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denver & the west | truth be tolled - pt. III  
A fork in C-470  
May sway how state adds lanes

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**LINE DRAWN** | Two proposals for the expansion of C-470 between I-25 and South Kipling Parkway aren't headed in the same direction. The state wants four new toll lanes costing \$325 million, while local officials and many residents in the C-470 corridor are pushing for a sales-tax increase that would pay for two new non-tolled lanes. (Post / Craig F. Walker)

The battle over an aging 12.5-mile section of C-470 could determine the future of toll roads in Colorado.

For the Colorado Tolling Enterprise's first major project, transportation officials have targeted the stretch of C-470 between Interstate 25 and South Kipling Parkway for new toll lanes costing \$325 million.

Yet local officials and many residents in the C-470 corridor say the state's proposal takes an expensive approach to congestion that favors a minority of motorists who can afford high tolls, leaving most drivers mired in clogged, adjacent, free lanes at peak travel times.

Consultants hired by Douglas County say the Colorado Department of Transportation's C-470 toll plan has no national precedent and is based on inflated traffic and toll-revenue forecasts.

Bloated predictions turned other toll projects across the country into precarious ventures, they say.

The C-470 plan "relies upon a risky, untested financing scheme that ... is unlikely to succeed," Douglas County representatives said in an April 28 letter summing up the county's dissection of a state study favoring toll lanes.

A default by the Colorado tolling authority "on the repayment of bonds is a likely result," they added.

"Our study shows that, financially, this roadway will never pay for itself," said Douglas County Commissioner

Melanie Worley, a leader of the opposition to C-470 toll lanes.

A draft of a new Federal Highway Administration study on U.S. toll projects, obtained by The Denver Post, says tolls for express-lane ventures "are presumed only to contribute a portion of the cost of construction and operations."

Most of the express-toll-lane projects surveyed "are not self-supporting," the study said.

Peggy Catlin, deputy executive director of CDOT and acting director of the toll authority, said C-470 toll lanes would be built with "non-recourse" bonds, so private investors who buy them would suffer from a default, not taxpayers. It's also likely the bonds would be insured, officials add.

The plan calls for new toll lanes in the median of C-470; current untolled lanes would remain free.

Douglas officials have proposed an alternative to the toll scheme: a regional sales-tax increase that would pay for new non-tolled lanes on C-470 and other area highways.

Of congestion on C-470, Worley said, "Adding even one general-purpose lane in each direction and improvements to local roadways improves the situation better than two toll lanes in each direction."

CDOT disputes that claim. If only one new non-tolled lane is added in each direction, they might be jammed at rush hour by the time they're finished, said CDOT spokeswoman Stacey Stegman.

The fight between state and local officials over tolling is part of a larger national debate over how to pay for road construction and maintenance when the gasoline tax is losing its value.

Better fuel economy in cars and increased sales of alternate-fuel vehicles are eating away at the tax's usefulness.

CDOT expects to be short \$40 billion for road construction and repair over the next 25 years.

The agency and its tolling offshoot have turned to pay-for-use highway lanes to make up a portion of the shortfall.

The toll proposal for C-470 has received the most attention, but state officials also are looking at adding new toll lanes to Interstate 70 east of the Mousetrap, Interstate 270, Interstate 225, Interstate 25 north of 80th Avenue, U.S. 36 and a new highway link between C-470 and the existing Northwest Parkway toll road.

Colorado is proposing "open-road tolling," a system gaining favor nationally that means all tolls are collected electronically through the use of vehicle transponders. There are no toll plazas and no cash transactions.

High-tech cameras are used to capture license-plate images of cheating motorists who try to use the toll lanes without transponders.

### **Can't keep adding lanes"**

The state's recently released \$8 million environmental study of possible C-470 improvements says express toll lanes are the quickest way to get relief for frustrated commuters in the congested corridor.

A public-opinion survey commissioned by the toll authority found three-quarters of respondents prefer tolled lanes over the option of raising taxes to build new free lanes.

Colorado plans to selectively add toll lanes to some of the state's busiest highways because the old model for expanding roads is outdated, Catlin said.

"You can't continue to build your way out of congestion; you can't keep adding lanes," she said. With "managed" toll lanes, the state can control traffic volumes by varying pricing and "you always have a part of the system that is uncongested."

Before Colorado officials can proceed with the C-470 proposal, they need the Denver Regional Council of Governments to include the toll lanes in the regional transportation plan.

If DRCOG approves, the tolling authority still needs to spend up to \$1 million more on a detailed traffic and revenue, or T&R, study of the C-470 toll lanes.

The T&R analysis will decide whether Colorado can win top ratings for bonds that will pay for construction of the new lanes, Catlin said.

High ratings are needed to sell the bonds to private investors.

Wilbur Smith Associates has been the toll authority's traffic and revenue consultant on earlier reviews, and it's expected the firm would bid to do the detailed, "investment grade" T&R study.

The company is one of three in the country that do the bulk of toll analyses.

A Denver Post review of 23 toll projects prepared by Smith and the other two firms found that 15 of the 20 that had been open three years had failed to reach the companies' projections.

Knowing it has been relatively easy for toll authorities to get traffic and revenue forecasts that favor construction of the roads, Douglas County officials set out to strangle the toll concept for C-470 well in advance of a final traffic study.

The county hired its own highway experts to examine the state's environmental review, and Douglas County's consultants say CDOT's high-priced toll proposal will more likely perpetuate gridlock than alleviate it.

The C-470 toll plan is unique in the country in that the express toll lanes will have a series of entry and exit points along their length, said Norman Marshall, Douglas County's lead consultant, who heads a Vermont-based transportation firm called Smart Mobility.



**EXPRESSED OPPOSITION** | Douglas County Commissioner Melanie Worley and Duane Fellhauer, the county's public works director, overlook C-470. They are attempting to block the state's toll plan for new lanes on the road, saying it would hurt businesses and fail to relieve congestion. (Post / Glenn Asakawa)

Numerous access points will create a "weave" of vehicles between entry ramps, free lanes and toll lanes that is likely

to slow traffic and introduce backups and accidents to a system that was supposed to relieve congestion and improve safety, Marshall said.

Critics of the C-470 plan say construction of toll lanes will only cut in half the number of daily hours that motorists are stuck in bumper-to-bumper congestion in adjacent, free lanes - from 10 hours a day if no improvements are made to five if toll lanes are added.

If the same number of non-tolled lanes are added instead of express toll lanes, peak-period congestion is eliminated, the state's study shows.

In commenting on CDOT's C-470 study, the U.S. Environmental Protection Agency noted the tolling scheme would leave non-tolled lanes congested, "making the express-lane alternative reliable only for those that can afford the toll."

Douglas officials say they too are troubled that the tolling plan depends on continuing congestion in the free lanes to lure motorists into the pay-for-use lanes.

Arapahoe County, Lone Tree, Aurora, the Highlands Ranch Metropolitan Districts, Highlands Ranch Community Association, Highlands Ranch Chamber of Commerce and Park Meadows Metropolitan District have joined Douglas County in opposing the C-470 toll plan.

When compared with the alternative of adding non-tolled lanes to C-470, tolling "is significantly more costly, provides a lower quality of service, increases congestion and delays, and has more impacts on the area's citizens, businesses and local governments," Lone Tree Mayor Jack O'Boyle said in an April 27 letter opposing the state's proposal.

"The congestion essential to successful toll lane revenue production will have the effect of redirecting traffic away from Lone Tree retail stores in the vicinity of C-470.

"... The congested nature of the facility will create a strong disincentive to businesses considering locating within the affected area."

The South Metro Denver Chamber of Commerce is one of the few entities that hasn't panned the toll option.

"The chamber wants something done; we have to widen that road," said John Brackney, the group's president and a former Arapahoe County commissioner.

Tolling would allow C-470 to be widened "sooner rather than later," but if Douglas County and other local governments are willing to put a sales-tax increase before voters to pay for widening with non-tolled lanes, the chamber is open to that option, Brackney said.

Douglas County's own public-opinion survey contradicts the state's findings that citizens favor tolling over taxes by a 3-1 margin. The county's survey shows 51 percent in support of raising the sales tax for more free lanes on C-470, while 39 percent support a toll lane alternative.

Douglas and state officials have criticized each other for skewing their surveys to get the results each side wanted.

### **Not everyone can benefit**

Some analysts say open-road tolling plans such as Colorado's can cause hardships for those without credit cards needed to acquire transponders.

"A significant number of potential users do not have the credit card and bank accounts required to obtain electronic transponders and benefit from them," said transportation engineer Emily Parkany, who has written about transponder use, road pricing and "environmental justice."

About 20 percent of U.S. households do not have a credit card and 10 percent lack a bank account, said Parkany, who studied the issue while she was assistant professor of civil and environmental engineering at Villanova University.

Still, motorists of all income levels can benefit from express toll lanes such as those proposed for C-470, Parkany

said, especially when someone is in a hurry to catch a plane or get to their child's soccer game.

"They are a good option for people, an option that is not forced on us," she said.

CDOT's Catlin echoes that theme.

"It is about choice," she said.

State officials acknowledge that their toll plan would still leave drivers in C-470's non-toll lanes jammed in traffic at times.

But adding express lanes is better than doing nothing when there is no money available for constructing non-tolled pavement, they say.

And because privately funded toll road construction would most likely not require an expensive and time-consuming environmental impact statement, new lanes could be built much sooner - as early as 2009 - than non-tolled lanes, Catlin added.

Jim Brady, a consultant to CDOT and project manager on the C-470 environmental study, rejected Douglas County's contention that the weave of motorists between toll and non-toll lanes will not work, leading to backups and accidents.

Engineers selected sections of C-470 for the weave where motorists will have adequate distances to make the move between lanes safely, Brady said.

"We're satisfied it's designed appropriately," Brady said.

Some transportation experts say Colorado's effort to promote open-road tolling should be only an interim solution before states move to a model that charges motorists directly for every mile they drive.

Oregon is experimenting with mileage-based fees as a replacement for the state's gas tax.

Mileage-based road fees could be more a "flexible, equitable and useful" way of charging for highway use than the gas tax, which is a "blunter, inferior" instrument, said Martin Wachs, director of transportation, space and technology for the Rand Corp.

With road fees, "charges are more carefully aligned with costs," Wachs said. Mileage-based pricing can be varied to bill motorists more for travel at rush hour or for driving a vehicle with low fuel economy.

Before joining Rand last year, Wachs was professor of civil and environmental engineering at the University of California, Berkeley and director of its Institute of Transportation Studies.

Whether CDOT's toll plan is interim or not, some local officials in metro Denver question the strategy.

Golden is fighting CDOT's suggestion that toll lanes might be a good way to complete the missing link in a beltway around Denver, connecting the existing Northwest Parkway toll road with C-470's northern terminus.

The state calls proposed new lanes in this area the Northwest Corridor.

### **An ulterior motive seen**

Golden City Manager Mike Bestor said the impetus for the road is not to relieve traffic congestion



OPEN ROAD | Peggy Catlin, deputy executive director of CDOT and acting director of the Colorado Tolling Enterprise, stands with CDOT electronics specialist Stephen Sperry at the tolling gantry on I-25's high-occupancy toll lanes near 58th Avenue. The HOT lanes open Friday. The tolling authority wants to add express toll lanes in the median of C-470. (Post / Brian Brainerd)

but rather to promote commercial construction along the corridor.

"Toll roads work when they are built to solve a traffic problem, not when they are built to spur development," he said.

Bestor also criticized the "induced congestion" on adjacent roads that state officials need to make toll lanes economically feasible.

Aurora officials say CDOT's proposal to widen I-225 with toll lanes from South Parker Road to I-70 also is ill-conceived.

Adding toll lanes to the median of I-225 may fit well with the state's plan to build a network of pay-for-use highways in metro Denver, but it would not be good for businesses and residents in the I-225 corridor, Aurora Mayor Ed Tauer said.

For Aurora residents and business owners, access to the area would be "permanently crippled" by construction of toll lanes that favor through traffic and push more congestion onto local arterials, Tauer said. "We think it's a bad idea."

For the past 15 years, E-470 has been the model of tolling in Colorado. Two and a half years ago, the Northwest Parkway opened with a similar design.

The ribbons of tolled asphalt were carved through empty land, and each found that traffic lagged optimistic projections, like so many other U.S. toll projects in recent decades.

The two toll highways expected to generate economic growth in their corridors, which in turn would add vehicles to the roads. But growth came slower than anticipated for E-470, and the Northwest Parkway still is waiting for development that could crowd the road with cars.

In contrast, Colorado's plan for new toll lanes aims to relieve jams on some of the state's busiest highways.

"We think this is a very important congestion-management tool," CDOT executive director Tom Norton said at a meeting of local government officials last week.

There is limited experience with such a model nationally.

In Southern California about 10 years ago, express toll lanes were added to a 10-mile stretch of State Route 91, linking Orange and Riverside counties.

But Marshall, Douglas County's consultant, says the California road amounts to a tube, with entry and exit only at each end - unlike the plan for C-470.

Without on- and off-ramps along its length, a toll highway is far easier and less expensive to construct, maintain and operate, he said. With the State Route 91 model, motorists avoid the weave across lanes.

To build non-tolled lanes instead of express toll lanes, cities and counties in Denver's south-metro area are looking at forming a regional transportation authority that could levy its own taxes or fees to pay for the expansion.

Instead of paying \$325 million for two toll lanes in each direction of C-470, one non-tolled lane each way could be built for as little as \$25 million to \$50 million, Marshall said.

CDOT answers that the price tag for non-tolled lanes does not include ongoing operating and maintenance costs or money to upgrade C-470's existing lanes, while the toll alternative does.

Worley, the Douglas County commissioner, said local officials only want time from the state to pursue the non-toll option.

CDOT officials say they must know by October if the regional taxing authority will be a viable alternative to tolling.

"I would like to encourage CDOT or the tolling enterprise just to back off and allow the local governments to proceed with this investigation," Worley said. "If we come up with a solution, explain it to citizens and they vote yes, it will take care of the problem."

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