

Insurance not taken

'Direct patient care' physicians are becoming more popular.

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MAKING THE CASE FOR FIXING ROADS

Facing tight budgets for fixing Colorado's crumbling highways, CDOT chief Shailen Bhatt now has new economic data in his toolkit.

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Making the jump to legal marijuana

With eight states voting on allowing pot sales this fall, a Denver firm is poised to help them untangle the issues. **MONICA MENDOZA, A12**

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Stapleton office space needed

The fast-growing residential area has a very low office vacancy rate. **MOLLY ARMBRISTER, A9**



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EXEC WILL LEAD ECHOSTAR



Vivek Khemka leaves Dish to help run consumer tech at sister

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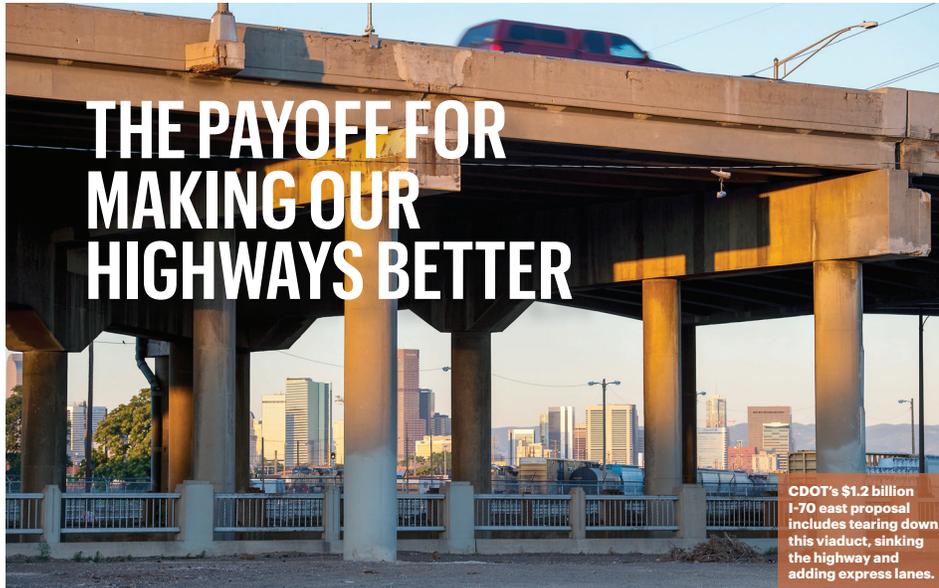
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DENVER BUSINESS JOURNAL



PHOTOS: KATHLEEN LAVINE, BUSINESS JOURNAL

THE PAYOFF FOR MAKING OUR HIGHWAYS BETTER

CDOT's \$1.2 billion I-70 east proposal includes tearing down this viaduct, sinking the highway and adding express lanes.

There's little government money available for repairing Colorado's highways, and businesses are suffering as a result. Now, state leaders are arming themselves with new data on how better roads mean a better economy.

BY CATHY PROCTOR
cproctor@bizjournals.com
303-803-9233, @
CProctorDenBiz

Sitting in traffic jams isn't just aggravating. It's expensive.

There's the cost of the gasoline you're burning as you inch along a clogged highway and the wear and tear the start-and-stop motion puts on your vehicle, not to mention the lost value of wasted time as you stare at the license plate in front of you.

But while congestion can damage the economy, eliminating congestion can spur economic development – with benefits rippling far beyond the jobs created by a

specific construction project.

The value of the savings in time and fuel alone soar into the billions of dollars for big projects like rebuilding and expanding Interstate 70 across Denver's northern flank.

That's the conclusion of "economic case studies" done for the Colorado Department of Transportation (CDOT) by High Street Consulting Group, which has a partner in Denver, and Boston-based Economic Development Research Group, an economic modeling firm.

CDOT, other state highway departments and the federal government have long pointed to the economic benefits of construction projects stemming from the num-

ber of people put to work engineering a new bridge or pouring new concrete on a highway.

But this new economic study covers much more ground than jobs created. It arms highway planners with new and more detailed data than ever before on the payoff for fixing roads, bridges and intersections.

This time, researchers used computer models to estimate the value of time and fuel savings across millions of motorists using this new bridge or that expanded highway, and assessed the economic value of those savings being reinvested back into the community.

It's a return-on-investment story that state highway officials have to tell if they hope to raise scarce money for a project.

Traditionally, road and bridge projects were paid for using the gas tax, but that's a shrinking source of revenue as vehicles become more fuel efficient and politicians and voters reject proposals to raise the tax levels to even stay abreast of inflation.

Colorado's gasoline tax is 22 cents per gallon and hasn't changed since 1991. The federal gasoline tax, 18.4 cents per gallon, hasn't changed since 1993.

Other money-raising measures for roads haven't fared well, either.

During the 2016 legislative session, both Republicans and Democrats said transportation funding was a priority. Both sides offered proposals to steer more money to Colorado's roads and highways.

Yet both sides killed the other's proposal in the last days of the session.

The economic case studies report, finished in March, looks at the economic impacts, spread across 25 years, of 12 major proposed road, transit and bridge projects around Colorado. (See details starting on Page A6.)

While the detailed data in the report is new, CDOT's approach of looking at the return on investment for highway improvements is not.

"We always look at the cost-benefit analysis in any of these investments," said Shailen Bhatt, CDOT's executive director. "We're not looking to just throw money willy-nilly at a problem. We want to understand, if we're making an investment on a project, what is the return on that money?" he said.

The answer will determine whether a project gets funding, and whether Colorado's economy keeps humming. Because without improvements, congestion will only get worse as the state's population grows.

And as traffic jams get worse, "the economy will slow down," said Tom Clark, CEO of the Metro Denver Economic Development Corp.

The cost of congestion takes its toll on existing commerce, and businesses looking to expand here will strike traffic-clogged Colorado from consideration, Clark said.

"It will be like Yogi Berra said, 'Nobody goes there anymore. It's too crowded.'"

There's no question traffic jams cost drivers and businesses money.

Denver drivers in 2014 collectively spent more than 91 million hours stuck in morning and afternoon rush hour traffic delays in 2014, according to a 2015 report



CDOT Executive Director Shailen Bhatt said, "We're not looking to just throw money willy-nilly at a problem."

issued by Texas A&M's Transportation Institute that covered 470 metro areas.

That was the 18th worst in the country out of the 470 cities included in the report.

The average Denver driver in 2014 spent 49 hours a year stopped in traffic.

Added up, all that time and congestion cost Denver drivers more than \$2 billion. Spread that across the state and the cost of congestion pushes even higher.

Some of those costs take the form of Front Range residents avoiding Colorado's high country – hurting resorts, restaurants and mountain towns – because they don't want to spend weekend hours crawling along Interstate 70. It's figured into the costs of goods that have to be ferried by trucks along traffic-clogged highways. And it's buried in the wages businesses pay to workers who have to travel through traffic jams to get to the office.

"When I moved to Denver 10 years ago, I said the infrastructure was oversized for the size of the city," said Chris Waggett, CEO of

D4 Urban LLC, a Denver real estate development company, which has plans for developing about 75 acres of land along Interstate 25 between the Alameda and Broadway interchanges in Denver.

"But since the recession, we've grown so fast, with so many new people coming in that we've overgrown our infrastructure. We have to catch up."

One of the projects analyzed by the new CDOT report is rebuilding the Alameda bridge over the South Platte River, along with the on- and off-ramps at I-25. The project is expected to cost about \$30 million, assuming money can be found for it.

But according to the report, the project's transportation benefit is about \$100 million, plus an additional \$323 million in new economic activity because the snarls on and near the highway would be smoothed.

Growth, and attendant traffic, problems aren't confined to the Denver metro area, either.

In 2014, a study on labor trends in northern Colorado showed that more people leave Larimer County to go to their jobs in Denver and Weld County than come into the county to work, said John Birks, Fort Collins' economic development director.

But as the commute time between Fort Collins and Denver gets longer, "it makes it less likely that talent will want to travel, and that makes it harder for employers to find the people they need," Birks said.

At mid-day, it takes about an hour to get from downtown Fort Collins to downtown Denver. But Birks said he and colleagues routinely tack on extra time to make the drive, because "the second you hit one accident, it can go to 90 minutes or even two hours."

Some congestion can be eliminated by widening the highway, building tolled express lanes, or even just by upgrading an old bridge or interchange. But that takes money that CDOT doesn't have.

State and federal dollars important

The department relies on state and federal dollars to pay to maintain the existing network and also improve it. But CDOT's budget hasn't kept pace with Colorado's population growth over the years.

In 1991, when the state's population of 3.3 million people drove about 27.7 billion miles a year, CDOT's budget worked out to about \$125 per person.

By 2015, the state's population had grown to 5.4 million people who drove about 49.3 billion miles a year. But CDOT's budget amounted to only \$69 per person, a per capita spending drop of 45 percent, according to the agency.

These days, paying for big projects involves more than just the state and federal highway agencies. Local investment is crucial.

Local match money plays a role in landing federal grants to help pay for construction, and it can close the funding gap – and ensure

that a project gets done sooner rather than later.

And that's where CDOT's economic report comes into play.

"States have raised revenue for transportation projects, but no one does it without a compelling story," Bhatt said. "The people want to know 'What's in it for me?'"

CDOT says that smoothing traffic along the northern part of I-25, between Fort Collins and Loveland, by adding a tolled express lane is expected to cost \$237 million.

Local governments along the highway are contributing \$25 million to the project, an effort that in turn helped land a \$15 million federal grant.

And – on a bang-for-your-buck basis – after the project is complete in 2021 it's expected to bring \$1.1 billion worth of transportation benefits in the form of fuel savings, time savings, less vehicle maintenance and more efficient logistics for businesses, the new CDOT report says.

And that's not all. Assuming the financial savings are reinvested, the ripple effect to the state's economy could grow to an additional \$1.1 billion over 25 years, according to CDOT's report.

Clark of the Metro Denver EDC

points to the potential major impact of the \$1.2 billion proposal to tear down the I-70 viaduct east of I-25, sink the highway 40 feet and put a lid over it, in addition to adding tolled express lanes in both directions.

"It's a bottleneck at the largest focal point in the Rocky Mountains, the airport. Fixing it ultimately means more freight, more passengers, and more business doing business along the Peña Boulevard corridor," he said.

"And if it's jammed now, then those jobs won't be there in the future. They'll pick up and move to another location that isn't as jammed," he said.

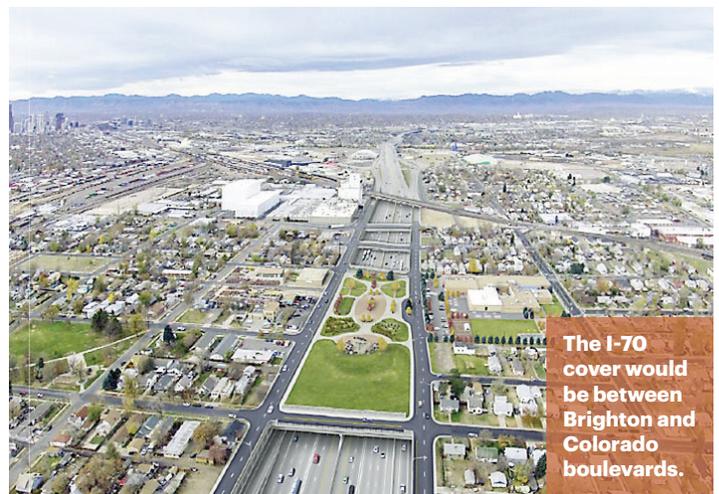
CDOT's study pegs the economic impact of the project at several billions of dollars. On the transportation side, the benefit in terms of time and fuel savings figures to be \$12.4 billion, according to the study.

New economic activity is estimated at an additional \$8.8 billion.

"There will be short term costs in productivity during the project, but down the road it will have significant benefits," said Craig Secrest, a Denver-based managing partner with High Street Consulting. "You have to look beyond the initial pain of the project."



A rendering of the proposed landscaped cover that would cover nearly four-acres of I-70 near Swansea Elementary School.



The I-70 cover would be between Brighton and Colorado boulevards.

ROI on highway projects

A close look at the benefits of six major road upgrades

Here are six of the 12 “Economic Case Studies” done for the Colorado Department of Transportation on the financial benefits of improving highways and bridges around the state at various key points.

The studies were done by High Street Consulting Group, which has a partner in Denver, and Boston-based Economic Development Research Group, an economic modeling firm.

They analyzed 12 major proposed road, bridge and transit projects around Colorado. Here, we look at six of those projects in and near metro Denver.



KATHLEEN LAVINE, BUSINESS JOURNAL

DEFINITIONS:

Transportation benefit: The estimated value of the project, over 25 years, in terms of time savings, due to reduced congestions, as well as savings seen by using less fuel, less wear and tear on vehicles.

Additional economic activity: The estimated value, over 25 years, of new business and economic activity due to the re-investment of time and money that otherwise would have been spent sitting in traffic.

I-70 EAST EXPRESS LANES: DENVER, AURORA

Project: Ripping down a 40-year-old, crumbling viaduct in north Denver, rebuilding I-70 between I-25 and Chambers Road in Aurora, adding one tolled express lane in each direction and putting a 4-acre park on a new lid over the sunken highway near Swansea Elementary School.

Benefits: Reduce congestion, improve travel time reliability in Denver’s major east-west corridor, replace aging infrastructure.

Funding identified: Yes

\$1.2B
COST

4,285
CONSTRUCTION JOBS

\$12.4B
TRANSPORTATION BENEFIT

\$8.8B
ADDITIONAL ECONOMIC ACTIVITY



I-25 AND WEST ALAMEDA AVENUE INTERCHANGE, DENVER

Project: Rebuilding the Alameda bridge over the South Platte River, rebuilding South Lipan Street, redoing on- and off-ramps to I-25. Must be done to allow future widening of I-25 in this area.

Benefits: Improved access to land slated for development, reducing congestion and addressing “chaotic” traffic patterns.

Funding identified: No

\$30M
COST

165
CONSTRUCTION JOBS

\$100M
TRANSPORTATION BENEFIT

\$323M
ADDITIONAL ECONOMIC ACTIVITY



I-70 WEST PEAK PERIOD LANES, CLEAR CREEK COUNTY

Project: Widen and harden 13 miles of the shoulder of westbound I-70, between the bottom of Floyd Hill west to the Empire junction with U.S. 40, to operate as a tolled, peak-period express lane for westbound travelers. Would mirror the new eastbound express lanes.

Benefits: Reduce travel times and congestion, increase reliability of travel time through the corridor. Maintain access to the mountains, “one of the region’s most valued assets.”

Funding identified: No

\$400M
COST

2,197
CONSTRUCTION JOBS

\$904M
TRANSPORTATION BENEFIT

\$629M
ADDITIONAL ECONOMIC ACTIVITY



NEW I-70 JUNCTION IN SILVERTHORNE, SUMMIT COUNTY

Project: Replace an outdated junction with a new, modern “diverging diamond” interchange that will improve traffic flow on all four ramps connecting to the interstate. Increase capacity on the westbound ramps.

Benefits: Reduce severe congestion during peak weekend traffic, maintain access to ski areas and reduce problems for local residents trying to get across town during peak times.

Funding identified: No

\$20M	220	\$41M	\$35M
COST	CONSTRUCTION JOBS	TRANSPORTATION BENEFIT	ADDITIONAL ECONOMIC ACTIVITY



EXPANDING I-25 IN NORTHERN COLORADO, LARIMER COUNTY

Project: Rebuilding and expanding I-25 between Loveland and Fort Collins through the addition of a 14-mile HOV/tolled express lane in each direction between Colorado 14 near Johnstown and Colorado 402 in Fort Collins. Also rebuild the road and interchanges and improve signage.

Benefits: Reduce travel time and increase travel time reliability, lower logistics and distribution costs for manufacturers using the corridor, improve the commute for workers traveling between Denver and Fort Collins.

Funding identified: Yes

\$230M	1,282	\$1.1B	\$1.1B
COST	CONSTRUCTION JOBS	TRANSPORTATION BENEFIT	ADDITIONAL ECONOMIC ACTIVITY



I-70 BRIDGE RECONSTRUCTION, CLEAR CREEK COUNTY

Project: Reconstruction of the bridge at I-70, mile marker 244 at the junction with U.S. 6, at the bottom of Floyd Hill

Benefits: Eliminate the westbound bottleneck and associated congestion at the bottom of Floyd Hill, replace an aging bridge, and avoid the potential of the bridge failing on its own and being shut down.

Funding identified: No

\$70M	385	\$586M	\$3B
COST	CONSTRUCTION JOBS	TRANSPORTATION BENEFIT	ADDITIONAL ECONOMIC ACTIVITY



OTHER PROJECT PROPOSALS

The other six “Economic Case Studies:”

Express buses: Would run 15 miles from the city of Longmont to Boulder Junction station, and then on through Boulder’s downtown.

North metro rail extension: Extends the North Metro rail line scheduled for 2018 completion from 124th Street to 162nd Street.

U.S. 550 to U.S. 160 connection in Durango: Reconfigures the connection of U.S. 550 to U.S. 160.

U.S. 50 expansion in Pueblo West: Would add a third lane in each direction and 12-foot shoulders for 4.8 miles of U.S. 50 west of Pueblo.

Colorado 13 improvements: Would add shoulders, wildlife underpasses, and game fences from miles 4 through 16 along Colorado 13 north from Rifle.

Colorado 71 upgrades: Would include intersection upgrades, shoulders and improvements to road geometry between I-70 and I-76.

