Eastern Corridor PE/EIS

BENEFIT/COST ANALYSIS
Preliminary findings and key conclusions

4% Discount Rate & $2003; basic analysis construct per peer group input
Construction related short-term benefits not included
Economic impact benefits measured by REMI in terms of Gross Regional Product (GRP)
Analysis Period 2006-2034, Construction Period 2006-2013

Total Costs (Present Value $2003) [1]

Highway Total Cost [2]	$ 477,278,000
Rail Transit Total Cost	$ 579,928,000
Expanded Bus Total Cost	$ 301,871,000
Total Multi-Modal Program Cost	**$ 1,359,077,000**

Notes: *[1] Total Cost includes construction costs and operating& maintenance costs through Year 2034.*
[2] Highway Total Cost includes $45M in TSM construction cost; TSM O&M costs are not included.

Total Benefits (Present Value $2003)

Travel Time Savings	$ 914,594,000	
Vehicle Operating Cost Savings	$ 209,254,000	
Accident Cost Savings	$ 117,104,000	
Emission Cost Savings	$ 1,329,000	
Transit Mobility Benefits	$ 23,662,000	
Economic Impacts w/o Business Attraction	$ 1,562,860,000	
Multi-Modal Transportation Benefits	**$ 2,828,803,000**	**(basic transportation benefits only)**
Economic Impacts w/Business Attraction	$ 11,141,940,000	
TOTAL MULTI-MODAL BENEFITS	**$ 13,970,743,000**	**(transportation + new investments)**

Key Conclusions:

Ratio of Total Multi-Modal Benefits to Total Costs	**10.3**
Ratio of Multi-Modal Transportation Benefits to Total Costs	**2.1**
Internal Rate of Return (based on Transportation Benefits only)	**13%**
Improved accessibility benefits by Year 2034	
➢ Increase in population	**11,800 people**
➢ Increase in employment	**10,220 jobs**
➢ Increase in Gross Regional Product	**$23 Billion**

PROJECTED TRAVEL BENEFITS

In order to assess the approximate effect of the proposed improvements, an approved computerized model is used to estimate how the transportation network would behave with the multi-modal improvements in place. The computer model accounts for where people live, where they work, other travel destinations, freight movements, likely transit usage, costs and other factors in making projections for the future (the year 2030, in this case). While these projections provide valuable indications of likely effect, or trends, they are not absolute numbers.

Compared to a "No-Build" scenario in which no new major transportation improvements would be made beyond those already approved and committed (see board at left), the Eastern Corridor Multi-Modal Improvements would have these benefits to the Cincinnati metropolitan area:

Travel Time: People would spend 21,000 fewer hours in their automobiles each day due to better connections and less bottlenecks[1]. Travel time is often the main factor people consider in making transportation decisions.

Delays: People would experience an average of 15,000 fewer hours of travel delay (dealing with congestion) each day. The extent of delays often relates to motorist frustration and quality of life.

Miles Traveled: People would travel an average of 137,000 fewer miles each day due to more efficient network connections and options[2]. Reducing miles traveled usually helps air quality.

In looking at these regional travel benefits, roughly half of the incremental benefits in each category result from Transportation System Management efforts and bus and rail transit investments, and the other half comes from highway improvements. The Eastern Corridor is a balanced plan that has different improvements for different needs.

[1] At an average time value of $20 per hour, this would be a time value savings of more than $150 million per year.
[2] This is equivalent to more than 50 million vehicle miles per year.