



COLORADO

Department of Transportation

CO Department of Transportation SMART Hearing

January 27, 2021



Shoshana Lew: Executive Director

Karen Stuart: Chair, Transportation Commission

Stephen Harelson: Chief Engineer



CDOT Responsibilities

MONITORS
278 of 522
AVALANCHE PATHS

**MAINTAINS,
& REPAIRS**
MORE THAN 23,000
HIGHWAY LANE MILES

SPENDS
\$69 MILLION
PER YEAR ON
SNOW REMOVAL

KEEPS
35
MOUNTAIN
PASSES
OPEN YEAR-ROUND

ADMINISTERS
ABOUT \$30
MILLION
IN FEDERAL
GRANTS
FOR TRANSIT
OPERATORS

OVERSEES
\$53.7 MILLION
IN FEDERAL AVIATION
GRANTS FOR AIRPORTS

MAINTAINS
3,447
BRIDGES

OVERSEES
28 BILLION
ANNUAL VEHICLE
MILES TRAVELED

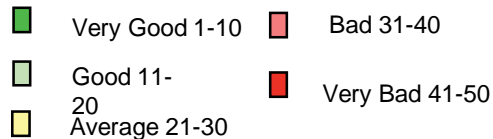
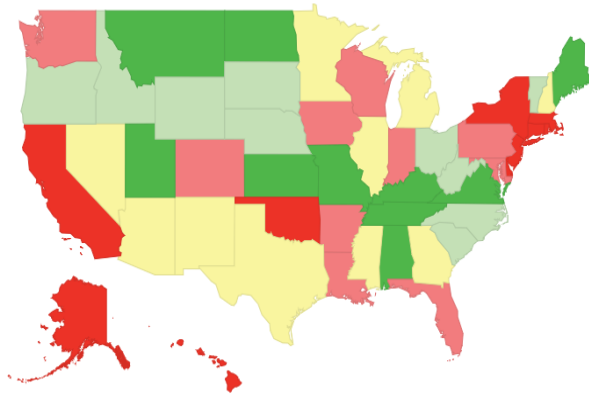
MANAGES
OVER \$8
MILLION
IN FEDERAL
GRANTS FOR
SAFE DRIVING
PROGRAMS



Where Do We Rank

Colorado Ranks **38th** Nationwide in Highway Performance

[Reason Foundation Report](#)



| Category | Rank |
|-------------------------------------|------|
| Rural Interstate Pavement Condition | 47 |
| Urban Interstate Pavement Condition | 33) |
| Rural Arterial Pavement Condition | 16 |
| Urban Arterial Pavement Condition | 33 |
| Urbanized Area Congestion | 37 |
| Structurally Deficient Bridges | 18 |
| Overall Fatality Rate | 23 |
| Rural Fatality Rate | 33 |
| Urban Fatality Rate | 32 |



FY 2020-21 CDOT Performance Plan



WIG #1 - Whole System, Whole Safety

Improve the safety of Colorado's Transportation System, by reducing the overall vehicle crash rate per 100 million vehicle miles traveled by two percent by June 30, 2021 and by six percent by June 30, 2023, from the estimated calendar year 2019 baseline of 223 crashes per 100 million vehicle miles traveled.



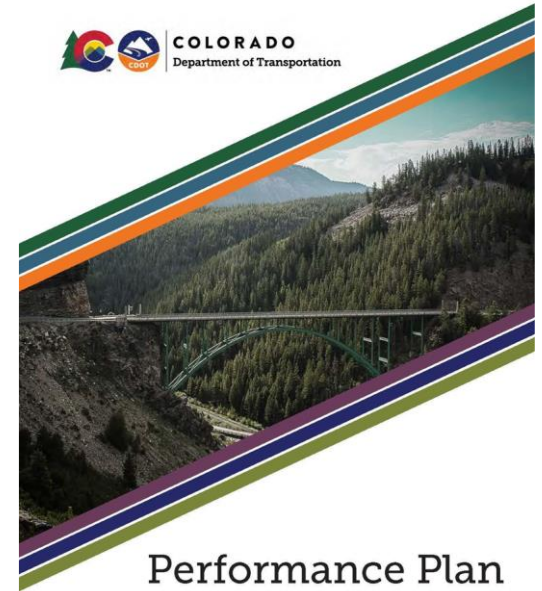
WIG #2 - Clean Transportation

Reduce pollution in our air and congestion on our roads by reducing vehicle miles traveled (VMT), greenhouse gas emissions, and ozone-causing emissions from the transportation sector, using multimodal options, by one percent per capita by June 30, 2021 and by three percent per capita by June 30, 2023, from the pre-COVID estimated calendar year 2019 baseline of 9,300 VMT per capita, 4.20 tons of greenhouse gases (CO₂e) per capita, 2.0 pounds of volatile organic compounds (VOC) per capita, and 9.5 pounds of nitrogen oxides (NO_x) per capita.



WIG #3 - Accountability & Transparency

Ensure that pre-construction (excluding right-of-way acquisitions) and construction-engineering costs for Senate Bill 17-267 construction projects account for no more than 20 percent of total project costs in fiscal year 2021, and throughout fiscal years 2022 and 2023, down from the current 24 percent.



Performance Plan
Fiscal Year 2020-2021

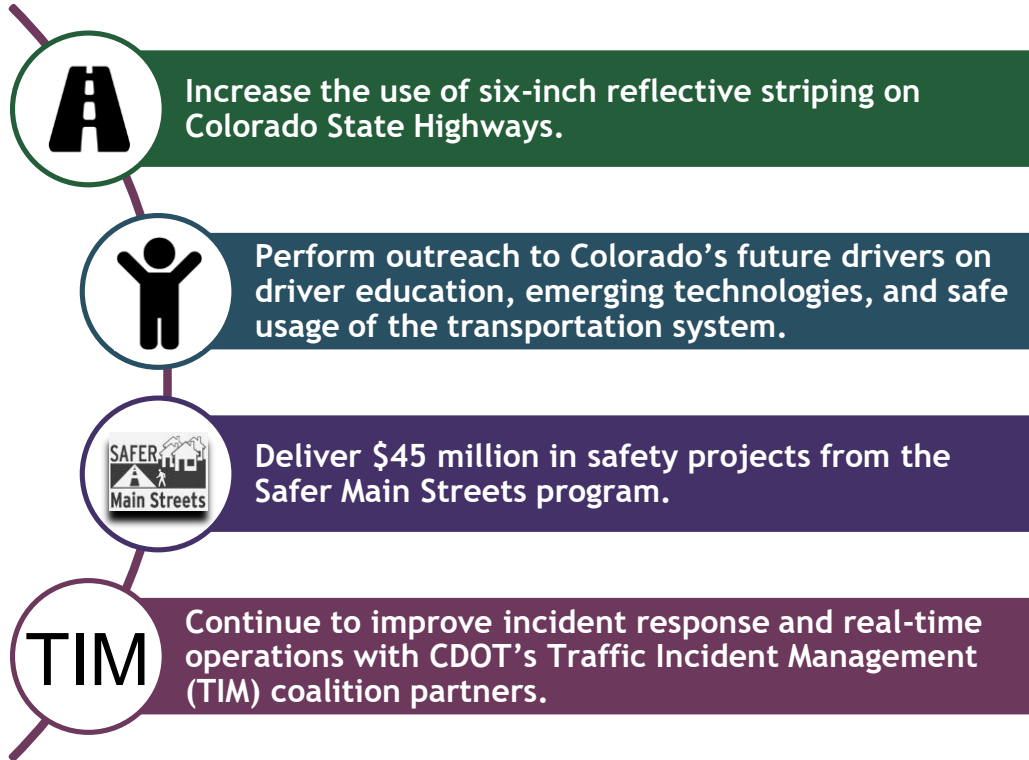


WIG #1 - Whole System, Whole Safety

GOAL

Improve the safety of Colorado's Transportation System, reducing the overall vehicle crash rate per 100 million vehicle miles traveled (VMT).

STRATEGIES

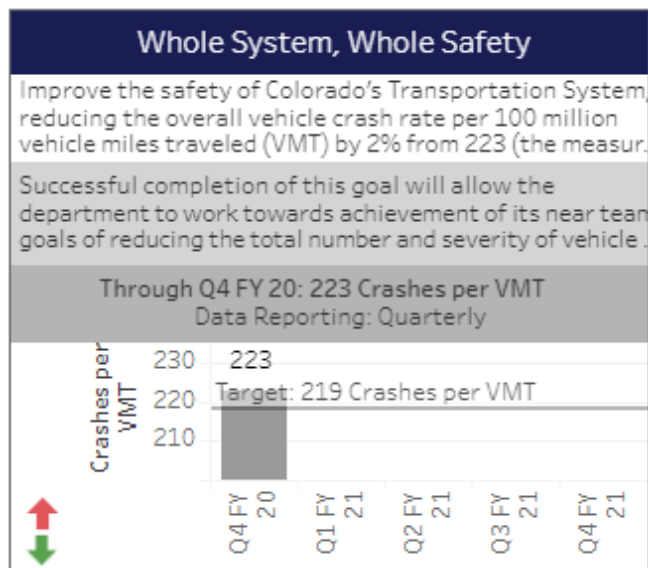




WIG #1 - Whole System, Whole Safety

Successful completion of this goal provides:

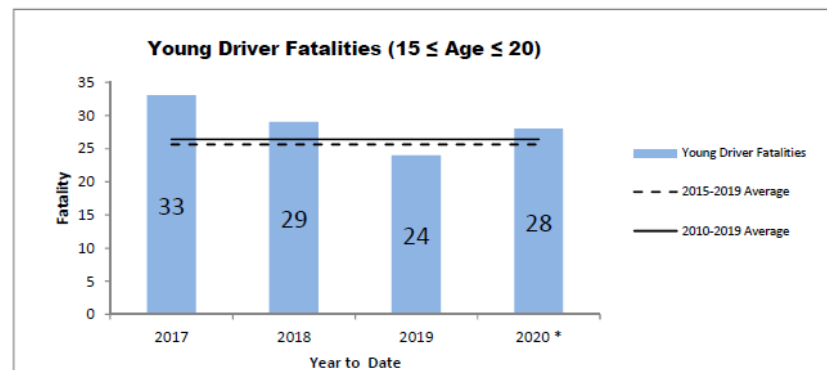
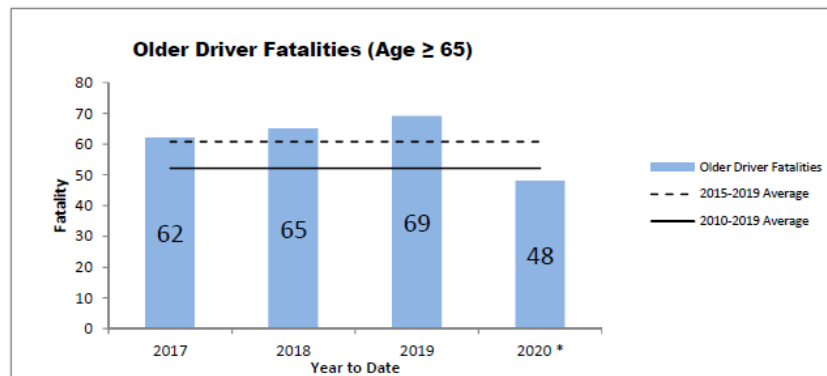
- ✓ Progress towards the Department's near term goals of reducing the total number and severity of vehicle crashes.
- ✓ Progress towards its visionary goal where the future of Colorado is zero deaths and serious injuries, allowing all people using any transportation mode arrive at their destination safely.
- ✓ Continued emphasis on safety through the program: *Whole System, Whole Safety: Bringing Everyone Home Safely*. This program focuses on human factors, physical assets, and organizational culture to fully integrate safety in everything CDOT does and support real-time operations.





COVID-19 Impacts on Traffic Safety

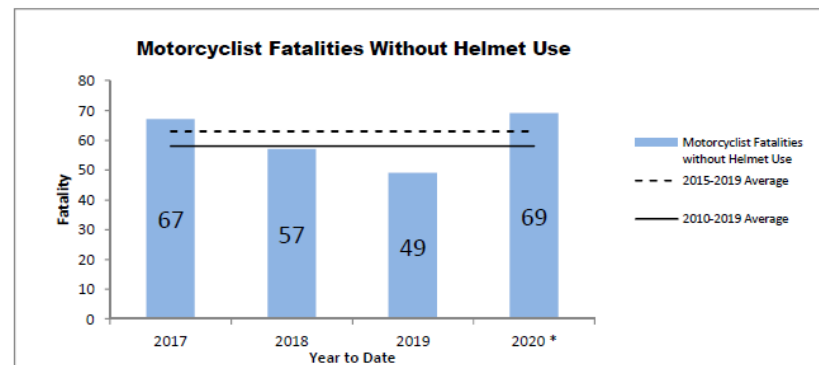
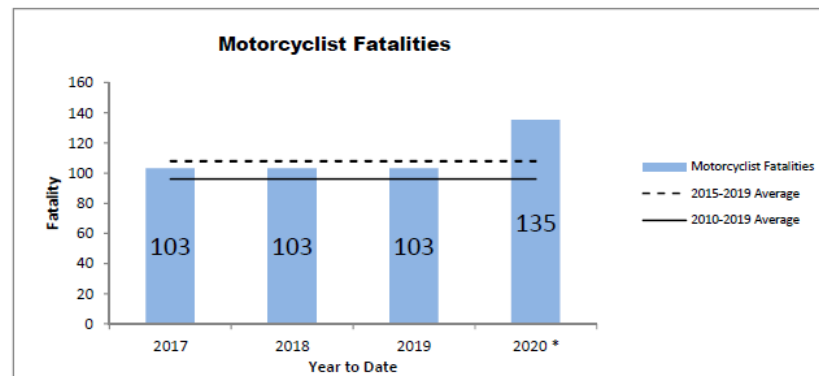
- **Vehicle Miles Traveled (VMT) decreased significantly during 2020 due to COVID-19.**
 - VMT has been reduced by 12.6% compared to 2019 VMT.
- **However, the number of traffic-related fatalities increased by 1.2% from 2019.**
 - 2019: 597 fatalities
 - 2020: 604 fatalities
- **Fatality rates among young drivers have increased by 17% from 2019, but are still below 2017/2018 levels.**





COVID-19 Impacts on Traffic Safety

- **Motorcyclist fatalities increased by 31% from 2019 levels.**
 - 2019: 103 fatalities
 - 2020: 135 fatalities
- **Motorcyclist fatalities without helmet use increased by 41% from 2019 levels.**
 - 2019: 49 fatalities
 - 2020: 69 fatalities
- **Motorcyclist fatalities are significantly above the past few years and historical averages.**



* Preliminary data as of



Improving Safety Along Urban Arterials

Safer Main Streets Grant Program

Developed to support infrastructure projects that improve safety and accessibility along urban arterials.

- 30 projects recommended
- 83% include or are near existing transit
- 65% are on or along state highways
- \$83M total project leverage from \$58M program, including local match





Wildlife Crossings Update

Projects with Wildlife Components Under Construction Now







- **I-25 South Gap** - Project includes 150,000 feet of deer fence, 28 gates, 65 jump-outs and 21 deer guards, four new grade separated wildlife crossings.
- **US 550/160** - Includes the installation of two wildlife underpass structures, two bridges designed to facilitate big game movement, deer fencing, and small mammal crossing structures.
- **US 160/SH 151 Wildlife Mitigation** - Project includes one overpass, one underpass, and 3 miles of deer fencing. Partnership with CPW, SUIT, NFWF.
- **US 24 Wildlife Fencing** - Includes 4 miles of wildlife fencing tied to 5 existing bridges and culverts.
- **SH 13 Design** - CPW partnership to design fencing and an underpass on SH13.



GOAL

Reduce pollution in our air and congestion on our roads by reducing vehicle miles traveled (VMT), greenhouse gas emissions, and ozone-causing emissions from the transportation sector, through multimodal options, by one percent per capita.

STRATEGIES

-  Restore Bustang bus service ridership to pre-COVID-19 levels and increase ridership.
-  To support Front Range mobility options, develop and begin constructing comprehensive "Mobility Hubs".
-  Increase departmental funding for electric vehicle adoption in the areas of infrastructure, awareness, and education, supporting Executive Order B2019-002.
-  Increase the percentage of total state highway miles within a 30-mile travel buffer of DC fast-charging stations.
-  Increase the number of Colorado Scenic & Historic Byways classified as electrified byways.
-  Launch an air quality research program focused on construction projects, with air quality measurements and analysis for one of CDOT's major construction projects.



WIG #2 - Clean Transportation

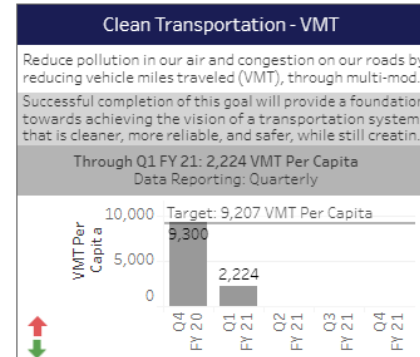
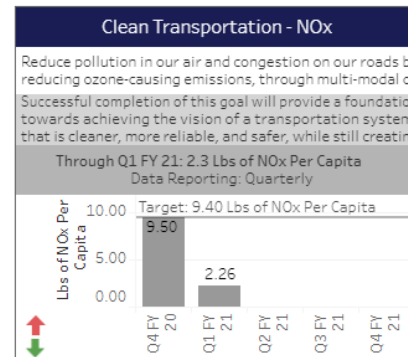
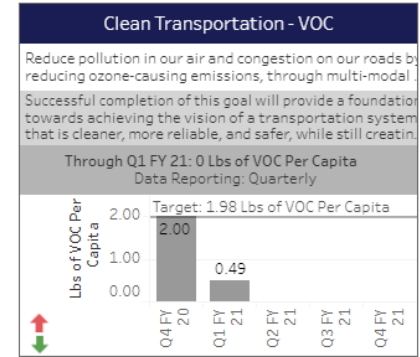
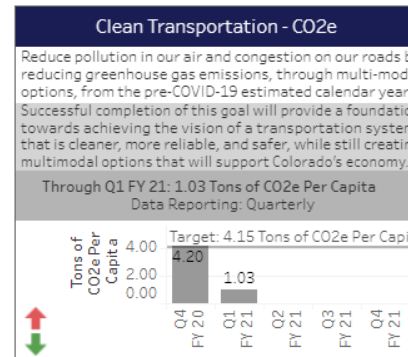
Successful completion of this goal provides:

- ✓ A foundation towards achieving the vision of a transportation system that is cleaner, more reliable, and safer, while still creating multimodal options that will support Colorado's economy.
- ✓ Progress towards the achievement of the objectives of Executive Order B2019-002, in conjunction with the Colorado Energy Office and the Colorado Department of Public Health and Environment.
- ✓ Progress towards the policy objectives within the "Bold Four" goal areas of Health, Economic Development, and Environment/Renewables.



GOVERNOR'S DASHBOARD

Governor Jared Polis - 43rd Governor of Colorado



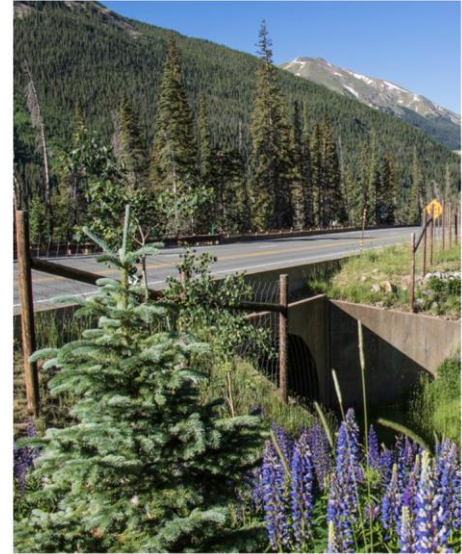


CDOT's Commitment to Clean Transportation

Transportation - Driving Tomorrow's Economy & Protecting our Air

CDOT's Approach is Evolving:

- Vehicle electrification and VMT reduction among top priorities.
- Prioritize funding asset protection, repair, and maintenance over 'widening and capacity'.
- Transit on equal footing with highway projects.
- Heightens focus on pedestrian and bicyclist safety, (which are now considered by many to be a public health crisis of its own;) Carves out dollars to focus specifically on this issue in the Denver metro area with plans to expand statewide.
- Reallocated staff vacancies to created new positions focused on GHGs, electrification, and Transportation Demand Management (TDM.)
- Working to add new requirements to NEPA studies-- adding more scrutiny to project impacts-- while at the same time working with CDPHE on a regulation that would apply the nation's first GHG budget for transportation plans.



SH 64 in Rio Blanco county.



CDOT's Commitment to Clean Transportation

CDOT's ten year plan was constructed with key environmental objectives in mind:

A major focus on safety and mobility along urban corridors or “main streets” decreasing VMT in urban areas

- Improving safety for pedestrians, bicyclists, and travelers of all modes
- Making neighborhoods more walkable and improving connectivity to transit, trails, bike paths, etc.
- Deliberately combines traditional highway and multimodal funds to prioritize these corridors

Putting state transit dollars to best use

- The ten year plan relies on the current distribution of road and multimodal dollars within the HUTF and focuses on putting transit dollars into investments that improve citizens' lives, as well as improve multimodality on key highway corridors when building capacity, e.g. multimodal hubs along I-25

Major focus on environmental mitigation for road project impacts

- This includes wildlife crossings, commitment to advanced mitigation, and working with environmental justice communities from day 1 with big projects like I-270



WIG # 3 - Accountability and Transparency

GOAL

Ensure that pre-construction and construction-engineering costs for Senate Bill 17-267 projects account for no more than 20 percent of total project costs.

STRATEGIES



Ensure all construction projects have project delivery plans consistent with Chief Engineer guidance.



Ensure timely execution of CDOT's construction program.



Ensure that construction expenditures for the annual construction season are kept within 95 to 105 percent of the expenditure target.



Ensure that 95 percent of construction projects are closed and de-budgeted within twelve months of final acceptance.



WIG # 3 - Accountability and Transparency

Successful completion of this goal provides:

- ✓ Efficient and effective construction delivery program that will maximize dollars directly spent on the transportation system.
- ✓ Positively impacting all Coloradans as they travel throughout the state and continuing to support the backbone of the state's economy.
- ✓ Implementation of the statewide project pipeline that gets the most of available funding and sets a plan for future dollars.



GOVERNOR'S DASHBOARD

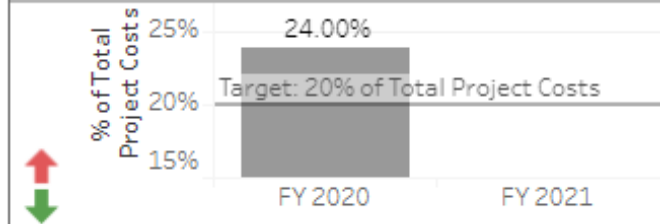
Governor Jared Polis - 43rd Governor of Colorado

Accountability & Transparency

Ensure that pre-construction and construction-engineering costs for Senate Bill 17-267 projects account for no more than 20% of total project costs in fiscal year, down from the current 24%.

Successful completion of this goal will lead towards efficient and effective construction delivery program that will maximize dollars directly spent on the transportation system.

Through FY 2020: 24% of Total Project Costs
Data Reporting: Annual





Accountability and Transparency

Just as important as establishing a project pipeline is creating **transparency and accountability structures** that let the public see the progress on projects and how dollars are being spent.

- **Increasing project transparency** through public reporting and dashboards on project management and project costs.
- **Setting new spending targets** to maximize dollars on transportation improvements that people can see.
- **Doubling down on project management** using best practices and new tools to tighten financial and project controls to clearly show expenses that track multiple years.
- Spending every dollar — across the department — as wisely as possible by **cutting discretionary costs** within CDOT.



<https://www.codot.gov/programs/your-transportation-priorities/projects-funded>



Efficiency, Transparency & Accountability

CDOT is tracking cost savings of about 6 to 8% reductions across multiple metrics that reflect overhead expenses:

- **CDOT reduced our Administration budget by 5.8% in FY 21**, including expenses made by the Director's Office. Many of these reductions are carried forward in our Draft FY 22 budget, including **another 5.5% reduction in our Administration budget.**
- **Nearly 7% year-over-year reduction in indirect capital construction costs**, including overhead costs and back office expenses that precede actual construction, as of the end of the first quarter of FY2021.
- **8% year-over-year reduction in personal and professional services consultants including engineering design consultants** (excluding on-site construction engineering work such as materials compliance testing), as of the end of the first quarter of FY2021.



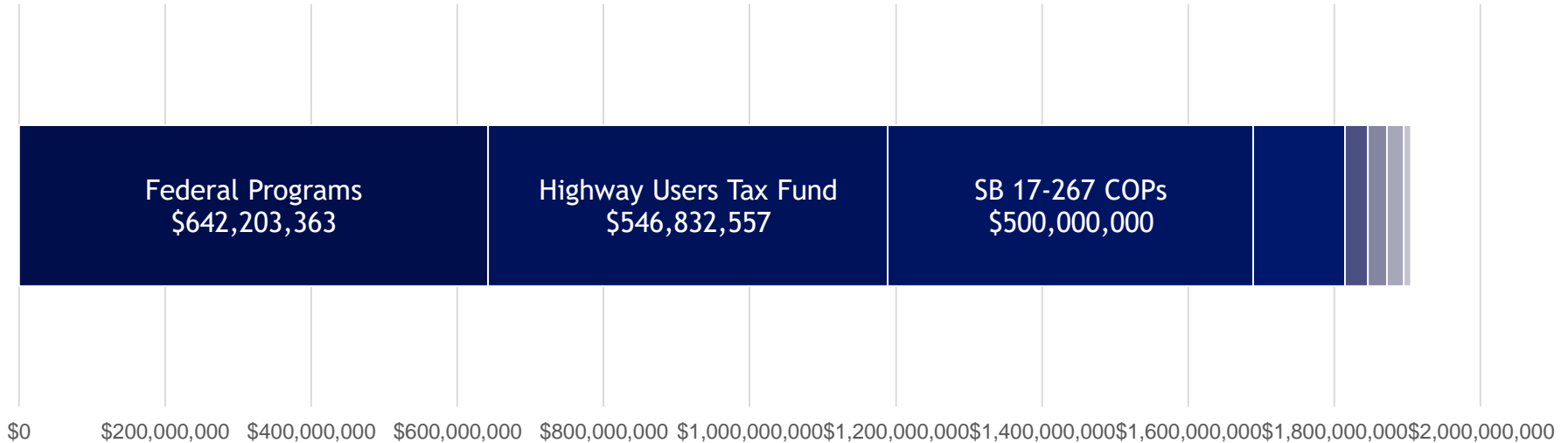
A recent project on CO 69 from Westcliffe to Hillside in Custer County resurfaced almost 13 miles, including critical bridge repairs and safety improvements (December 2020.)



CDOT Budget



FY 2021-22 Sources of Revenue

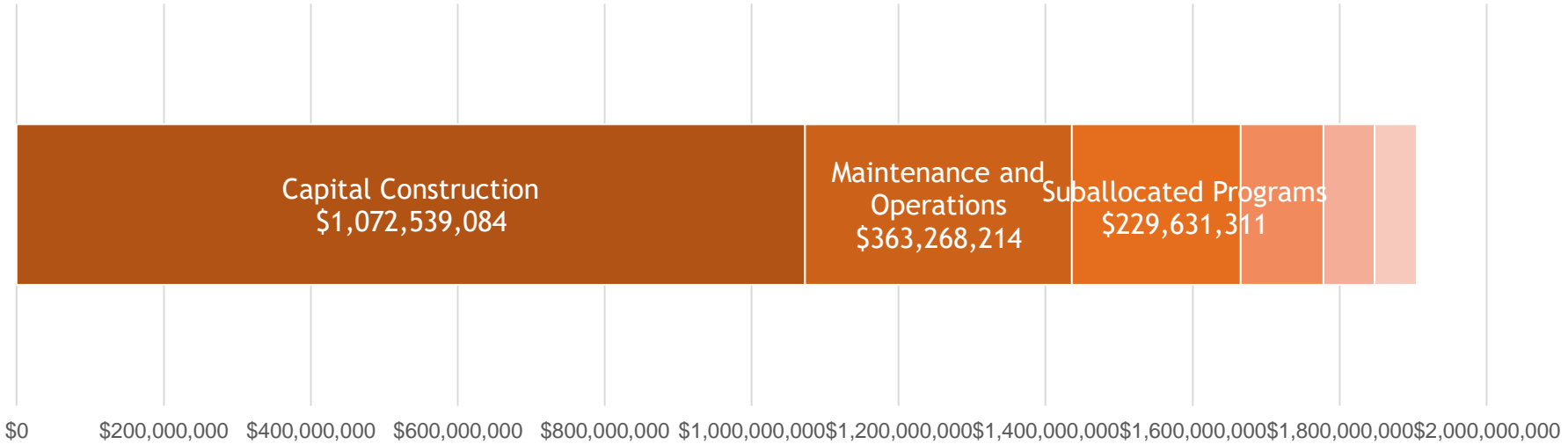


- Bridge Enterprise - \$125,414,441
- Miscellaneous - \$31,856,809
- Aeronautics - \$25,999,999
- High Performance Transportation Enterprise - \$22,845,717

**Total -
\$1,905,094,886**



FY 2021-22 Uses of Revenue

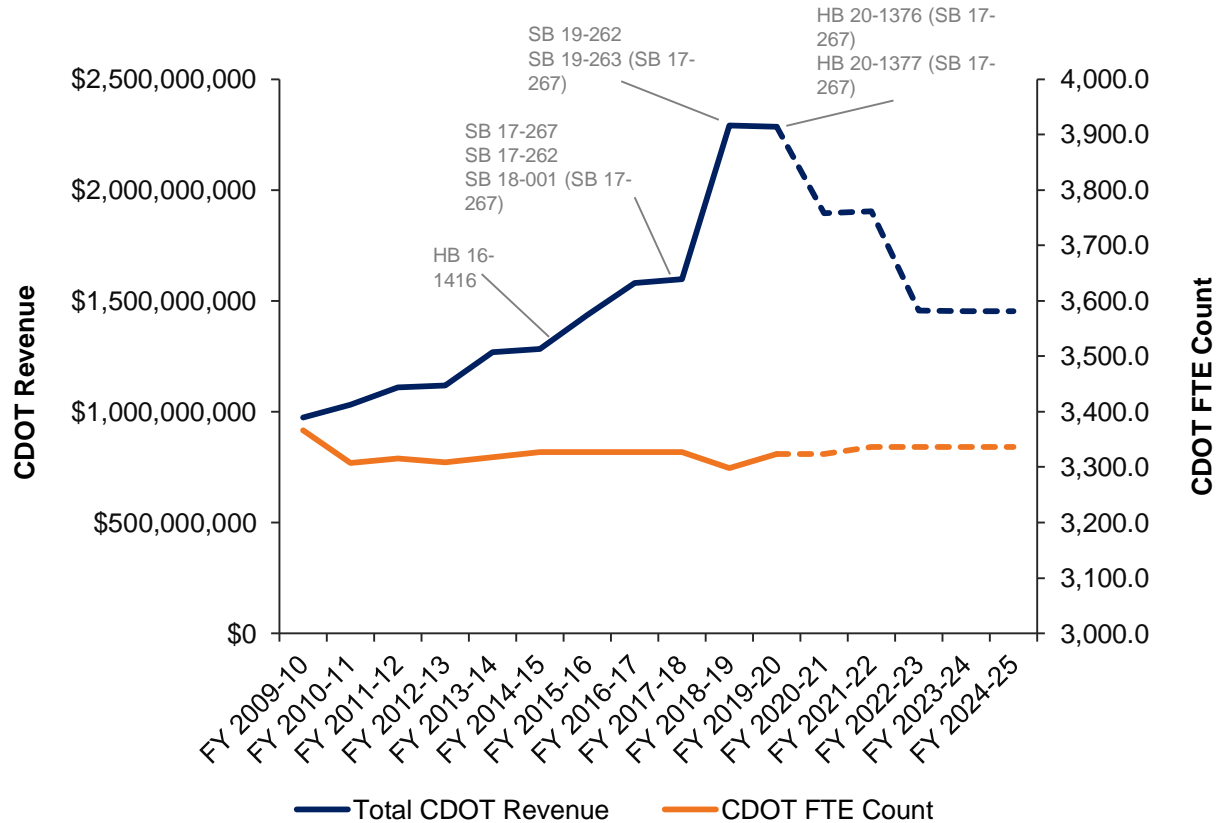


**Total -
\$1,905,094,886**

- Administration & Agency Operations - \$112,989,257
- Multimodal Services - \$69,539,270



CDOT Budget History





This bill made several changes to CDOT's General Fund revenue and debt service payments, including:

- Suspended annual General Fund transfer of \$50 million for FY 2020-21 and FY 2021-22
- Increased by \$12 million (to a total of \$62 million) CDOT's portion of SB17-267 debt service for FY 2020-21 and FY 2021-22
- Conversations about SB267 3rd tranche and debt impacts



Proposed Stimulus Funding



Governor's Stimulus Proposal

\$30M: Changing our Infrastructure to Improve Safety During COVID and Over the Long Term:

Revitalizing Main Streets: Designed to help cities repurpose and redesign streets, sidewalks and trails during COVID to provide greater social distance between people whether they are walking, biking or supporting local businesses. 56 grants have been awarded to date. While immediately focused on COVID, these projects also make permanent changes that promote healthy activity and mobility in Colorado's towns and cities.

Safer Main Streets: Currently a Denver metro area-only grant, stimulus dollars would expand this program statewide. Focus is on quick-to-implement improvements along urban arterials that make it safer to walk, bike and access transit.

\$130M: Fixing Our Infrastructure:

- Rural roads rehabilitation and maintenance in tourism corridors and scenic byways
- Wildlife migration corridor enhancements
- Denver metro west I-70 bridge repair
- Rehabilitation of the EJMT



The Eisenhower Johnson Memorial Tunnels.



FY21 Federal Appropriations

Highway Bridge and STBGP Supplemental Funds Contained in FY21 Appropriations

- STBG should expect to see another \$8.75M distributed
- Colorado will receive at least \$6M in additional Bridge funds and could receive more based on a formula of Colorado's poor bridge deck area as it relates to the national total poor deck area.
 - In the previous allocation last year CDOT only qualified for the minimum, so CDOT will likely get only the \$6M
- These funds will require the normal state/local match, or utilize toll credits
- These funds do not have the same provision for maintenance, salaries or operations as the COVID stimulus package
- Scenic Byway and Competitive grant funding. \$16M and \$50M nationally, but no distribution methodology provided. Anticipate competitive applications will be required.

Taken together, these two provisions (COVID Relief and FY 21 Supplemental Funds) would provide Colorado approximately \$150M.



Planning - 10 Year Plan



10-Year Plan at a Glance

The 10-year plan includes:

- 100+ shovel-ready projects
- 1,000+ lane miles touched
- 15 rehabbed or new transit facilities
- Largest investment in rural road condition in CDOT history
- A focus on taking care of our system: over 50% of funds go to improving the condition of our roadway system (asset management & resurfacing projects)





Ten Year Plan: Implementation Update

As of December 2020:

Highway Project Status (Years 1-4)



Out of the 90 highway projects with SB funding:

- 15 projects are complete
- 4 projects are partially complete
- 40 projects are approved to go to ad
(Some are pending funding for years 3 and 4)

Transit Project Status (Years 1-2)



Out of the 45 transit projects with SB funding:

- 4 projects are complete or in construction
- 5 projects are in design



Ten Year Plan: Transit and Mobility Vision

Mobility Hubs

Centerra-Loveland (US 34) and Berthoud (CO 56) Pedestrian Tunnel & Parking

- Both under construction

Longmont/Firestone (CO 119)

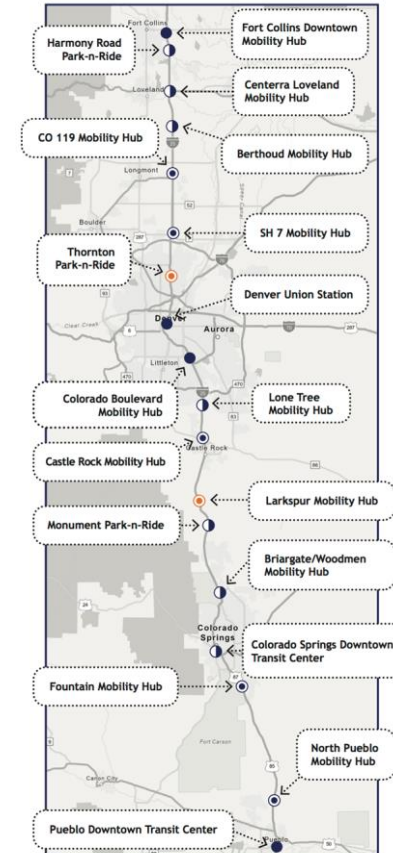
- Design nearly complete, ROW acquisition is in-process. Construction can start Spring 2021

Lone Tree (DTC) and North Pueblo

- Both under site selection

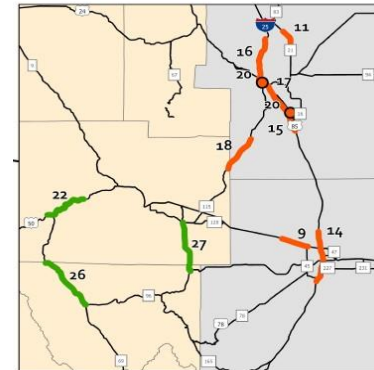
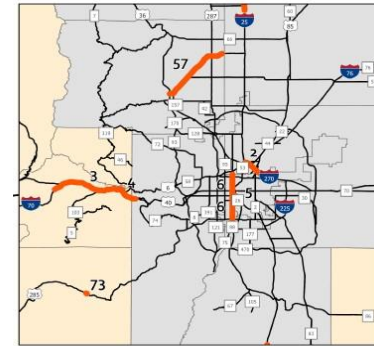
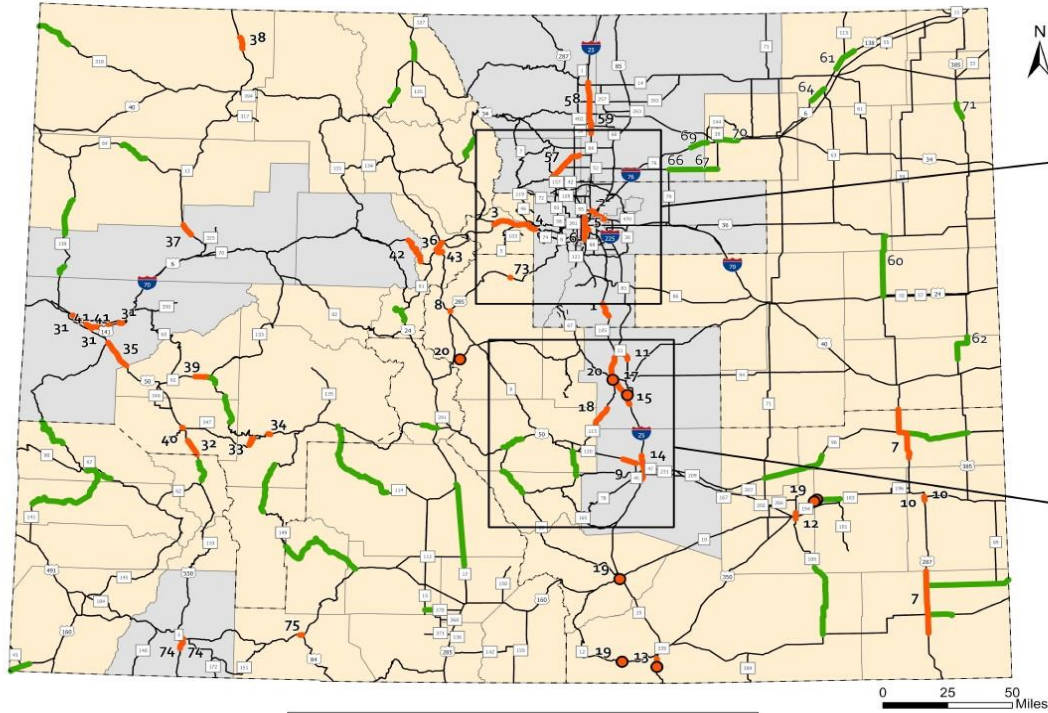
Integrating Transit Into Key Corridors

- Region 2, Bijou Street Storage and Maintenance Facility - Construction
- Region 3, Winter Park Maintenance Facility - Design
- Region 3, RFTA: Aspen Maintenance Facility Improvements - Complete!
- Region 3, Summit County Transit Operations Center - Design





SB 267 Highway Projects



Data Source: CDOT 2016/2019
Created: October 2019

- Rural Paving Projects
- Major Capital Projects
- Major Capital Projects
- CDOT Engineering Regions
- Urban Counties
- Rural Counties



Need for Infrastructure Investment



Transportation's Impact on Colorado's Economic Recovery



- **Creating economic opportunities for Coloradans** in a sector with low barriers to entry that provides wages that can support families.
- **Tapping Colorado talent to rebuild and revitalize our infrastructure.**
- **Fixing our broken system of rural roads** to enable a functioning state network. These roads are critical connections and detours across the state.
- **Addressing GHG targets** by changing travel along the I-25 corridor.
- **Bridging the digital divide** with broadband infrastructure.
- **Leveraging sudden telecommute growth** to reduce traffic long-term.
- **Improving equity and environmental justice** in neighborhoods close to highways through mitigation efforts and additional community outreach.
- **Addressing transportation as the #1 source of greenhouse gas pollution.**
- **Becoming leaders in clean freight** as the sector rapidly evolves.



Contracting Information

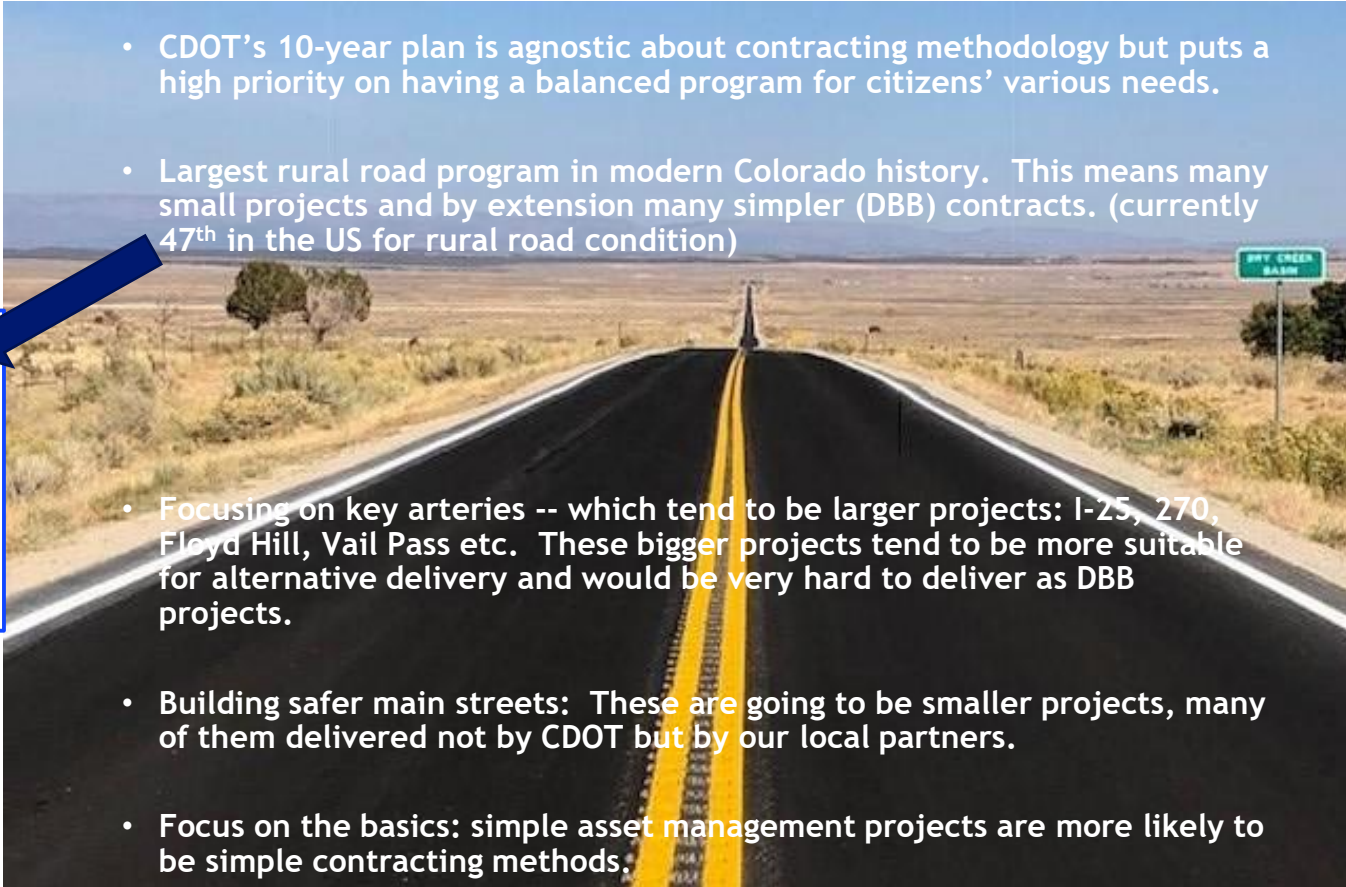


A Balanced Program

Delivering quality for all Coloradans

Rural Road Program:

- \$337M dedicated to rural road pavement
- 41 rural road projects
- Improve more than 500 miles of rural roads statewide

- 
- CDOT's 10-year plan is agnostic about contracting methodology but puts a high priority on having a balanced program for citizens' various needs.
 - Largest rural road program in modern Colorado history. This means many small projects and by extension many simpler (DBB) contracts. (currently 47th in the US for rural road condition)
 - Focusing on key arteries -- which tend to be larger projects: I-25, 270, Floyd Hill, Vail Pass etc. These bigger projects tend to be more suitable for alternative delivery and would be very hard to deliver as DBB projects.
 - Building safer main streets: These are going to be smaller projects, many of them delivered not by CDOT but by our local partners.
 - Focus on the basics: simple asset management projects are more likely to be simple contracting methods.



Demystifying Alternative Delivery

- Federal Highway Administration encourages these methods and allow for different forms of “risk sharing”, which makes the contractor accountable for the design component as well as for building it.
- In order to serve the public interest, CDOT does not focus on any certain contractor’s specialty, but instead identifies projects, large and small, that serve the needs of all Coloradans.





What is Alternative Delivery?

- Alternative delivery is a method of including design and construction work within the same contract, as opposed to the design being separate from the construction contract.
- Two major types: Design Build and Construction Manager/General Contractor (CMGC). These contracts make the awardee accountable for the majority of the design, including the engineering design, which shifts risk to the contractor and away from the state.
- To be clear, comparing the price of alternative delivery contracts and design bid build contract is not an apples-to-apples comparison.





When Does It Work Well?



Most large projects in modern CO History have been constructed with some form of alternative delivery.

At the same time, design bid build often works best for smaller and simpler projects, which are equally important but different.

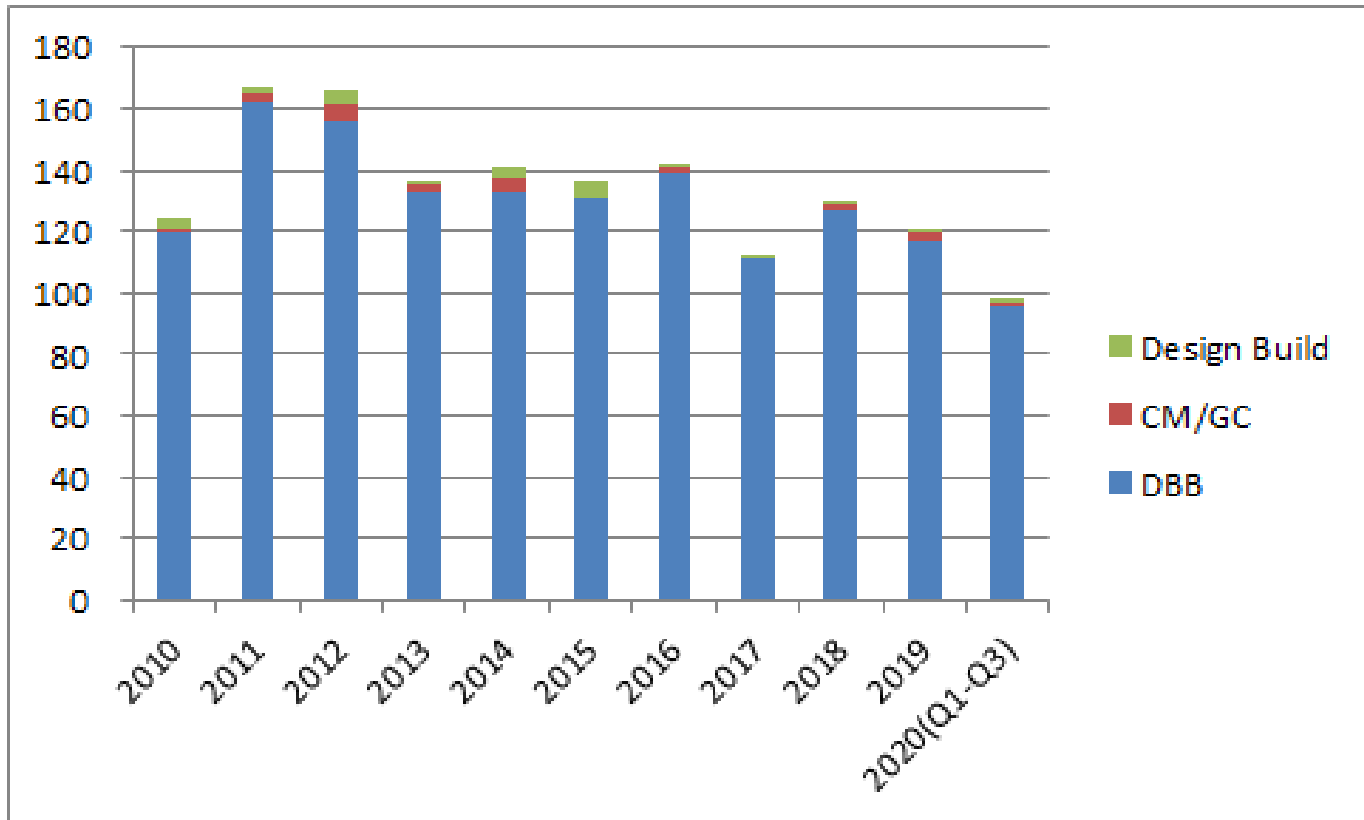
Limiting tools would effectively limit the kinds of projects that can be built in a very diverse state with diverse needs

Alternative delivery does not work for all projects and tends to be better suited for

- larger construction projects (Central I-70, TREX, Glenwood Canyon)
- emergency events, (US 36 emergency repair)
- other complex/multivariable projects with integrated design and construction teams from the beginning (multiple phases of I-25 reconstruction, north and south).

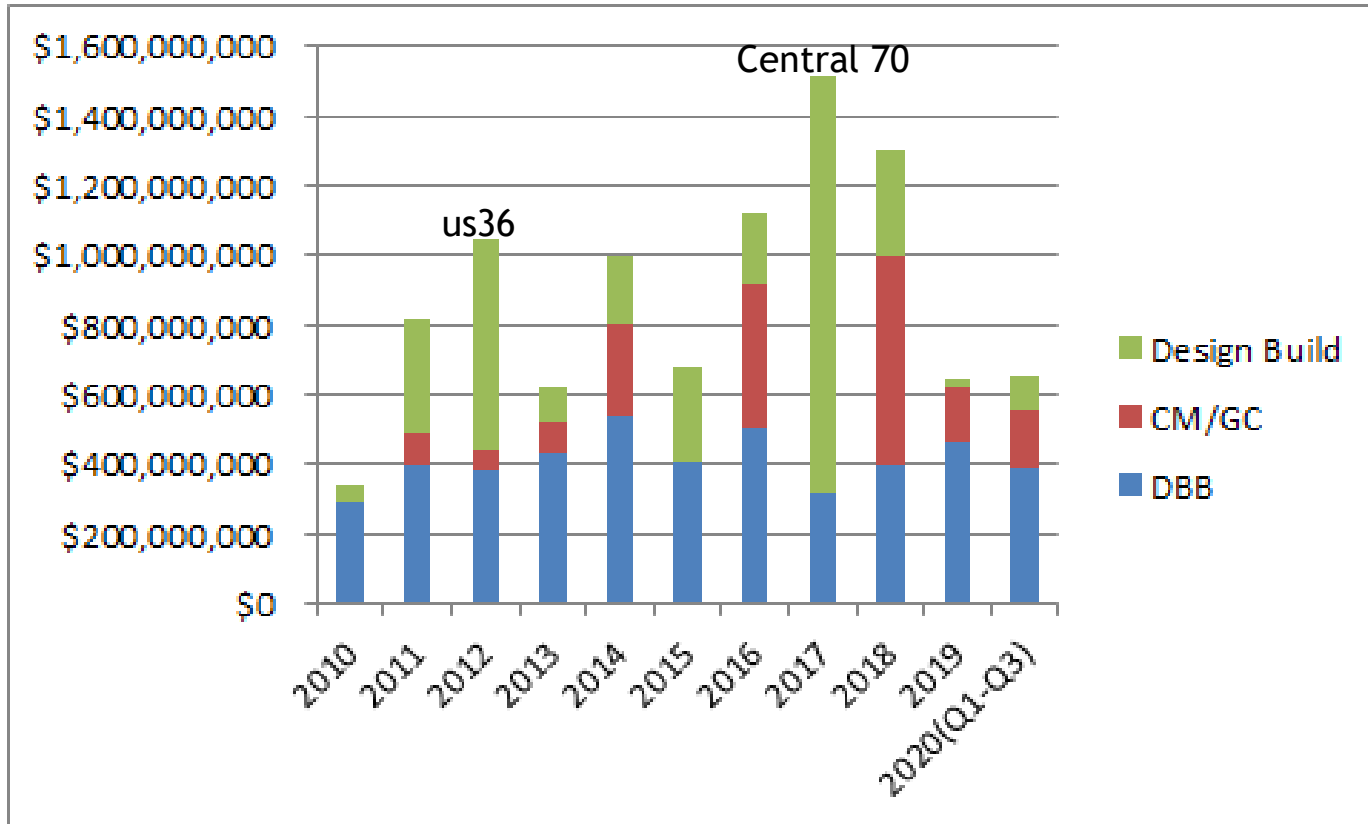


Projects by Type and Number 2010-2020





Projects by Type and Value 2010-2020





Contractors by Type

Since 2012

| Project Type | Number of Projects | Cost |
|-----------------------|--------------------|------|
| CM/GC | 15 | |
| DB | 13 | |
| Streamline DB | 4 | |
| Modified DB | 1 | |
| Emergency (CMGC like) | 2 | |
| Totals | 35 | |

35 innovative contracts since 2012
with 18 contractors

| Project Type | Number of Projects | Cost |
|--------------|--------------------|---------|
| DBB | 1,184 | \$3.95B |

185 different contractors



CDOT EDI Efforts

- **Enhance the employee experience**
 - Foster an Inclusive Organizational Culture
 - Provide mandatory EDI Training for CDOT supervisors
 - Implement Inclusive Hiring Practices
- **CRBRC Initiatives**
 - Formation of the department's EDI Strategic Planning Partnership
- **Update Policies & Procedures**
 - Continued implementation of ADA Transition Plan
 - Evaluation of and potential updates to Emerging Small Business Program (part of the DBE Program)
- **Review community engagement strategy**
 - Diverse and underrepresented communities
 - Community engagement technology
 - Data collection and analysis



Remote Workforce

CDOT transitioned approx. 1,500 office-based employees to work remotely within days of receiving the direction from the Governor's Office.

For CDOT's approx. 1,600 essential employees in 250 worksites around the state, schedule and work adjustments were made to accommodate fewer employees in any location at one time.

CDOT implemented guidelines and regulations for all of our contractors working on construction projects during the pandemic. CDOT is proud to say that our robust COVID safety protocols resulted in a very low infection rate; even when there were record levels of covid reported, only 91 employees reported positive test results.

To this day, 95% of non-essential, mostly office-based CDOT employees continue to work remotely at least 75% of the time.



What's Next

- Tranche 3 of SB 267 COP issuance in late Spring to continue support of 10 year plan
- Governor's transportation stimulus proposal taken up in 2021 legislative session
- CDOT continues to identify and prepare for current 10 year plan projects that can be accelerated if state of federal stimulus dollars become available
- **Create a sustainable investment in transportation including both revenue generation and a framework for spending that focuses on taking care of our system, economic competitiveness, reducing traffic, and reducing pollution. A sustainable revenue source should be tied to road use and current state and local allocations should be maintained.**



A project on SH340 repaved ¾ mile this summer, including recycling of existing material and adding wider shoulders for safety (August 2020.)



Legislative & Regulatory Agendas

CDOT Agenda:

- Increase public project statutory cap limit
- Budget reports to DPA and State Controller

Other Bills:

- Transportation Revenue
- Greenhouse Gas Emissions

Budget Requests:

- Continue SB267 funding

Planned Rule Revisions

State Highway Utility Accommodation Code

- *Review of rules in its entirety to reflect updated practices and legal requirements.*

Chain Law

- *Make permanent emergency rule changes.*

SB19-239 Emerging Mobility

- *To implement any legislative recommendations per SB 19-239 regarding potential fees on motor vehicles used for commercial purposes*

Outdoor Advertising

- *Address any changes or improvements in process and seek to simplify existing rules.*

<https://www.codot.gov/business/rules>

