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HIGH SPEED RAIL FOR OHIO

Prepared by

Ohio Railway Organization, Inc.

THE OHIO RAILWAY ORGANIZATION

The Ohio Railway Organization, Inc. (ORO) is a privately-owned Ohio corporation founded in 1989 by a consortium of firms with particular expertise in the planning, design, financing, construction and operation of major transportation systems throughout the world. Its member firms combine the experience, knowledge and resources necessary to make a privately-operated, profitable high speed rail system for Ohio a reality.

Although incorporated to function as a legal entity for privatized high speed rail development in Ohio, ORO is by no means a newcomer to high-speed initiatives in the state. The firms comprising ORO have regarded this project as viable and approached it with enthusiasm over a timespan of nearly twenty years. ORO's shareholders have long been supporters of high speed rail in Ohio and throughout the U.S. All of the shareholders are active participants in other innovative transportation privatization initiatives across the globe, and most have a special continuing interest in the Ohio project because they base a significant portion of their operations in Ohio. At the end of this booklet, a brief background is presented for each of ORO's shareholders.

Interest in high speed rail in Ohio first began to coalesce in the mid-1970's and continued strong throughout the early 1980's in a succession of studies suggesting viability of such a system - studies that major shareholders of ORO participated in. With the formation of ORO, the shareholders made substantial corporate commitments - expressing their conviction that high speed rail could be a reality for Ohio.

For the past year, ORO has been preparing an action plan to implement a high speed rail passenger system to link Cleveland, Columbus and Cincinnati with intermediate stations in Mansfield, Springfield and Dayton. This action plan addresses a proposed service plan, projected ridership and revenue, estimated capital costs, estimated operation and maintenance costs, project benefits, train technology, environmental impacts, financing and an implementation schedule for high speed rail service between these cities. An overview of ORO's action plan is presented on the following pages.

High speed rail is an answer to our growing transportation needs. Improved mobility would result from implementing a high speed rail system along with an economic boost and a new level of pride and way of life for the residents of Ohio.

The time to act is now to transform Ohio's years of interest in high speed rail into a functioning reality. We invite each and every one of you to share in this vision and help lay the groundwork for the total transportation needs of Ohio's generations of tomorrow.

ORO OHIO RAILWAY ORGANIZATION INC.

HIGH SPEED RAIL FOR OHIO

A PLAN FOR ACTION

Presented to:
Ohio High Speed Rail Authority

Presented by:
Ohio Railway Organization, Inc.

September 24, 1991

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OUTLINE OF PRESENTATION

- SUMMARY
- PROJECT BENEFITS
- ENVIRONMENTAL BENEFITS
- PROJECT DESCRIPTION
- ROLLING STOCK
- SERVICE PLAN
- ENVIRONMENTAL IMPACTS
- COMMUNITY INVOLVEMENT
- ESTIMATED CAPITAL COSTS
- OPERATION AND MAINTENANCE COSTS
- RIDERSHIP AND REVENUE
- FINANCING
- IMPLEMENTATION SCHEDULE
- IMMEDIATE ACTION PLAN

SUMMARY

- **A Quality High Speed Rail System to Link Cleveland, Columbus and Cincinnati can be Built With Existing, Service Proven Technology**

- **The Project Would be a Prudent Investment for Ohio to:**

  - **Improve Air Quality**
  - **Reduce Highway and Airport Congestion**
  - **Reduce Highway and Airport Investment**
  - **Maintain Mobility**
  - **Increase Productivity**
  - **Reduce Travel Time Between Cities**
  - **Save Fuel**
  - **Improve Travel Safety**
  - **Reduce Highway and Airport Maintenance Costs**

- **Economic Benefits of the Project Exceed $11 Billion**

- **The Project Includes 260 Miles of Track and 9 Stations**

SUMMARY (Cont'd)

- **Trips Between Cleveland and Columbus and Between Cincinnati and Columbus Would Require Just Over One Hour of Travel Time**

- **The Capital Cost of the Entire Project is Estimated in 1991 to be $3.1 Billion Over 5 Years of Construction**

- **This is Comparable to the 1985 Estimate by the Ohio High Speed Rail Task Force of $2.1 Billion When Escalated to 1991 Values**

- **This is Also Comparable to Ohio's Annual State Highway Construction Expenditures of $750 Million**

- **Service Life of the Railroad Can be Twice That of a Highway**

- **The Railroad Can Move Nearly Twice as Many People Per Hour on One Track as a Single Lane of Interstate Highway and at Twice the Average Highway Speed**

SUMMARY (Cont'd)

- **Annual Operating and Maintenance Costs are Estimated to be $61 Million**

- **Annual Operating Revenues are Estimated to be $88 Million if the System Were Operating in 1991**

- **Revenues Would Cover All Operating and Maintenance Costs**

- **Surplus Revenues Will Be Used to Finance Some Project Construction Costs**

- **The Balance of the Project's Costs - $3 Billion - Will Need to be Financed by Other Sources**

- **These Sources Could be State, Private, or Federal and are Being Reviewed by ORO and Ohio High Speed Rail Authority**

PROJECT BENEFITS

- **Benefits From Construction (5 Yrs.)** **$5.4 Billion**
  - **71,000 Person Years**

- **Benefits From Operations (20 Yrs.)** **$3.2 Billion**
  - **79,000 Person Years**

- **User Benefits (20 Yrs.)**

- Time Savings	$ 0.4 Billion
- Avoidance of Auto Use	1.6 Billion
- Avoided Accidents	0.2 Billion
- Fuel Savings	0.3 Billion
	$2.5 Billion

- **Total Estimated Benefits** **$11.1 Billion**

- **Benefits of Accessibility and Mobility**

- **Creation of a New Industry/Image for Ohio**

- **Increased Activity Near Stations**

- **Reduction of Transportation Infrastructure Costs**

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ENVIRONMENTAL BENEFITS

- **Air Pollutant Reductions Over 20 Years**
  - **6.3 Million kg of Hydrocarbons**
  - **45.5 Million kg of Carbon Monoxide**
  - **4.8 Million kg of Nitrogen Oxides**

- **Energy Savings Over 20 Years**
  - **224 Million Gallons of Gasoline**

- **Noise Reductions**

PROJECT DESCRIPTION

- **Route is Cincinnati - Dayton - Springfield - Columbus - Mansfield - Cleveland**

- **Route Length - 260 Miles**

- **Nine Stations:**

  Cincinnati
  Cincinnati North
  Dayton
  Springfield
  Columbus
  Columbus North
  Mansfield
  Cleveland Southwest
  Cleveland

- **Electrically Powered**

- **Fully Automatic Train Control System**

- **Ballasted, Continuously Welded Rail With Concrete Ties**

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ROLLING STOCK

- 186 mph (300 km/h) Top Speed
- 25kV, 60 Hz Power
- 20kWh Per Train Mile Power Consumption
- Air Conditioned
- 2.24 mph/sec Acceleration
- 1.57 mph/sec Deceleration
- Interior Noise Will be Less Than in an Automobile
- Exterior Noise Will be Less Than a Diesel Bus
- Food and Beverage Service on all Trains
- Telephones in all Cars

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SERVICE PLAN

- **Trains Depart Columbus Cincinnati and Cleveland Every Hour From 0600 to 2200**

- **Special Trains for Special Events**

- **Two Minute Station Stops Except Four Minutes at Columbus**

- **All Reserved Seats**

- **Sample Fares**

	Business	Coach
Cleveland to Columbus	$75	$45
Columbus to Cincinnati	$60	$36
Dayton to Springfield	$24	$15

- **Reliable Service in all Weather Conditions**

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ENVIRONMENTAL IMPACTS

- 10 River Crossings
- 5 Known Wetlands
- Minimal Electromagnetic Interference
- Expected Air Pollutant Reduction
- Expected Energy Savings
- 10 State Nature Preserves Potentially Affected
- Several Identified Historic and Archaeological Sites
- Clean-Up of Hazardous Materials Expected on Railroad and Highway Property
- Visual Impacts
- Train Noise

COMMUNITY INVOLVEMENT

- **Meetings With Representatives of Cincinnati, Dayton, Springfield, Columbus, Mansfield, Brook Park and Cleveland**

- **Meetings with CONRAIL, CSXT and AMTRAK**

- **Presentations on Request**

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ESTIMATED CAPITAL COSTS

	Cost (in Millions of 1991 $)
RIGHT-OF-WAY	$ 243
TRACK AND STRUCTURES	1,245
ELECTRIFICATION	440
SIGNALS AND COMMUNICATION	166
STATIONS	44
YARDS AND SHOPS	46
Subtotal	$ 2,184
ROLLING STOCK COST	75
Subtotal	$ 2,259
CONTINGENCY - 20%	452
DESIGN AND MANAGEMENT	407
TOTAL	$ 3,118

OPERATION AND MAINTENANCE COSTS

	Annual Cost (in Millions of 1991 $)
PERSONNEL COSTS	
Administration	$ 7.7
Transportation	8.8
Engineering and Maintenance	21.8
Total Personnel Costs	$38.3
MATERIAL COSTS	
Equipment Maintenance	$ 3.8
Maintenance-of-Way	8.5
Electric Power	4.1
Other Costs	6.5
Total Material Costs	$22.9
TOTAL O&M COSTS	$61.2

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RIDERSHIP AND REVENUE

- **Ridership** 1991 1.8 Million

- **Rail Travelers are Estimated to be 5% of Total Travel Among the Cities Served**

- **Sources of Riders**

	1991 Riders	%
Auto	1,511,000	85
Air	26,000	1
Growth	49,000	3
Induced	192,000	11
	1,778,000	100

- **Business Travel is Estimated as 72% of All Trips**

- **Revenue** 1991 $88 Million

FINANCING

- **$3 Billion Needed from Public and Private Sources**
- **Federal Participation is Considered Likely**
- **Private Investors Have Expressed Interest, But are Not Yet Committed**
- **Net Operating Revenue will Help to Finance Part of the Project Cost**
- **Operating Surpluses, Federal Grants and Private Investment Will Reduce the State's Investment**
- **Use of Ohio Railroad Excise Tax Revenues Could Serve to Support Project Development**