
Economic Impacts of Complimentary Roadway and Airport Expansions

Steven Landau

Adam Winston

Economic Development Research Group

Presented by:
Steven Landau

Presented at:

I-TED 2011

INTERNATIONAL TRANSPORTATION ECONOMIC DEVELOPMENT CONFERENCE

*May 1-3, 2011
Charleston, WV*

Example Drawn from Multiple Airport/Ground Access Plans/Projects

Program:

- Airport Runway Extension
- Enhanced NAV Aids
- Airport Roadway Expansion

Example Drawn from Multiple Airport/Ground Access Plans/Projects

Goals:

- (1) Reduce average access time to an airport
- (2) Increase road reliability to that airport
- (3) Increase airside capacity through longer runway, which eliminates need for some air cargo to be trucked to more distant airport
- (4) Reduced aircraft delay

Potential Benefits

- Diverted some passenger and freight travel that previously used other airports
- Expanded roadway access to the airport is faster (car and truck), reducing delay
- Reduced flight disruption due to NAV, increasing reliability
- Freight carriers achieve better returns to scale, lowering costs to shippers
- Increase international exports of air dependent industries (electronics, etc.).
- New business activity is enabled through more and better connections through the airport (market access)

Direct Project Impact

Household Savings and Key Freight Industries

Sector	Travel Cost Savings
Household Spending	
Agriculture	
Manufacturing	
Transportation	
Wholesale & Retail Trade, Warehousing and Delivery Services	
TOTAL	\$

Benefit Cost Analysis

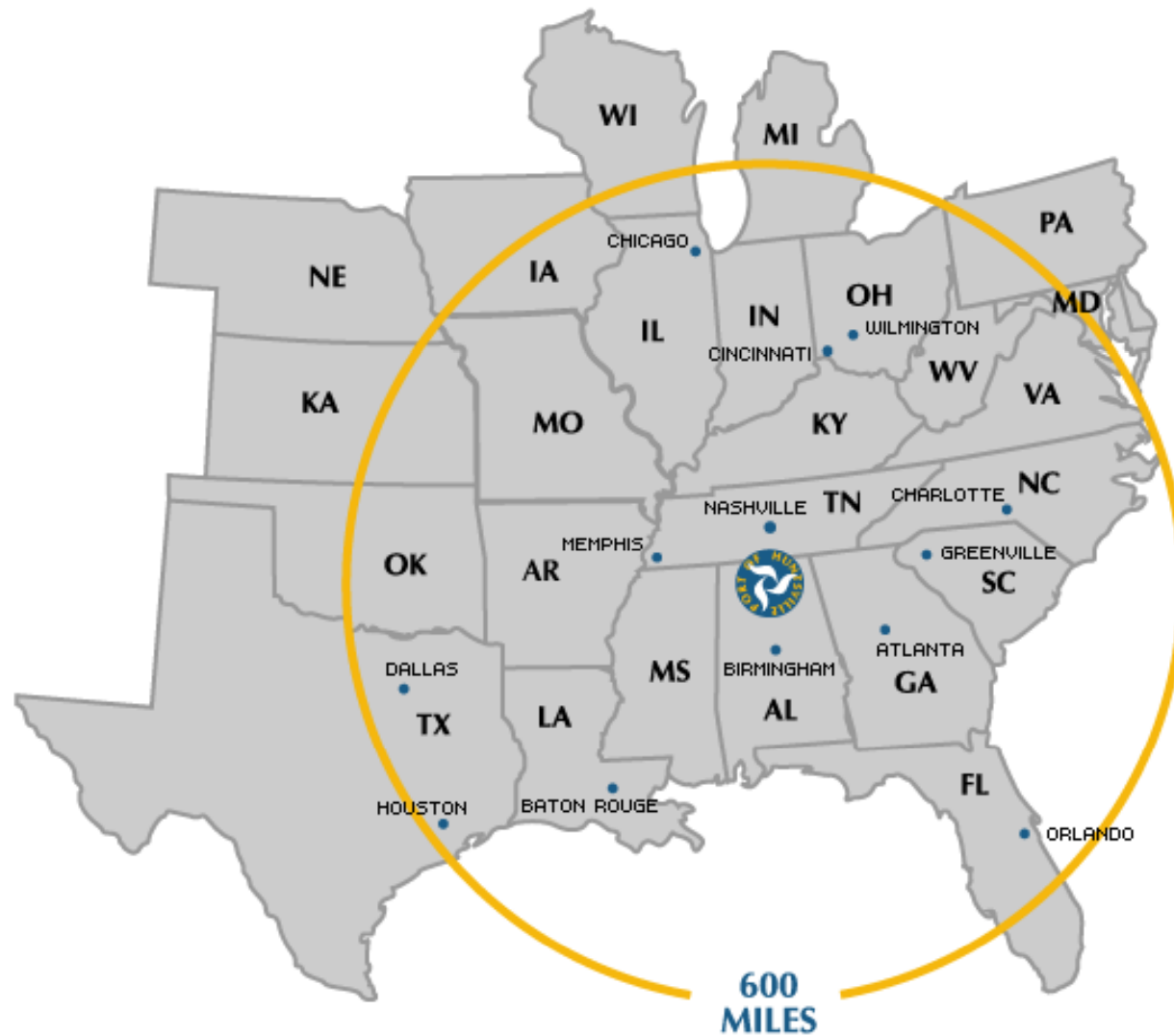
Gross Benefits By Mode	Traveler Benefits	
	Vehicle Operating Cost	Time & Reliability Costs
Passenger Car – On the Clock		
Passenger Car - Personal		
Truck - Freight		
Air Freight		
Passenger Air – On the Clock		
TOTALS	\$	\$

Net Present Value and BCA			
PV-Traditional	PV- Wider Benefits	BCA Ratio – Traditional	BCA Ratio -Wider Benefits
\$	\$		

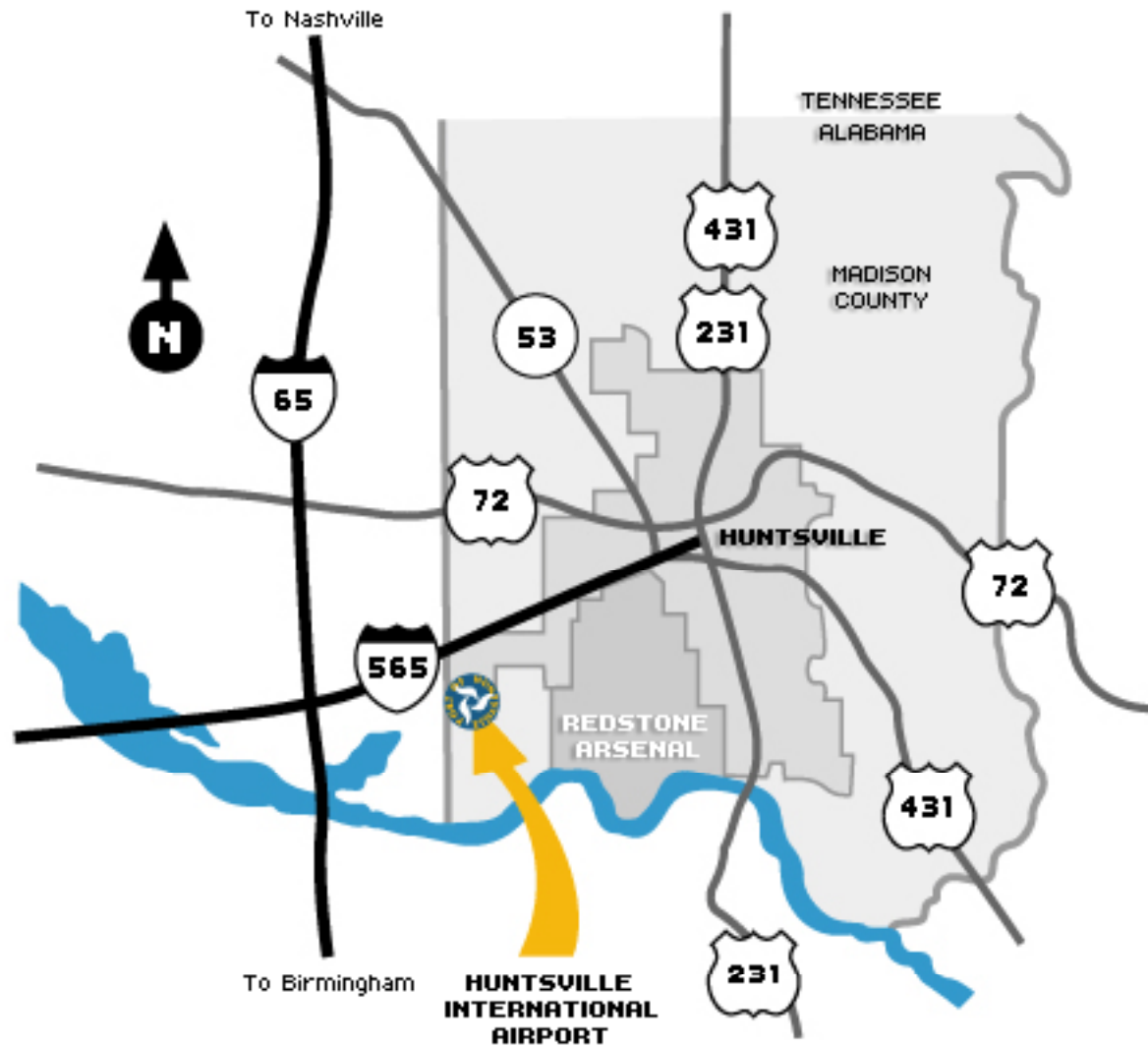
Case Studies

- Huntsville, AL
- Denver, CO

Port of Huntsville



Port of Huntsville



Project Definition – Huntsville

Vision

- 1960's - Develop Huntsville International Airport into a premier multimodal gateway.

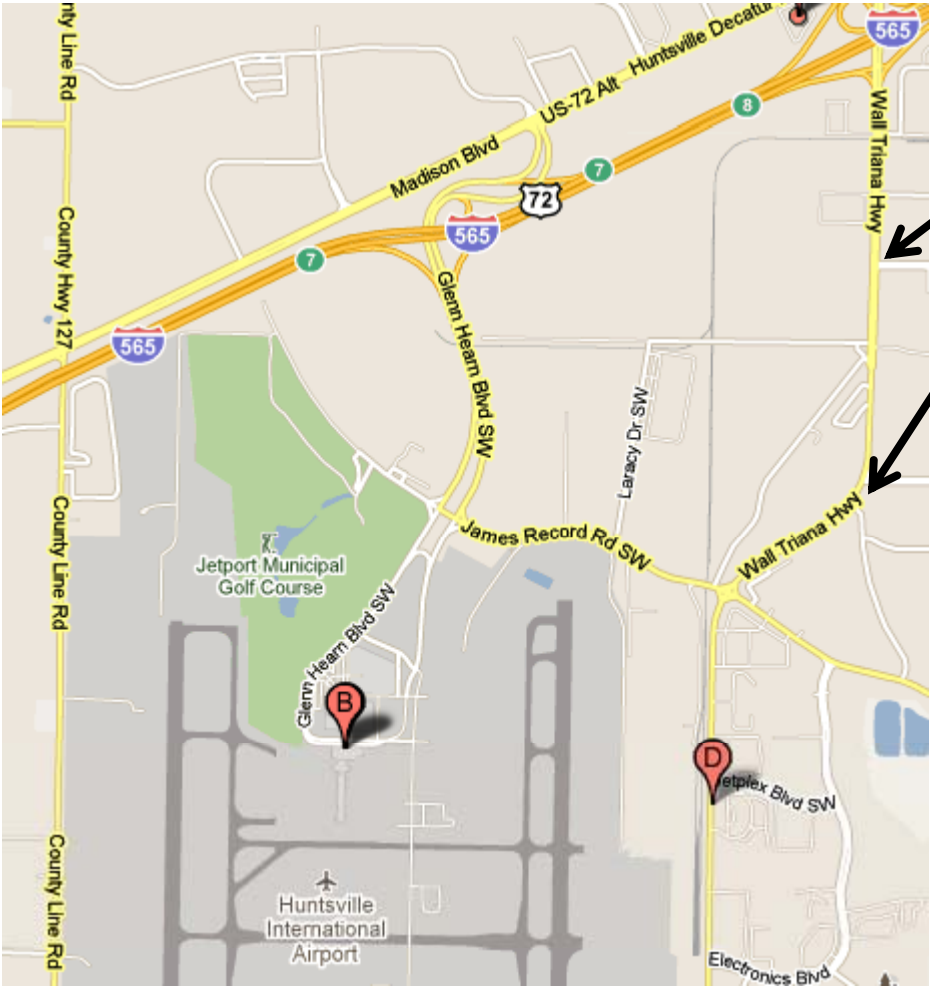
Project

- 1987: International Intermodal Center (IIC) was built: an inland port that provides a central location for receiving, transferring, storing, and distributing cargo by air, rail, and highway.

Access

- \$7.83 million (\$2008) of state funds were spent to construct the Wall Triana Highway, connecting the Port of Huntsville to I-565.

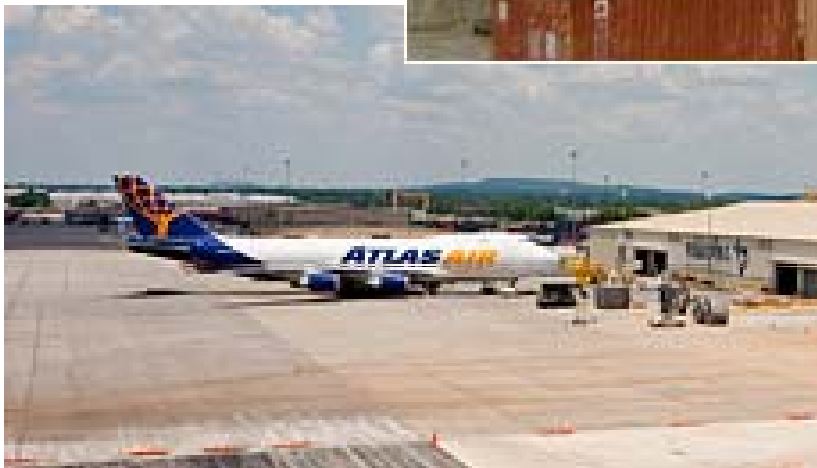
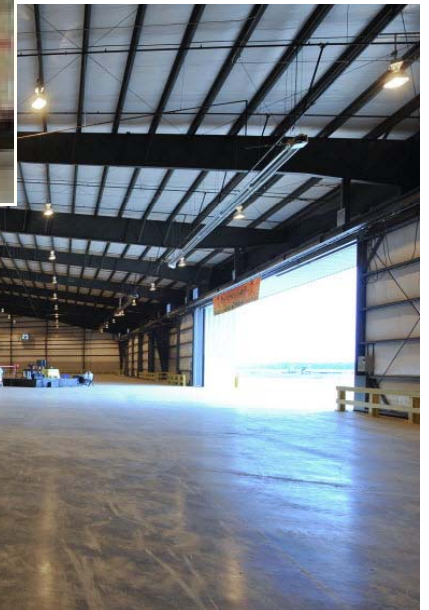
Wall Triana Highway



Intermodal – Rail cargo



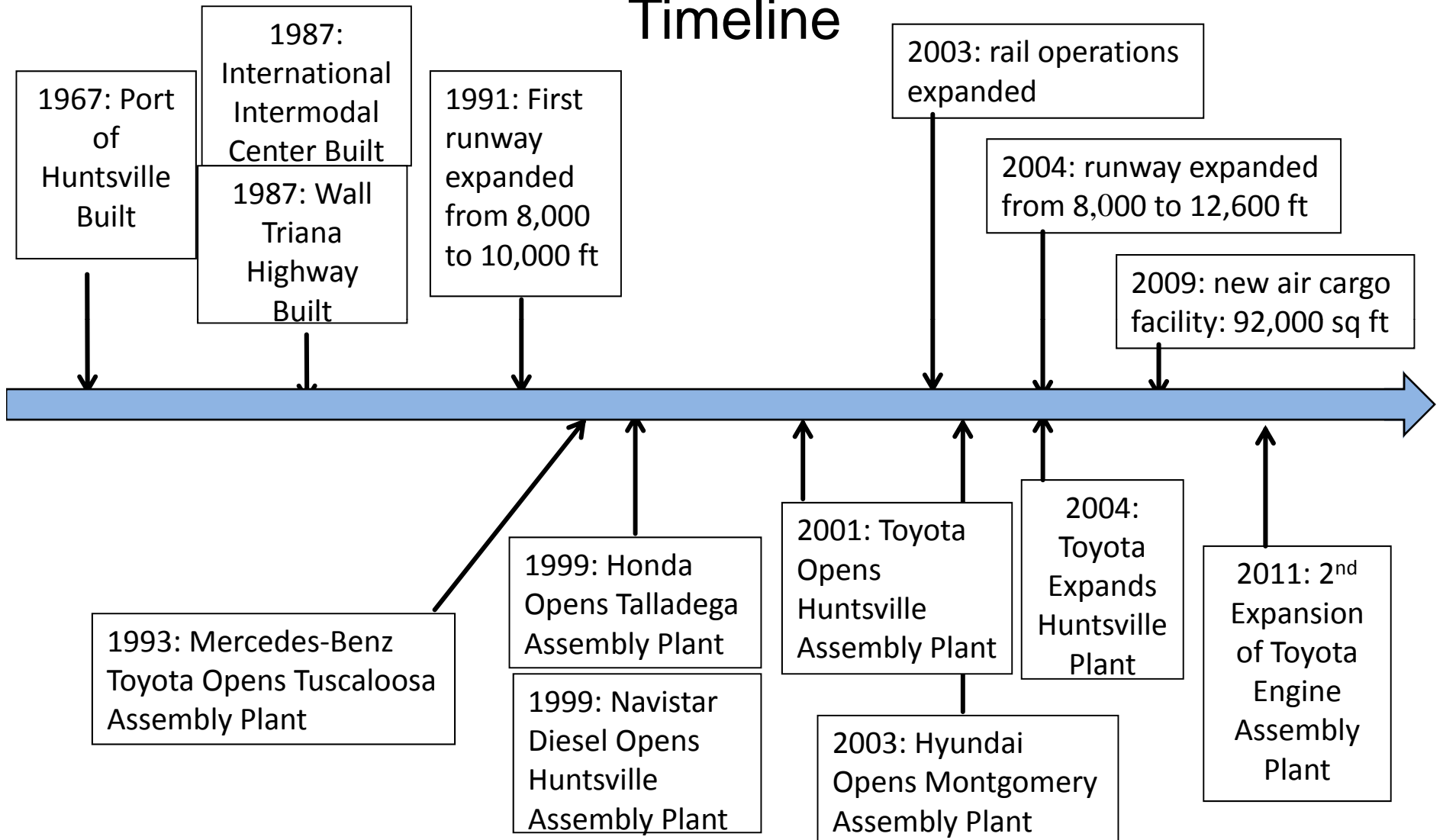
Intermodal – Air Cargo



Jet Plex Facility



Port of Huntsville and Regional Development Timeline



Huntsville

- 300,000 square feet for receiving, storing, transferring and distributing domestic and international air cargo.
- Air cargo building expansion: 92,000 feet in 2009
- Port officials and freight forwarders indicated sufficient space at the facility to meet all demand.
- No indications for constrained ground access from interviews with carriers

Denver International Airport



Denver International Airport

National growth in Air Cargo Freight

Forecasted air cargo growth rate at 6.4% annually from 1998-2007

Electronic Retailing increasing reliance on air shipments

Colorado Business Growth

High-tech and Bio-tech expanding air shipments

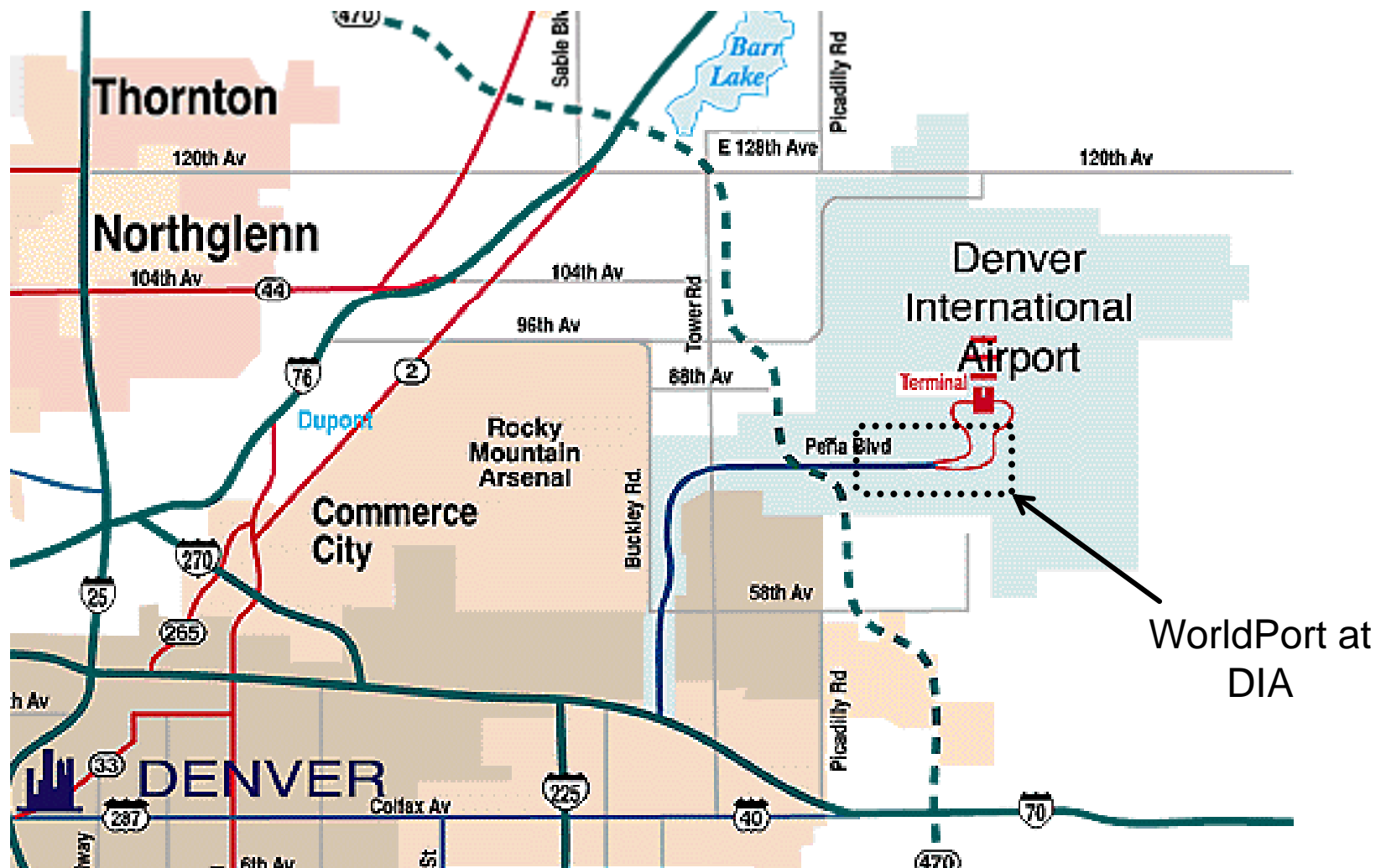
Capacity constraint at DIA

Cargo capacity at 519,000. Volume expected to increase to 800,000 tons by 2008.

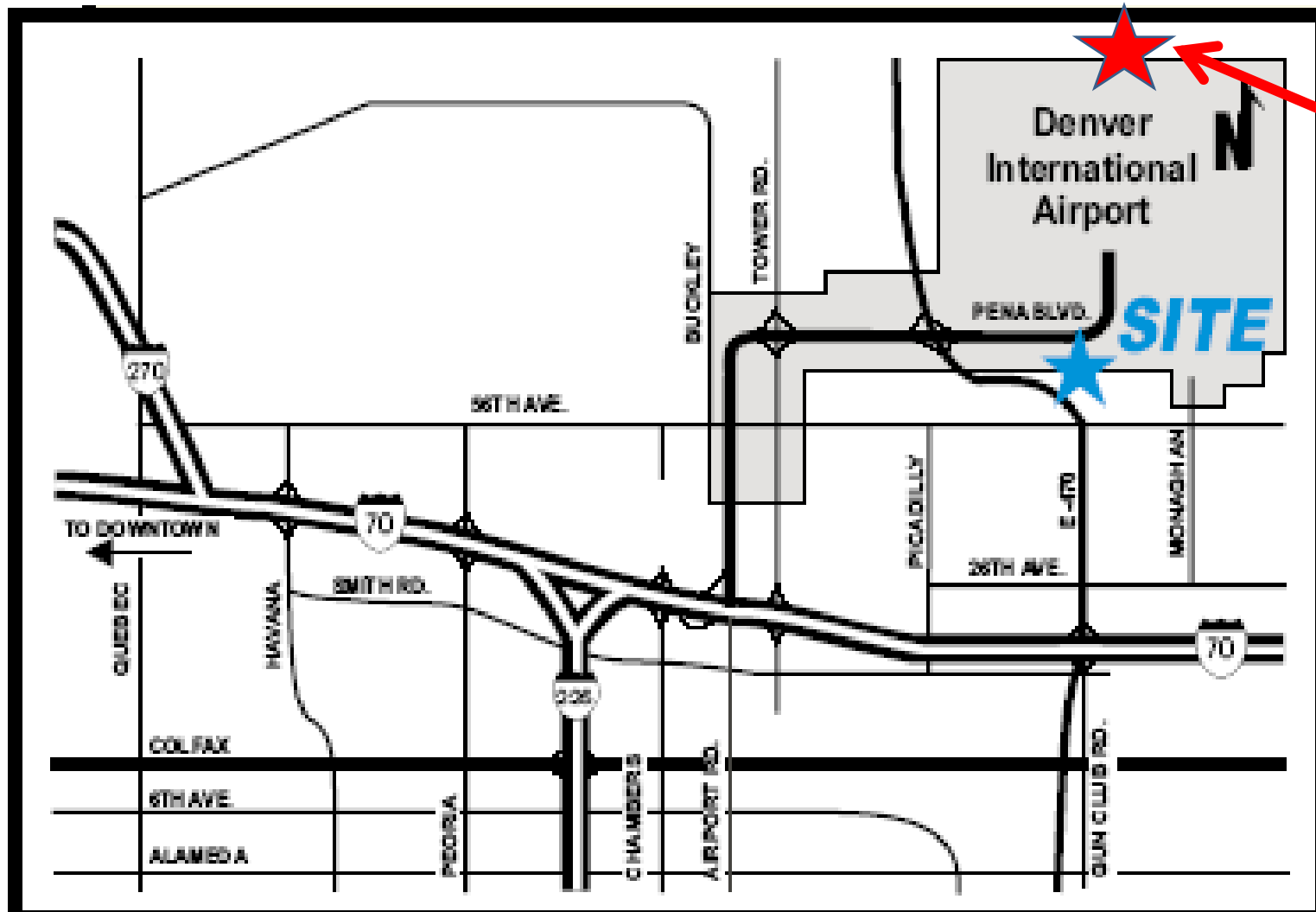
Development of two buildings for a total of 100,000 sq ft

Original plans: eight buildings equaling 495,200 sq. ft

Denver International Airport



Denver International Airport



Original
Planned
Site

DIA – Groundside Access

- Initial Plan
 - Build air cargo facility on north side near East 120th Ave
- Problem
 - Trucking companies said that the north side location was too far from I-70 and did not want to invest in facilities there.
- Solution
 - City agreed to change the cargo location to the south end in proximity to Pena boulevard which satisfied the trucking companies

World Port at DIA



Building #12

Building #11

Conclusions & Observations

- All airports are multimodal ground and air interchange terminals.
- It makes sense to measure the implications of related ground transport changes if an airport improvement project is expected to affect traffic on related roadways
- Many road system changes also may affect the travel routes of some people or cargo to and from the airport
- However, a “slippery slope” toward overreaching or double-counting benefits is introduced
- Further research is needed to untangle the relationships in multimodal interactions

Thank You

Steven Landau	Adam Winston
Economic Development Research Group	Economic Development Research Group
2 Oliver St. Boston MA 02109	2 Oliver St. Boston MA 02109
617-338-6775 x 206	617-338-6775 x 215
slandau@edrgroup.com	awinston@edrgroup.com
www.edrgroup.com	www.edrgroup.com