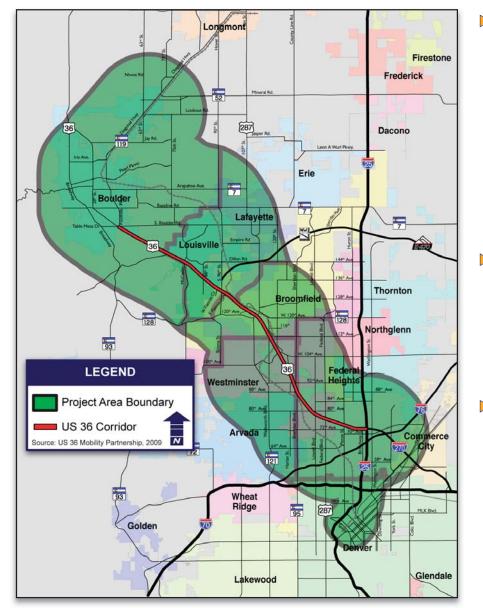








# US 36 ENVIRONMENTAL IMPACT STATEMENT



- Since 2003, the Colorado Department of Transportation (CDOT) and the Regional Transportation District (RTD), in conjunction with the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA), have been studying transportation improvements along 18 miles of US 36 between Denver and Boulder in the US 36 Environmental Impact Statement (EIS) study.
- The purpose of the US 36 project is to improve mobility along the US 36 corridor from I-25 in Adams County to Foothills Parkway/Table Mesa Drive in Boulder, and among intermediate destinations.
- Needs:
  - Increase trip capacity
  - Expand access
  - Provide congestion relief
  - Expand mode of travel options
  - Increase efficiency of transit services
  - Update outdated highway facilities

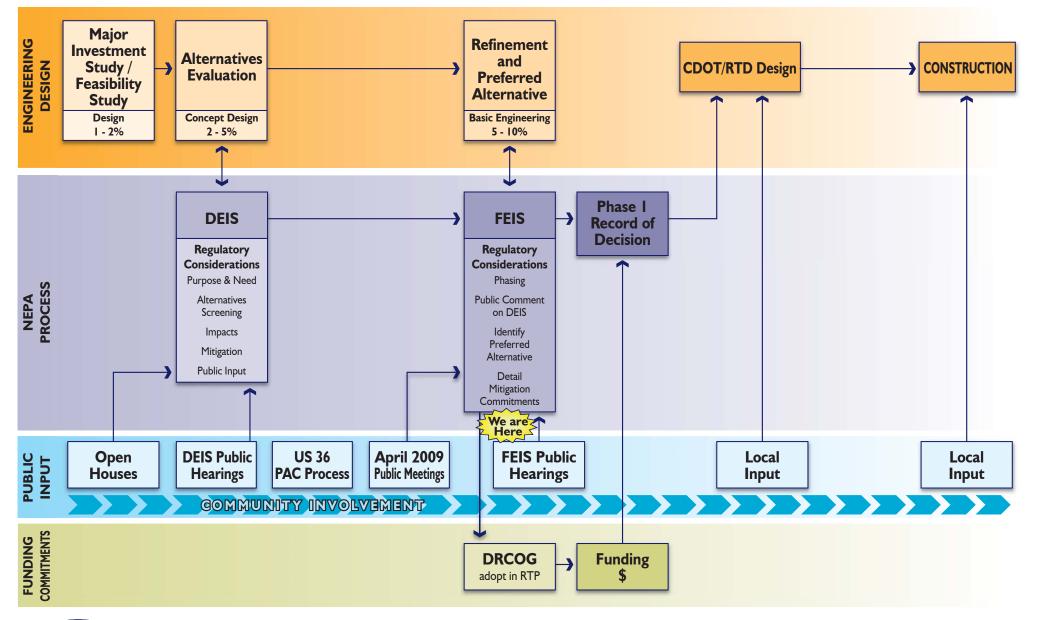




	2007	2008	2009						FUTURE						
PHASE			JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	FUTURE
Prepare DEIS															
Public Review	_														
Combined															
Alternative															
Development															
Prepare FEIS															
Public Review															
Phase I															
Record of														*	
Decision															
Identify															
Funding									1	1	Ц.	Ц.	1	Ц	
Final Design &															
Construction															



# PROJECT DEVELOPMENT FLOWCHART





### US 36 PREFERRED ALTERNATIVE COMMITTEE PROCESS TO IDENTIFY A PREFERRED ALTERNATIVE

#### HOW THEY CAME TO BE:

In order to respond to public and jurisdiction comment, a U.S. 36 Preferred Alternative Committee (PAC), a 21-member group comprised of agency representatives, elected officials and technical staff from local jurisdictions, was convened.

### **PURPOSE:**

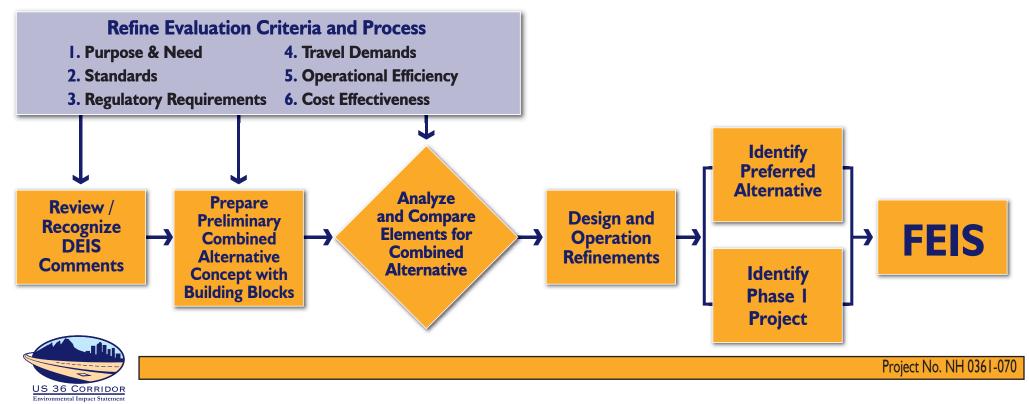
The US 36 PAC has met since January 2008 to identify the Preferred Alternative for inclusion in the U.S. 36 Final Environmental Impact Statement.

### **ISSUES ADDRESSED:**

- Access to Broadway
- Auxiliary lanes
- Bus Rapid Transit operations and stations
- West End design options

- Access to managed lanes
- Bikeway
- Travel Demand Management

### **US 36 PREFERRED ALTERNATIVE COMMITTEE PROCESS:**

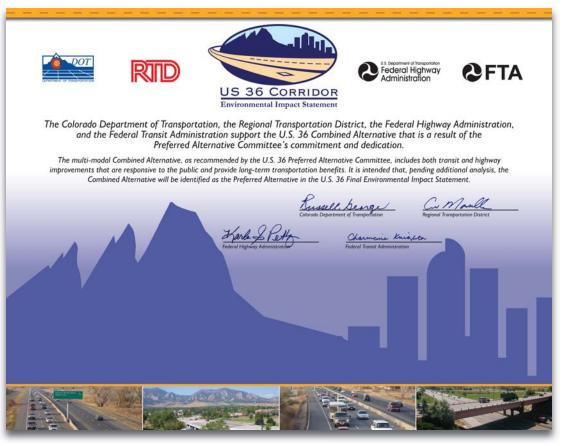




#### US 36 PAC Members

A 21-member group comprised of agency representatives, elected officials and technical staff from local jurisdictions.

- Adams County
- Boulder County
- Jefferson County
- City & County of Denver
- City & County of Broomfield
- City of Westminster
- City of Louisville
- City of Superior
- City of Boulder
- Federal Highway Administration
- Federal Transit
  Administration
- Colorado Department of Transportation
- Regional Transportation
  District
- U.S. Army Corps of Engineers
- ▶ 36 Commuting Solutions







#### OUTCOME

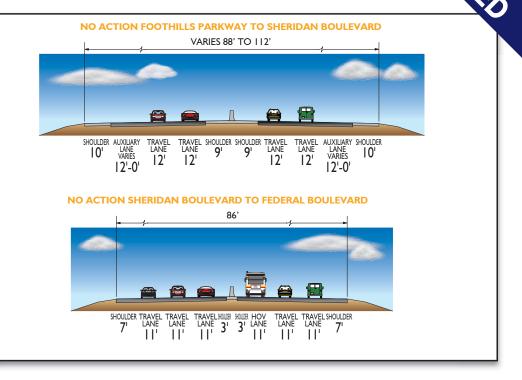
- July 2008: Reached consensus agreement on the "Recommendation for a Combined Alternative"
- The Combined Alternative Package includes both transit and highway improvements that are responsive to the public and provide long-term transportation benefits.
- Combined Alternative Package identified as the Preferred Alternative in the U.S. 36 Final EIS





**No Action** 



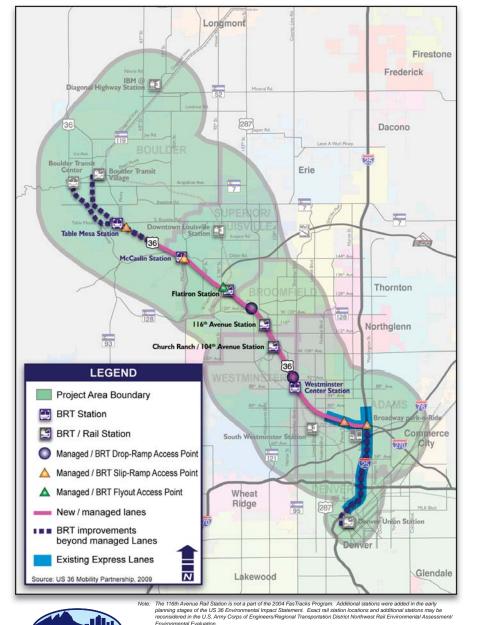


- No improvements beyond those already under way or funded for future construction
- Includes minor bus system improvements but no additional highway capacity
- Used as the basis for evaluation of build alternatives





### Managed Lanes, Bus Rapid Transit (BRT), and Bikeway



US 36 CORRIDOR Environmental Impact Statement

MANAGED / BRT - CHERRYVALE ROAD to S. 88th STREET 132' TO 180' T TRAVEL TRAVEL STRIPED MANAGEDI SHOULDER LANE LANE BUFFER BRT 12' 12' 12' 4' 12' SHOULDEF SHOULDER MANAGEDI STRIPED TRAVEL TRAVEL BRT BUFFER LANE LANE 12'4'12'12' 12 MANAGED / BRT - S. 88th STREET to PECOS STREET 184' TO 232' 🖨 🖽 sHOULDER AUXILIARY/ TRAVEL TRAVEL 12' ADDITIONAL LANE LANE LANE 12' 12' 0-24'  $\begin{array}{c|c} \text{SNOW} & \text{MANAGED} &$ shoulder LANE TRAVEL AUXILIARY SHOULDER LANE ADDITIONAL 12' 12' 0-24' MANAGED / BRT with a BRT STATION 278' R SHOULDER SNOW MANAAGED) 2' STORAGE BRT SHOULDER LANE 10' 12' STOPPING THROUGH HOULDER THROUGH STOPPING LANE LANE 2' LANE LANE 12' 12' 12' 12' 12' PLATFORM HANAGEDI SNOW SHOLLDER SHOLLDER BRT STORAGE/ LANE SHOLLDER 2' 12' 12' 10' TRAVEL TRAVEL SHOULDER LANE LANE 12' SHOULDER TRAVEL TRAVEL 12' LANE LANE 12' 12' 12' shoulder BRT LANE 12' PLATFOR souder 4' BRT LANE 12' shoulde 4'

- Two new managed lanes in each direction in median of US 36 from I-25 to west of McCaslin interchange
- Barrier-separated managed lanes can be used by buses and HOVs for free, and SOVs for a fee
- Improvements to all interchanges
- In-line BRT stations in median of US 36
- No additional general purpose lanes
- Transportation demand management
- Bikeway between Westminster and Boulder
- Cost = \$1.8 billion



### General Purpose Lanes, Bus Rapid Transit (BRT), HOV Lanes, and Bikeway



Note: The 116th Avenue Rail Station is not a part of the 2004 FasTracks Program. Additional stations were added in the early planning stages of the US 36 Environmental Impact Statement. Exact rail station locations and additional stations may be reconsidered in the U.S. Army Corps of Engineers/Regional Transportation District Northwest Rail Environmental Assessme Environmental Evolution.

GENERAL PURPOSE LANES. HOV and BRT - FOOTHILLS PARKWAY to EAST FLATIRON CIRCLE a a ( TRAVEL BUFFER BRT/ LANE 4' HOV 12' LANE 12' BRT/ BUFFER TRAVEL HOV 4' LANE LANE 12' shoulder auxiliary 12' lane 12' travel LANE 12 shoulder shoulder AUXILIARY SHOULDER LANE **GENERAL PURPOSE LANES, HOV and BRT - EAST FLATIRON CIRCLE to I-25** 180 a 🗛 🖴 TRAVEL BUFFER BRT/ LANE 4' HOV 12' 12' shoulder 12' BRT/ BUFFER TRAVEL HOV 4' LANE LANE 4' 12' shoulder 12' TRAVEL/ AUXILIARY LANE TRAVEL TRAVEL/ AUXILIARY LANE I 2' SHOULDER LANE LANE HOULDE 12 **GENERAL PURPOSE LANES, HOV and BRT with a BRT STATION** 240  $\begin{matrix} \text{TRAVEL} & \text{BUFFR} \\ \text{LANE} & 4' \\ 12' \end{matrix}$ shoulder TRAVEL LANE travel LANE BRT/ HOV LANE STOPPING THROUGH SHOLLDER THROUGH STOPPING LANE LANE 2' LANE LANE 12' 12' 12' 12' PLATFORM 17 BRT/ BUFFER HOV 4' LANE 4' TRAVEL LANE TRAVEL LANE shoulder SHOULDER 910UD8 LANE 17

- Additional general purpose lanes from I-25 to Boulder; number of lanes varies according to demand
- Buffer-separated BRT/HOV lanes in median of US 36 from I-25 to Boulder
- Improvements to all interchanges
- In-line BRT stations in median of US 36 to provide rapid passenger boarding
- Carpools and vanpools allowed in BRT/HOV lanes; no single-occupant vehicles allowed
- Transportation demand management
- Bikeway between Westminster and Boulder
- Cost = \$1.6 billion

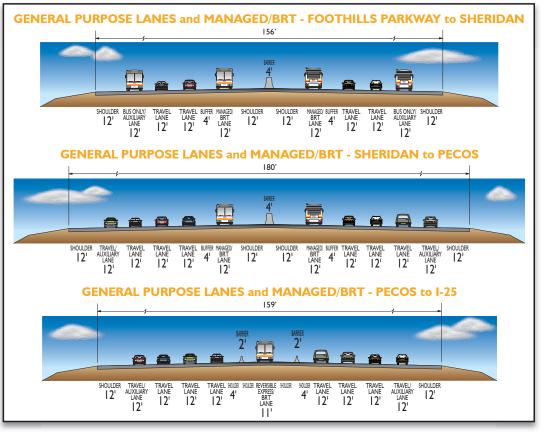


## PREFERRED ALTERNATIVE

(Combined Alternative Package) Managed Lanes, Bus Rapid Transit (BRT), Auxiliary Lanes, and Bikeway



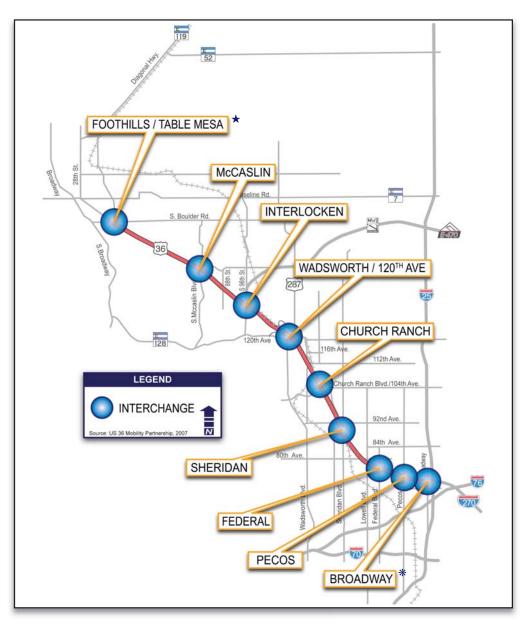
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- One new buffer-separated, managed lane in each direction
- Managed lanes can be used by buses and HOVs for free, and SOVs for a fee
- Auxiliary lanes between most interchanges
- Improvements to all interchanges
- Ramp and side-loading BRT stations
- Transportation demand management
- Bikeway between Westminster and Boulder
- Cost = \$1.3 billion



## PREFERRED ALTERNATIVE HIGHWAY ELEMENTS



- Managed lane access points between each interchange
- Auxiliary lanes between most interchanges
- Interchange improvements at nine locations
- Replace aging infrastructure such as pavement and bridges
- Separate study to evaluate local access will be done before any action occurs regarding this interchange
- ★ Improvements pending Public-Private Partnership.



Project No. NH 0361-070

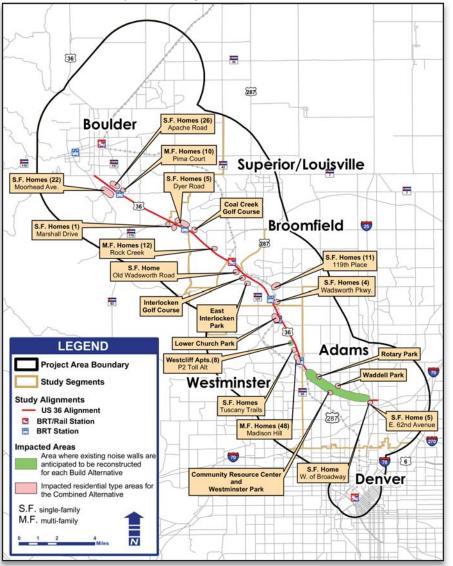
# **RIGHT-OF-WAY (ROW) IMPACTS**

IMPACT	SEGMENT	PACKAGE 2	PACKAGE 4	PREFERRED ALTERNATIVE		
Number of Residential Dwelling Units Displaced	Denver	0	0	0		
	Adams	171	172	41		
	Westminster	21	21	22		
	Broomfield	8	8	0		
	Superior/Louisville	0	0	0		
	Boulder	I	I	2		
	Total	201	202	65		
Number of Businesses Displaced	Denver	0	0	0		
	Adams	56	56	9		
	Westminster	28	28	10		
	Broomfield	21	18	5		
	Superior/Louisville	0	0	0		
	Boulder	33	33	0		
	Total	138	135	24		

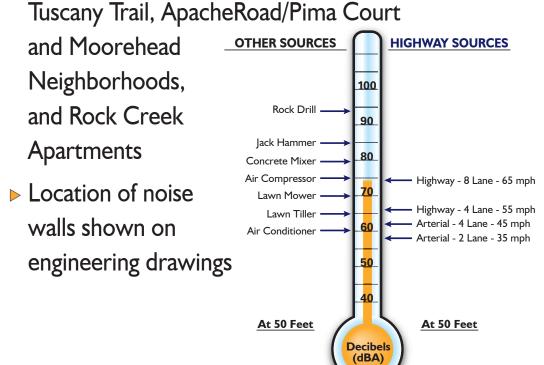


# NOISE IMPACTS AND PROPOSED MITIGATION

Location of Noise Impacts & Mitigation



- ▶ 114 residences impacted by Package 1
- I 26 residences impacted by Packages 2 and 4
- I 35 residences impacted by Combined Alternative Package
- Noise mitigations are proposed at Madison Hills,



\* CDOT threshold for noise mitigation in residential, park, church and similar use areas is 66 dbA



## PROPOSED US 36 BIKEWAY





Project No. NH 0361-070





## Resources studied in the US 36 Final EIS:

- Traffic
- Land Use
- Economics
- Right-of-way
- Social Impacts and Community Facilities
- Environmental Justice
- Cultural Resources (Historic and Archaeology)
- Paleontology
- Parks and Open Space
- Public Safety and Security
- Visual and Aesthetic Resources
- Air Quality
- Noise
- Biological Resources (Wildlife, Vegetation, and Threatened and Endangered Species)
- Mineral Resources, Geology, and Soils
- Farmlands
- Hazardous Materials
- Utilities
- Energy
- Water Resources (Water Quality and Floodplains)
- Wetlands and Other Waters of the U.S.
- Construction Impacts
- Cumulative Impacts
- Impacts of each resource identified
- Mitigation measures developed for identified impacts
- See US 36 Final EIS for details





## PHASE I

- Regional bus service enhancements
- FastConnects and local bus service enhancements
- Ticket vending machines at BRT stations
- Fare box upgrades (systemwide)
- Fiber along US 36 and to the BRT stations
- Transportation Demand Management, including marketing and branding for BRT
- Safety measures at BRT stations (e.g., cameras)
- Variable message signs at BRT stations
- Bus instrumentation to allow real time transit data collection (systemwide)
- Smart cards (systemwide)

## **FUTURE PHASES**

- Special vehicles
- Enhanced RTD paint scheme
- Bus ramp metering bypass lanes
- Queue jumps







Transportation demand management (TDM) consists of methods and strategies to reduce the demand for travel, particularly single-occupant vehicle (SOV) travel, either by eliminating trips, shortening trips, changing the mode of travel, or changing the time of day when the trip is made.

### **US 36 TDM Elements:**

- Similar to I-25 Transportation Expansion project (T-REX)
- Primarily during construction
- Establishment of an advisory task force
- Task force would identify stakeholder performance measures and programs

### POSSIBLE PROGRAMS:

### Vanpools and carpools

- Matching services
- RideArrangers
- Subsidies and formation services

### **Financial incentives**

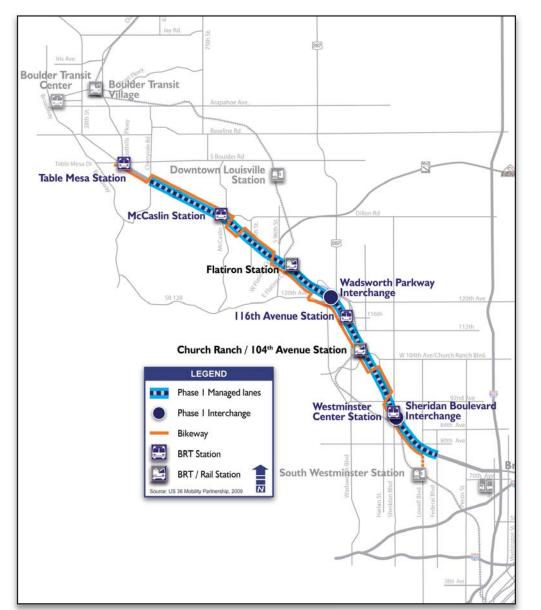
- Transit pass subsidies
- Vanpool subsidies

### Stakeholder outreach and education

- Web sites
- Alternative work schedules
- Telecommuting/compressed work week
- Preferential parking programs
- Bicycle commuting support



# PHASE I OF THE PREFERRED ALTERNATIVE



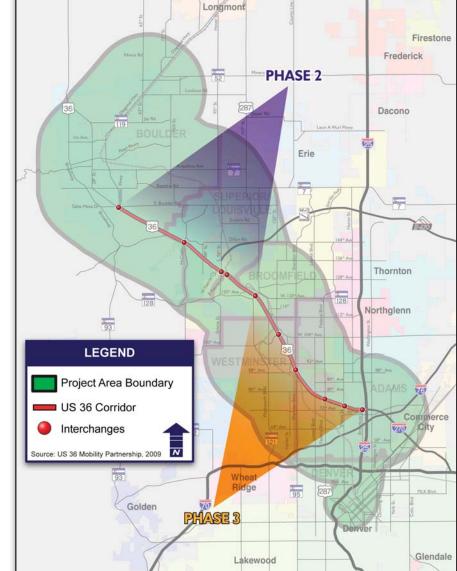
- Build managed lane from
  Federal Boulevard to Boulder
- Enhance BRT stations and service
- Reconstruct Sheridan Boulevard and Wadsworth Parkway Interchanges
- Replace Lowell Boulevard and I 12<sup>th</sup> Avenue bridges
- Rehabilitate and widen pavement
- Construct bikeway between Boulder and Westminster
- Cost = \$536.0 million



# PHASES 2 AND 3 OF PREFERRED ALTERNATIVE

### PHASE 2

- Foothills Parkway/Table Mesa Drive to east of Wadsworth Parkway
- Auxiliary and climbing lanes
- BRT improvements
- Pavement reconstruction
- Interchange improvements
  - Foothills Parkway/ Table Mesa Drive
  - McCaslin Boulevard
  - Interlocken Loop
  - Wadsworth Parkway



### PHASE 3

- East of Wadsworth
  Parkway to I-25
- Auxiliary lanes
- BRT improvements
- Pavement reconstruction
- Interchange improvements
  - Church Ranch Boulevard/ 104th Avenue
  - Federal Boulevard
  - Broadway/I-25



# **RESOLUTION OF BROADWAY ACCESS**

- Comments at April 2009 public meetings
- Follow-up discussion with Adams County and Save Your Neighborhood Access (SYNA)
- Process and Final EIS language approved by Adams County and SYNA
  - No Changes to Access in Phase I
  - Separate study to evaluate local access will be done before any action regarding this interchange







- Visit the CDOT Web site for current information about the project - www.dot.state.co.us
- Visit the RTD Web site for current information about the project www.RTD-FasTracks.com





- Be involved with 36 Commuting Solutions www.36commutingsolutions.org
- Contact your local government representative







Contact CDOT at: CDOT Public Relations Office 4201 E. Arkansas Ave. Denver, CO 80222 (303) 757-9228 info@dot.state.co.us

Project No. NH 0361-070