



**Nashville Regional Summit:
Lessons Learned in Implementing
Mass Transit**

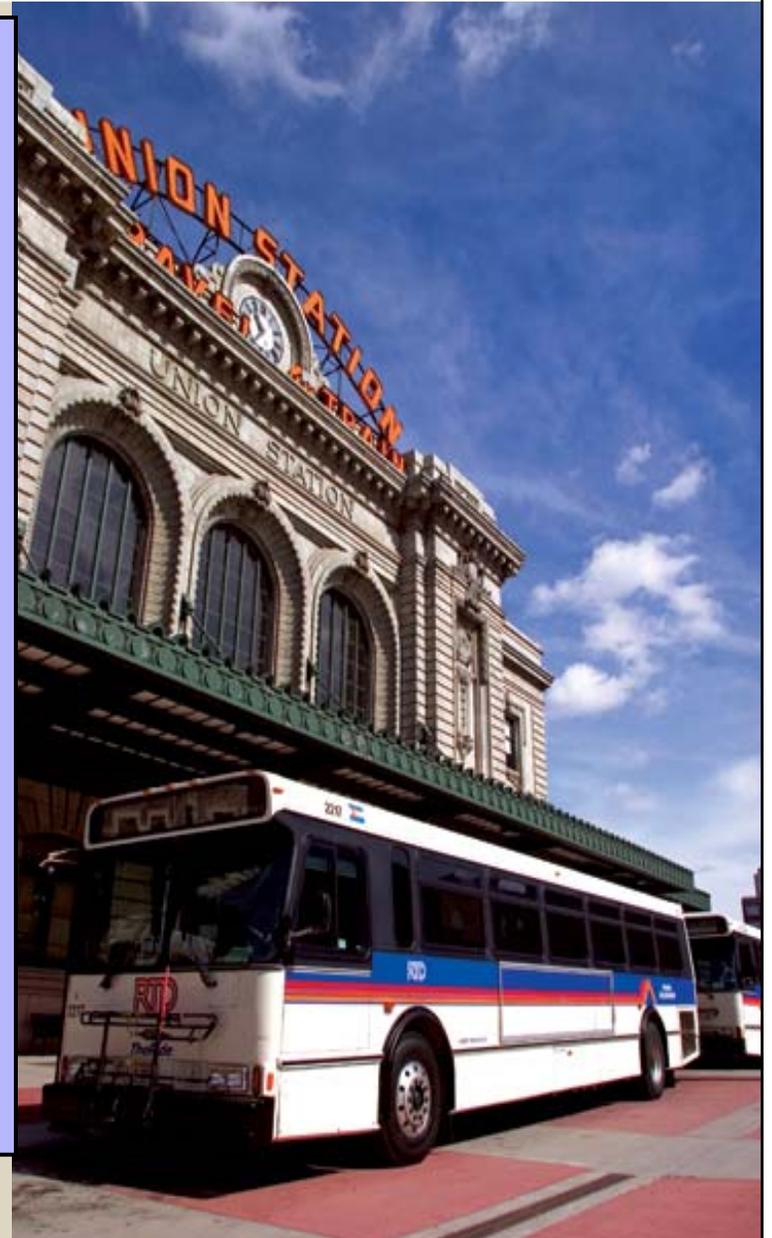
Cal Marsella, RTD General Manager

May 27, 2009



The Regional Transportation District

- Created in 1969
- Eight county service area
 - 40 municipalities
- Service area: 2,410 square miles
- 2.5 million population
- 15 elected Board members
- In 1994, the first Light Rail was opened in the region
 - Central Corridor





The Regional Transportation District

- 1,071 buses
- 91 light rail vehicles
- 175 routes
- 76 park-n-rides
- 10,329 bus stops
- 2,510 employees
- 35 miles of light rail
- 36 light rail stations
- 6 operating facilities
- 2 admin. facilities





RTD Cost Model

Retained Costs

- General Administrative Costs
- Financial Reporting and Budgeting
- Planning and Marketing
- Public Facilities
- Other Costs (Dispatch, Street Supervision, Service Monitoring, etc.)



RTD Cost Model

Non-Retained Costs

- Direct Costs
 - Labor (Operator, Mechanic, Service, etc.)
 - Consumables (Fuel, Repair Parts, etc.)
 - Direct Support (Unit/Body Shops, Warehouse, Liability, Workers Comp., etc.)
- Variable Overhead Costs
 - Facilities-related (Management-Transportation, Maintenance, Vault Pullers, Parts Clerks, etc.)
 - Indirect Support (Accounts Payable, Payroll, etc.)



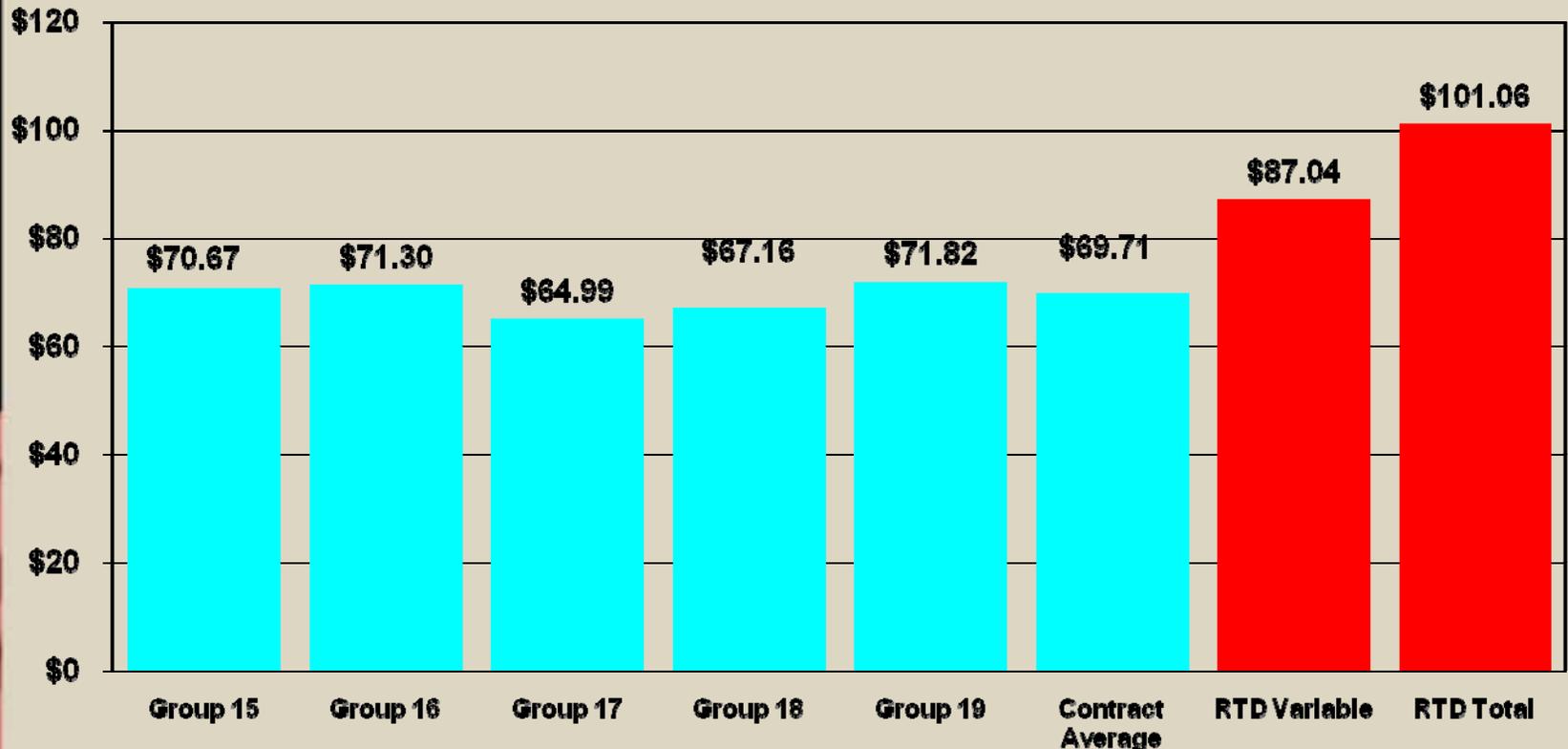
RTD Cost Model

Fixed Overhead Costs

- Operations Department Senior Management
- District Shops Facility Operations and Maintenance Costs



Comparison of RTD and Private Contract Costs - 2008



1. Private contractors pay fuel tax, sales tax, property tax, and vehicle registration fees which RTD does not pay.
2. RTD costs are estimates based on inflated 2007 actual costs.
3. RTD total costs include all variable costs, fixed costs, and depreciation on operating facilities and support equipment.
4. RTD has statutory limitation on insurance liability. Private carriers do not have statutory limitation on insurance liability.



Operating Expense per Vehicle Revenue Hour by Mode – 2007 NTD Reporting Year

City	Bus	Light Rail	Demand Response	Vanpool	Cable Car	Trolleybus	Heavy Rail	Automated Guideway	Commuter Rail	Ferryboat
Denver	\$95.21	\$86.83	\$58.23	\$21.77						
San Francisco	\$145.44	\$216.08	\$50.93		\$308.55	\$130.88				
Santa Clara	\$156.84	\$276.32	\$72.67							
Los Angeles	\$117.10	\$390.20		\$34.46			\$332.07			
Chicago CTA	\$126.13						\$145.07			
Chicago PACE	\$94.65		\$62.13	\$19.18						
Atlanta	\$96.28		\$60.16				\$205.98			
Miami-Dade	\$109.25		\$44.38				\$224.39	\$229.12*		
Minneapolis	\$111.26	\$168.71								
Salt Lake City	\$116.23	\$107.63	\$70.30	\$23.47						
Dallas	\$106.44	\$327.98	\$72.86	\$24.14					\$825.24	
Houston	\$100.25	\$236.82	\$43.47	\$20.97						
Milwaukee	\$101.56		\$60.72	\$22.65						
Philadelphia	\$122.14	\$138.56	\$48.56				\$176.94		\$326.68	
Pittsburg	\$127.03	\$300.90	\$45.12					\$50.18**		
Boston	\$122.27	\$210.49	\$50.74		\$186.92	\$178.34			\$318.25	\$465.58

* Miami People Mover

** Pittsburg Inclined Plane



Operating Expense per Vehicle Revenue Mile by Mode – 2007 NTD Reporting Year

City	Bus	Light Rail	Demand Response	Vanpool	Cable Car	Trolleybus	Heavy Rail	Automated Guideway	Commuter Rail	Ferryboat
Denver	\$6.89	\$4.64	\$4.13	\$0.53						
San Francisco	\$16.44	\$24.36	\$4.63		\$93.81	\$19.27				
Santa Clara	\$12.48	\$16.66	\$5.14							
Los Angeles	\$9.68	\$16.63		\$0.74			\$14.59			
Chicago CTA	\$12.76						\$8.01			
Chicago PACE	\$6.72		\$4.31	\$0.66						
Atlanta	\$7.89		\$3.40				\$7.80			
Miami-Dade	\$8.96		\$3.03				\$9.65	\$22.46*		
Minneapolis	\$9.42	\$11.52								
Salt Lake City	\$6.19	\$9.29	\$4.70	\$0.60						
Dallas	\$7.66	\$15.28	\$4.44	\$0.59					\$37.86	
Houston	\$6.96	\$17.15	\$2.43	\$0.058						
Milwaukee	\$7.89		\$4.49	\$0.50						
Philadelphia	\$11.81	\$15.10	\$5.03				\$9.10		\$12.14	
Pittsburg	\$9.53	\$22.57	\$2.98					\$17.40**		
Boston	\$11.44	\$20.99	\$3.92		\$19.38	\$12.40			\$10.00	\$31.21

* Miami People Mover

** Pittsburg Inclined Plane



Economic Impacts

- “New office buildings opening in southeast Denver are leasing well as long as they're next to a light-rail stop.”
- “ ‘If you’re on the (light rail), the market is pretty good.’ ”

The Denver Post

For new offices, it's all about the ride

Buildings in southeast Denver that are near light rail have no problems leasing, but other new projects aren't filling up.

By Margaret Jackson



The Palazzo Verdi office building at 6401 S. Fiddlers Green Circle in Greenwood Village is fully leased to Ciber and Newmont Mining. (Karl Gehring, The Denver Post)

Article Last Updated: 11/05/2008 11:42:54 PM MST

New office buildings opening in southeast Denver are leasing well as long as they're next to a light-rail stop.

Developer John Madden's Palazzo Verdi, which has direct access to the light-rail line, is 100 percent leased to Ciber and Newmont Mining. The building opens next week.

But Shea Properties' Maroon V, which does not have direct access to light rail, is sitting vacant. The building opened before Shea's Village Center Station, which is under construction along the rail line and is fully leased. Wireless-service provider Cricket and Shea will occupy the building.

One Lincoln Station at the end of the rail line in Lone Tree is fully leased to directory publisher Dex. The rail line runs from downtown along Interstate 25 and up Interstate 225.

"If you're on the (light-rail) line, the market is pretty . . . good," said Bob Whittelsey, a principal at Colliers Bennett & Kahnweiler Inc., who handled leasing for Palazzo Verdi. "If you're off the line, the market is fairly soft."



Economic Benefits

- It is estimated that for every \$1 invested in transit infrastructure translates into as much as a \$6 investment in the local economy.
- Every \$10 million capital investment in public transportation can return up to \$30 million in business sales alone.



Agency Funding

- .6% (6 cents on a \$10 purchase) sales tax revenue helps fund RTD's base system
- Each .1% raises approximately \$40 million per year in revenue
- .4% helps fund the FasTracks program
- Fare and pass revenue
- Bus advertisements



Transit-Oriented Development (TOD)

- Functional relationship between transit facility and surrounding development
- Pedestrian-oriented urban design & streetscape
- More compact and denser than existing adjacent development patterns
- Mix of uses
- Influence area of $\frac{1}{4}$ - $\frac{1}{2}$ mile from station





RTD's Role in TODs

- RTD is the “T” in TOD.
- The vision and direction for TOD has been established by the Denver Regional Council of Governments and the cities and counties.
- RTD plays a part in helping to facilitate this vision, but our main role is planning, building and operating a transit system.
- RTD supports TOD because we believe it is an important tool in helping the Denver region deal with its future growth challenges.



Regionalism

- To become a great City, you need to be a great Region
- Major trip attractions
 - Sport venues
 - Convention centers
 - Government facilities
 - Jobs
- Business spin-off





RTD Light Rail Projects

First Four Projects

Central Corridor

- Opened in 1994
- Ridership: 14,000 trips/day

Southwest Corridor

- Opened in 2000
- Ridership: 13,000 trips/day

Central Platte Valley Corridor

- Opened 2002
- Ridership: 3,000-5,000 trips/day

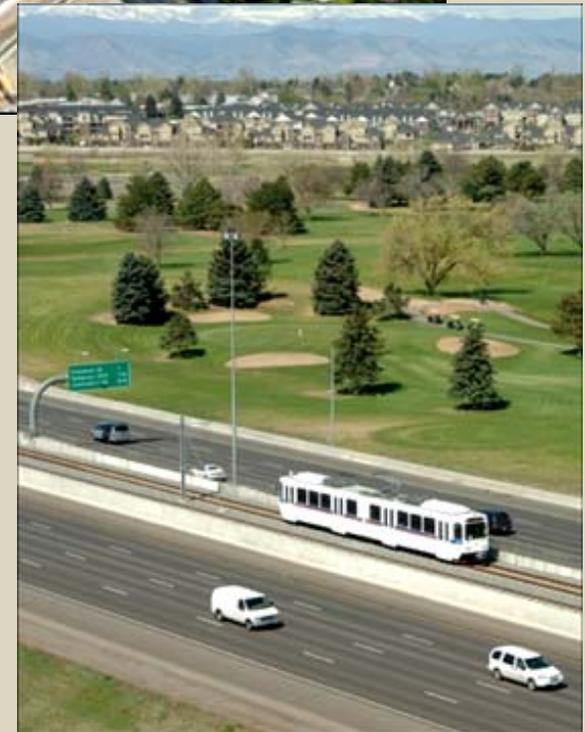
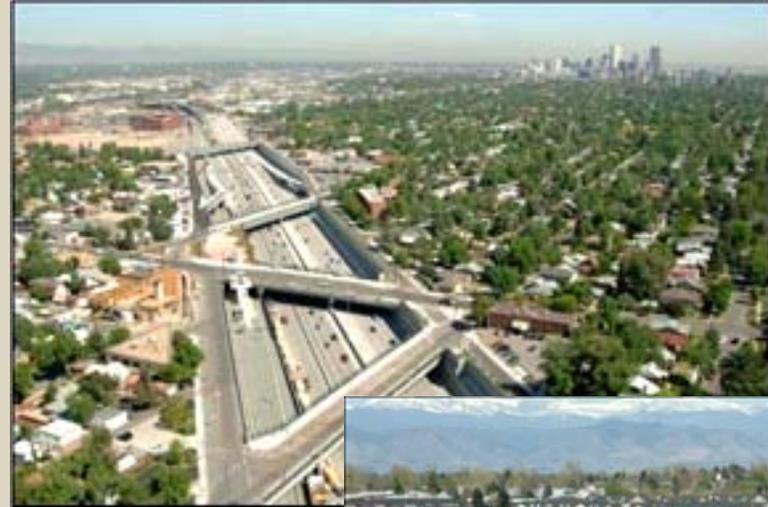
Southeast Corridor

- Opened 2006
- Ridership: 35,000 trips/day



The T-REX Project

- Partnership between RTD, CDOT, FTA, FHWA
- \$1.67 billion design/build project
- On time, on budget
- 19 miles of new light rail
- 13 stations
- 17 miles of highway expansion
- Feeder bus system
- 6,000 parking spaces





The FasTracks Program

- By 2001, RTD Board and local communities wanted a comprehensive, region-wide transit plan
- 100% RTD Board support
- Public vote in 2004 to fund the program
- 0.4% sales tax increase (\$.04 on \$10 purchase)
 - 0.6% was existing tax for base system
- Passed 58% to 42%
- Regional political support
 - All 31 metro mayors unanimously supported FasTracks
 - Strong support from Denver Metro Chamber, industry, and business community
- Professional campaign team
 - \$3.6 million raised for campaign



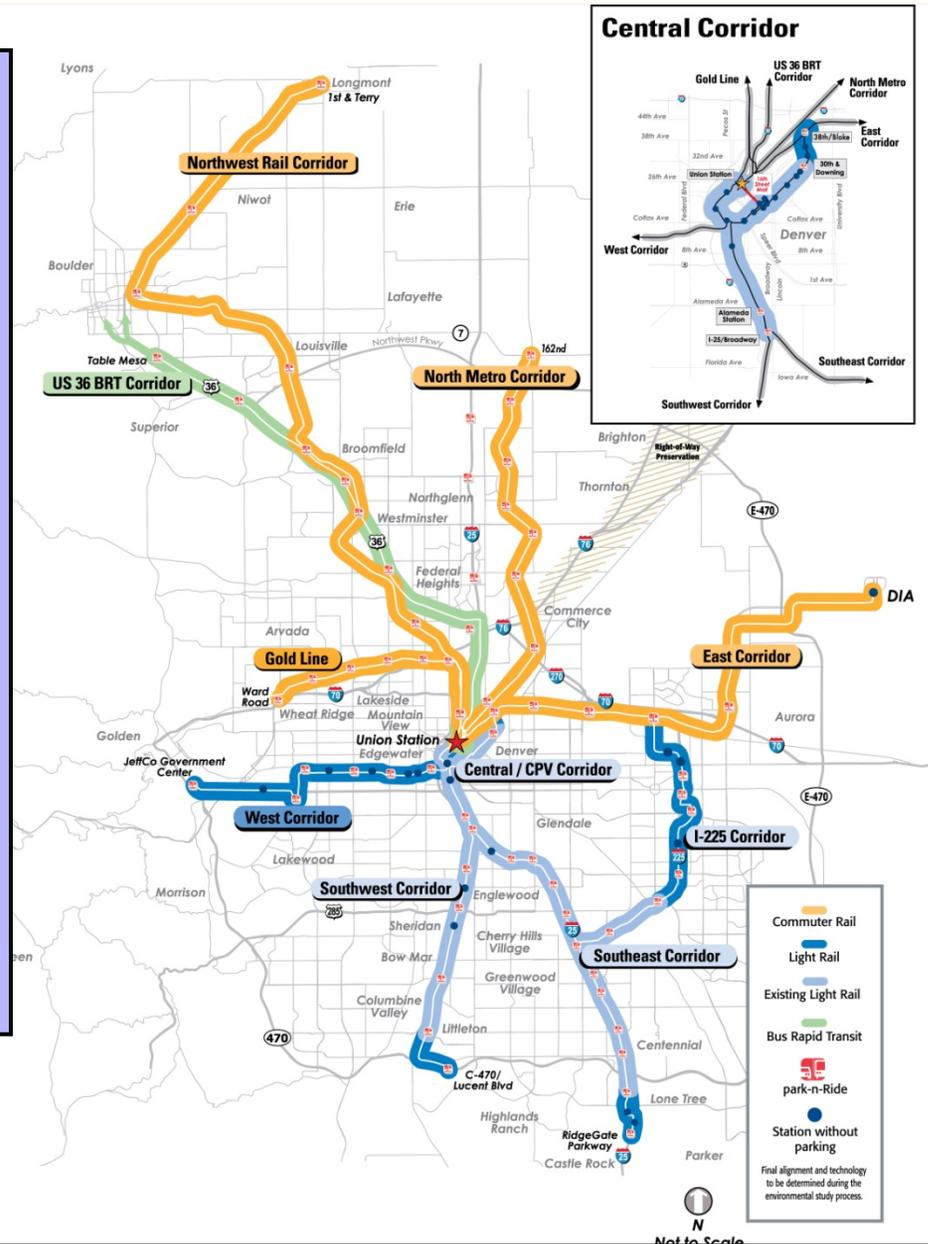
FasTracks support/opposition

- Political Support
 - Support from all 31 District Mayors
 - Including Denver Mayor John Hickenlooper
- Daily Newspapers
 - Strong support: Denver Post
 - Fervent opposition: Rocky Mountain News (13 editorials against)
- Opposition from Governor and State DOT
- Strong campaign – professional campaign team
 - \$3.6 million
- Strong support from Denver Metro Chamber, industry, and overall business community



The RTD FasTracks Plan

- 122 miles of new light rail and commuter rail
- 18 miles of Bus Rapid Transit (BRT)
- 31 new park-n-Rides with over 21,000 new spaces
- Enhanced Bus Network & Transit Hubs (FastConnects)
- Redevelopment of Denver Union Station





Denver Union Station – Master Plan





FasTracks Facts

- **Short-term**
 - Drives our economy through the recession
 - Creates more than 10,000 construction jobs at height of construction
- **Long-term**
 - Reliable, safe regional transit system
 - Environmental – reduces emissions
 - Transportation – provides commuters with options
 - Connects entire labor market to jobs network



Strong Support for FasTracks

- Support for FasTracks continues to grow:
 - 2004 – Metro Mayors Caucus unanimous support
 - 2004 – 58% voter approval for .4% tax
 - 2007 – 79% public support for FasTracks
 - 2009 – Metro Mayors recommend tax increase
 - 2009 – 83% public support for FasTracks
- RTD Board currently considering a tax increase to complete FasTracks by 2017
 - Additional tax would begin in 2011 and have a sunset provision



Lessons Learned

- Visioning
 - Should be lofty, but attainable and grounded
 - Should capture the region's imagination and be embraced throughout the transit district
- Importance of Regionalism
- Do your homework
 - Major Investment Studies
 - Don't recreate the wheel
 - Use the regional growth and vision plans
- Effective Management
 - Manage your organization in a business-like fashion
 - Earn the public's trust



Lessons Learned cont.

- Smart Investments
 - Make first investments successful
 - Accurate cost estimate
 - Schedule
 - Good ridership results
- Development
 - Transit investment profoundly impacts development
- Maintain Quality
- Different view and different ideas
 - Understand that Republicans and Democrats have different perceptions
 - Wise transit investments apply to BOTH



Questions?