length of the I-65 corridor except at the system interchanges with other interstates. Where I-65 intersects other interstates, both of the two remaining typical sections shown above would transition into an elevated section. Please see the elevated typical section used for these locations below:

- One-side Elevated two lanes (one each direction) – assumed HOV lane typical section at the I-459, I-20/59 and Corridor X (Future I-22) interchanges.



Estimated Cost and ROW Impact of HOV Lanes for I-65

The screening analysis determined the approximate new ROW required for each HOV lane option as well as the total number of ROW encroachments for each typical section's foot print. The cost of ROW was not included in the construction cost estimate. ROW impact will be refined and ROW costs will be determined in the next phase of the study. It should also be noted that the cost for new HOV interchanges in the corridor was not included in the construction cost estimate.

The median-concurrent-striped option will require approximately 124 acres of new ROW and will have an estimated construction cost of \$459 million. The median-concurrent-barrier option will require approximately 229 acres of new ROW and will have an estimated construction cost of \$671 million. These construction costs do not include ROW costs, utility costs or the cost of new HOV interchanges.

Estimated Capital Costs for BRT

Detailed cost estimates for BRT were not developed at this phase of study because ridership was not modeled or predicted. Ridership provides the information necessary for determining service frequency, number of vehicles needed and station types. Based on the initial screening completed for HOV and BRT, basic cost ranges have been developed that would be in addition to the infrastructure costs developed for the HOV typical sections. Infrastructure costs for BRT on US 31 were not developed and would be developed in detail during the next phase of study.

Next Steps

The Feasibility Study, completed with the submission of this document, concluded that HOV lanes and BRT are viable in the I-65 corridor and that additional investment in BRT in the US 31 corridor is viable as well. The technical analysis demonstrated that there is a need based on existing and projected conditions in the region. The next step in the progression of this project is the initiation of an Alternatives Analysis (AA) that would begin the Environmental Impact Statement (EIS) process. The Alternatives Analysis will refine the screening process in a comprehensive and detailed evaluation of potential alternatives in the I-65 corridor. Some of the key issues that an Alternatives Analysis will address in greater detail include:

- Design-level decisions and construction cost for HOV lanes
- Refined right-of-way (ROW) impact and cost
- Capital cost of Bus Rapid Transit (BRT) system
- Effect on environmental justice communities
- Comprehensive traffic modeling of I-65 and US 31
- Overall benefits of HOV lanes and BRT
- Funding sources

The selected alternatives would be carried forward for more detailed evaluation in the Draft EIS (DEIS) and would be those that best meet the needs established by this Feasibility Study. It is recommended that both the FHWA and the FTA participate as co-lead agencies for the EIS process in this study to have representation for both the roadway and transit components.