

2021 ASPHALT INDUSTRY OUTLOOK “MARKET CONDITIONS, TRENDS, AND NEW DEVELOPMENTS”

PROVIDED FOR CAPA MEMBERS & AGENCY PARTNERS

Presented by
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Executive Director

Mike Skinner, P.E.
Director of Engineering



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2021 ASPHALT INDUSTRY OUTLOOK & MARKET ANALYSIS



**WEBINAR
OUTLINE**



**THE CAPA
MISSION**



**2020 - A LOOK
BACK**



**2021 - MARKET
CONDITIONS**



**INDUSTRY
TRENDS**

Webinar Participants:

- contractors
- suppliers
- consultants
- product/service providers
- agency personnel



**NEW
DEVELOPMENTS**



**RESOURCES AND
PROFESSIONAL
DEVELOPMENT**

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Colorado Asphalt Pavement Association

Membership
 24 Producer/Supplier Members
 171 Associate & Affiliates
 65 Local Agencies
260 TOTAL MEMBER ORGANIZATIONS

Industry Partners



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LabCAT Certified Technician



Rocky Mountain Asphalt Education Center



ROCKY MOUNTAIN ASPHALT CONFERENCE & EQUIPMENT SHOW



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CAPA Board of Directors

– NEW Leadership!



CAPA Executive Board

President: Mike McDonald, Kiewit Infrastructure
Vice President: Russ Larsen, Elam Construction
Secretary: Ken Coulson, Coulson Excavating Co.
Treasurer: John Paul Ary, A & S Construction
1st Past President: Kyle Alpha, United Companies
Officer: Grant Cruseturner, Brannan Sand and Gravel
Officer: Ryan Yoch, Martin Marietta
Officer: Scott Davis, Schmidt Construction Co.
Officer: Ed Wells, Connell Resources

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CAPA Board of Directors

Red: New in 2020-2021



Chance Allen, Aggregate Industries, Golden
Brett Baker, SIMON, Cheyenne
Sam Beuke, Suncor Energy, Denver
Pete Borer, Wagner Equipment, Aurora
Ron Feltz, Jebro Inc., Cheyenne
Jeff Keller, APC Construction/APC Southern, Golden
Jim McCormick, McCormick Excavating and Paving, Stratton
Danny Mikkelsen, New West Paving, Denver
Stu Ponting, Colorado Asphalt Services Inc., Commerce City
Eric West, Westest Inc., Denver

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ASPHALT PAVEMENT MATERIALS (APM):

66 PRODUCTION FACILITIES

9.9 MILLION TONS

- A majority of producers operate sand, gravel, and quarry operations
- A majority of producers also are general contractors

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CAPA MISSION:
TO ADVANCE
THE USE AND
QUALITY OF
ASPHALT
PAVEMENTS IN
COLORADO.



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All Types of Pavements:



Cradle to Grave

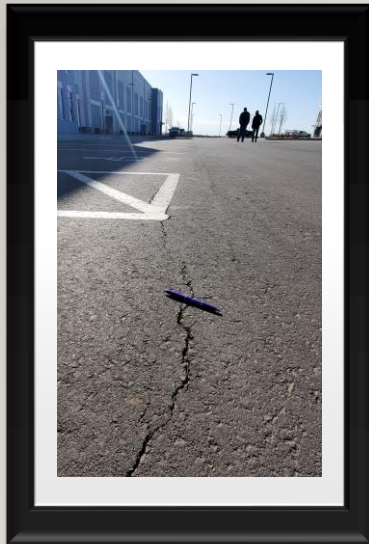
- Design
- Construction
- Maintenance
- Asset Management

Complete Service

- Best Practices
- Innovations
- New Technology
- Training & Education
- Marketing & Promotion
- Spec. Development
- Technical Assistance



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- DECEMBER 15, 2020
- ON SITE MEETING AT NORTHERN COLORADO COMMERCIAL PROJECT. REQUESTED BY GENERAL CONTRACTOR.
- ISSUES: PERFORMANCE, SPECIFICATIONS, CONSTRUCTION QUALITY

We are not the judge, the jury and the executioner. We provide a sounding board of ideas, information and guidance to support problem resolution.

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COLORADO RIDES ON US

Asphalt.

2020 – A Look Back

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2020 Colorado Asphalt Materials Usage *Projected in January, 2020*

<u>Construction Type</u>	<u>% Market</u>	<u>Volume of Work Change</u>
City/County:	35%	<i>estimated 5% increase in volume</i>
State DOT:	20%	<i>estimated 10% increase in volume</i>
Commercial	1/3 of 35%	<i>estimated 5% increase in volume</i>
Residential:	2/3 of 35%	<i>estimated 10% increase in volume</i>
Other:	<u>10%</u>	<i>estimated 5% increase in volume</i>
	100%	

Other: toll authority, Federal Lands Highways – National Parks, airports, military

(12 M tons – 2008; 7.0 M tons in 2015; 7.5 M tons in 2016; 8.8 M tons in 2018; 8.7 M tons in 2019)

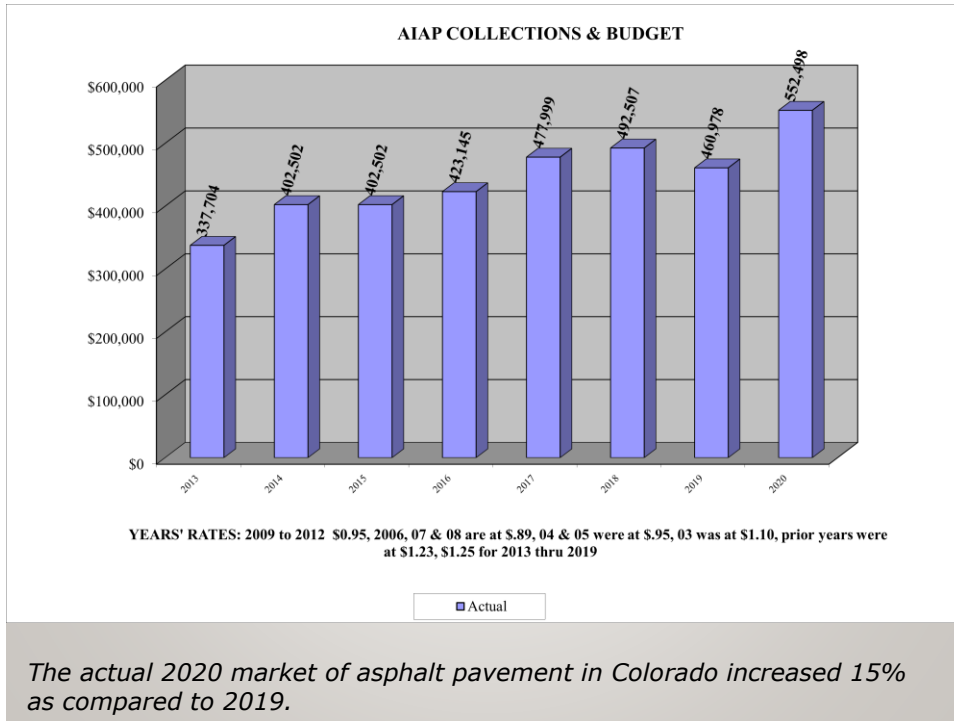
2019 Asphalt Quantity Actual – 8.7 Million tons

2020 Asphalt Quantity Projection - 9.1 Million tons


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Colorado Asphalt Market - 2020

$\$552,500 / \$1.25 \text{ per liquid ton} =$
442,000 tons of AC

442,000 tons of virgin AC / 0.048 AC in
ton of HMA =
9.21 M tons of HMA

9,210,000 tons + 700,000 tons =
=

9.91 M tons of HMA

- Assume 15% RAP in all mixes, 4.8% virgin AC content per ton of HMA
- Assume non-member/non reporting market total 700,000 tons

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2020 Colorado Asphalt Materials Usage ACTUAL

<u>Construction Type</u>	<u>% Market</u>	<u>Volume of Work Change</u>
City/County:	35%	<i>5% increase in volume</i>
State DOT:	25%	<i>24% increase in volume (1.6 M to 2.1 M)</i>
Commercial	1/3 of 35%	<i>15% increase in volume</i>
Residential:	2/3 of 35%	<i>18% increase in volume</i>
Other:	<u>5%</u>	<i>10% increase in volume</i>
	100%	

(12 M tons – 2008; 7.0 M tons in 2015; 7.5 M tons in 2016; 8.8 M tons in 2018; 8.7 M tons in 2019)

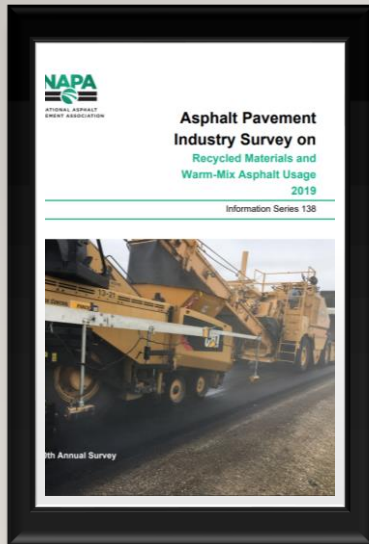
2019 Asphalt Quantity Actual – 8.7 Million tons

2020 Asphalt Quantity Projection - 9.1 Million tons

2020 Asphalt Quantity Actual – 9.9 Million tons* (15% increase over 2019)

* - Highest annual total since 2007 – 10.1 Million tons

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UNITED STATES ASPHALT TONNAGE, RAP, WMA, 2009-2019

PUBLISHED BY NAPA
NOVEMBER, 2020

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National Asphalt Pavement Association – United States, 2009 - 2019

Total Asphalt Mixture Production

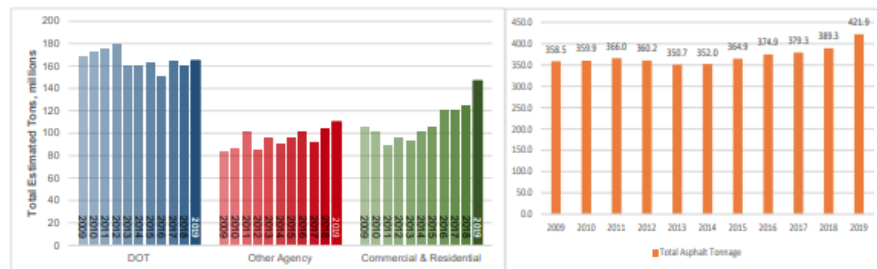


Figure 2: Estimated Total Asphalt Mixture Production by Sector (left) and in Total (right), 2009–2019

From 2018 to 2019, the estimated total amount of asphalt mixture produced in the United States increased from 389.3 million tons to 421.9 million tons, an increase of 7.7 percent.

Compared to the 2018 construction season, 2019 asphalt mixture tonnage produced for the DOT sector increased 2.7 percent, mixture production for the Other Agency sector increased by 5 percent, and the Commercial and Residential sector grew significantly (15.3 percent) from 2018 to 2019.

Source: NAPA, IS 138, 2020

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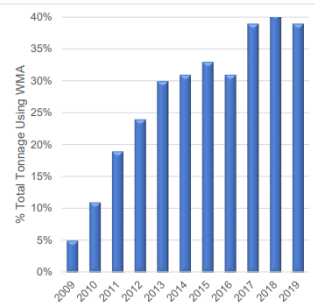


Figure 15: Percent Total Tonnage Produced Using WMA Technologies

WMA TECHNOLOGY – United States

- The 2019 construction season had a 4 percent increase in the production of asphalt with WMA technologies to 164.5 million tons.
- 38.9 percent of total asphalt pavement tonnage.
- WMA is being used in all market sectors – DOT, other agency, commercial & residential.

Source: NAPA, IS 138, 2020

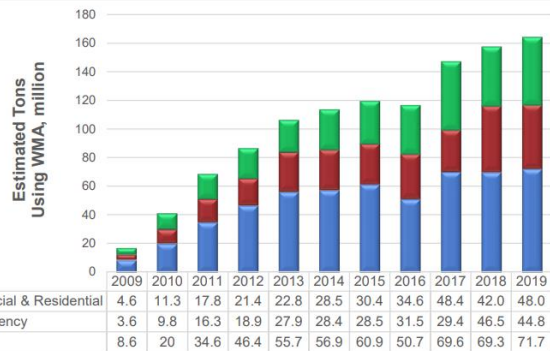


Figure 16: Estimated Tons (Millions) Produced With WMA Technologies by Sector, 2009–2019

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RECLAIMED ASPHALT PAVEMENT (RAP) – United States

From the 2018 to 2019 construction season, the amount of RAP used in HMA/WMA increased from 82.2 million to 89.2 million tons. The average percent RAP used in asphalt mixtures remained the same at 21.1 percent in 2018 and 2019. For 2019, about 98 percent of companies responding to the survey reported using RAP. Source: NAPA, IS 138, 2020

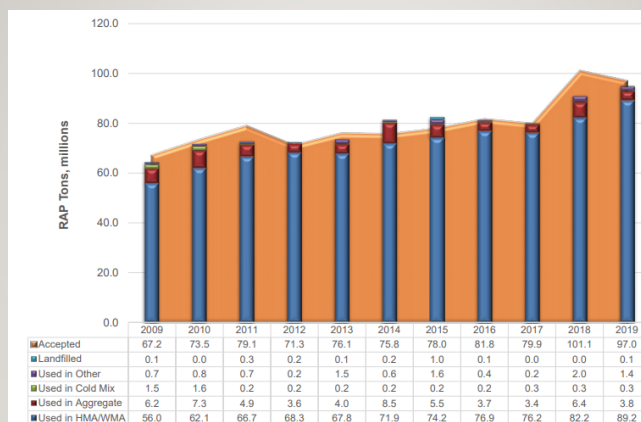


Figure 3: Comparison of Tons of RAP Accepted and Tons of RAP Used or Landfilled (Million Tons), 2009–2019

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MATERIAL CONSERVATION – UTILIZE MORE RECYCLED ASPHALT PAVEMENT



Asphalt pavements are 100% recyclable and are the #1 product recycled in the U.S. each year.

CDOT spec allows 23% binder replacement (ie. approximately 25% RAP in all lifts), 20% RAP is standard on all HMA mixes in Colorado.



Specify for innovation

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COLORADO RIDES ON US

Asphalt.

2021 Outlook: Market Conditions

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United States Economy – 2020 Data & 2021 Forecast:

- Real gross domestic product (GDP) is estimated to have fallen 3.7% in 2020—down from increases of 2.2% in 2019 and 3% in 2018—marking the first annual decrease in GDP after 10 consecutive years of positive economic growth in the United States.
- The forecast for 2021 anticipates real GDP growth increasing to 3.8% as the pace of the U.S. economy recovers from its largest percent decline in GDP since 1946.
- Government spending grew at an estimated 1.4% in 2020, slower than in 2018 and 2019. Much of the increase came from record stimulus aimed at keeping consumers and small businesses afloat.
- Consumer spending on goods and services generally accounts for nearly 70% of total GDP, and it declined an estimated 4.1% in 2020, a fall from the increase seen in 2019.
- *The Covid-19 pandemic has resulted in “rapid shifts in consumer behavior.” (goods, services, housing, entertainment, leisure).*

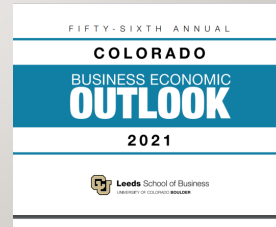
BOTTOM LINE: The US economy was greatly impacted by the Covid-19 pandemic and has not fully recovered. The impacts will continue well into 2021.



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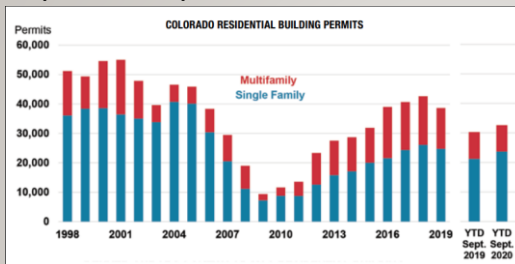
COLORADO BUSINESS ECONOMIC OUTLOOK 2021

- The State Demography Office expects **net in-migration** of 35,000 in 2020 and 30,000 for 2021.
- The number of **single-family permits** issued in Colorado will total 26,000 in 2020, up 5% from 2019. The after effects of the COVID-19 recession and slower migration will result in a **7.7% decline** to 24,000 single-family permits in 2021. **In 2020, homes built along the Front Range accounted for 84% of Colorado's single-family permits.**
- **Multifamily permits** are expected to decline in 2021, as units already underway are completed and in-migration slows further. The committee forecasts 12,500 multifamily units will be permitted in 2021, a **10% decrease** from 2020.
- **Nonresidential construction** (ie. commercial - remodeled offices, medical, schools, churches, retail, etc.) starts in 2020 are forecast to end the year at \$4.8 billion, down 4% from 2019. Nonresidential construction starts are expected to be **down another 16%** in 2021.
- **Nonbuilding construction** (roads, bridges, drainage, water, mass transit, etc.) is projected at \$2.1 B for 2020. 2021 is expected **to be flat at \$2.2 B** if a) construction on one of the two large water projects is formally awarded and b) the next \$500 M tranche of CDOT bonds proceeds as planned.



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New Development in the Housing (Residential) Market



RESIDENTIAL BUILDING PERMITS BY TYPE 2011-2021			
Year	Single Family	Multifamily	Total Housing Units
2011	8,723	4,779	13,502
2012	12,617	10,684	23,301
2013	15,772	11,745	27,517
2014	17,104	11,594	28,698
2015	20,025	11,846	31,871
2016	21,577	17,397	38,974
2017	24,338	16,335	40,673
2018	26,134	16,493	42,627
2019 ^a	24,756	13,877	38,633
2020 ^b	26,000	13,900	39,900
2021 ^c	24,000	12,500	36,500

Many people forced to spend weeks at home were motivated to reassess their housing situation to accommodate home offices, learning spaces, or more room to spread out.

There appears to be a shift away from dense housing with nearby entertainment and restaurants that made living in small units in urban multifamily buildings attractive. At least for the short term, this may benefit the single-family market. As of fall 2020, the inventory supply level for downtown Denver condos is much higher than for all property types at less dense locations elsewhere.

The market for second homes is doing well due to the attraction of Colorado's outdoors, remote office workers not being tied to a short commute, and the desire of having a place to "cocoon" with families in mountain areas.



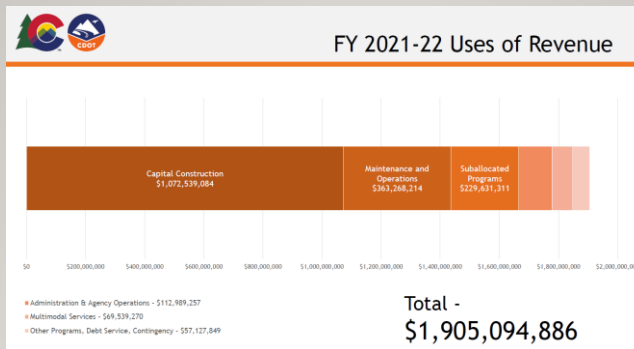
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Denver-area housing market caps off 2020 with another record-setting month

Active for-sale housing inventory in the 11-county Denver metro reached an all-time low at the end of December, capping off a historic year for Denver's housing market.

"While this year has shown us that forecasting the future is nearly impossible, it is clear that we will be starting off 2021 with historically low inventory, high buyer demand and low interest rates," said [Andrew Abrams](#), chair of DMAR's Market Trends Committee and owner of A-Squared Real Estate, in the report. "This could lead to another wild year of real estate with future unknowns of how the vaccine will impact human behavior."

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The impacts of the COVID-19 pandemic will weigh on **FY 2020-21 General Fund revenue collections**, which are projected to **decline 5.6 percent** from a year-ago levels. House Bill 20-1376 suspended the annual **General Fund Transfer** of \$50 M to CDOT for FY 2020-21 and FY 2021-22.

The CDOT FY 2021-22 Annual Budget is balanced using the September 2020 HUTF revenue forecast, which reflects a **budget shortfall of \$45.7 million** relative to revenue that was forecasted for FY 2021-22 prior to the COVID-19 pandemic.

The CDOT share of the **Federal Covid Relief (Stimulus Funding)** plus FY 21 Supplemental Funding will be \$150 M.

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FEDERAL SUPPORT FOR HIGHWAY AND AIRFIELD PAVEMENT PROJECTS IN 2021*

COURTESY OF JAY HANSEN, VICE PRESIDENT, GOVERNMENTAL AFFAIRS, NAPA

	FY 2020	FY 2021	Comments
Federal-Aid Highways			
Highway Trust Fund	\$46.4 billion	\$46.4 billion	Per FAST Act Extension
General Fund	\$2.2 billion	\$2.0 billion	Support at-risk bridge program and alternative fuel corridors
Build Grants	\$1 billion	\$1 billion	Discretionary DOT Grants
DOT Relief	\$0	\$10 billion	Distributed by formula
Airport Improvement Program (AIP)			
Airway Trust Fund	\$3.35 billion	\$3.35 billion	The AIP Program has been stagnant for many years.
General Fund	\$400 million	\$400 million	

*The Coronavirus Response and Relief Supplemental Appropriation Act (H.R. 133), signed into law by the President on December 27, 2020

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FEDERAL HIGHWAY FUNDING FOR COLORADO IN FY 21

FY 2020 Actual Apportionment from the FAST Act	FY 2021 Estimated Apportionment under FAST Act Extension	FY 2020 Actual Obligation Limitation Under Transportation Appropriations Bill	FY 2021 Estimated Obligation Limitation under Consolidated Appropriations Bill	FY 2021 Estimated Apportionment for COVID relief
\$589,072,823	\$592,076,009	\$512,270,210	\$512,270,210	\$133,700,580

- FHWA will release actual state-by-state funding notices in late January.
- Colorado's FY 21 Apportionment slightly higher to meet 95% rate-of-return on gas tax receipts.
- COVID relief funds can be spent by DOT's to pay for costs related to preventative maintenance, operations, personnel, debt service, and coverage for other revenue losses.

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ADDITIONAL PROVISIONS IN THE CONSOLIDATED APPROPRIATIONS ACT

- \$3,000,000 for asphalt research into airfield pavements.
- \$800,000 for research on plastic in asphalt mixtures.
- Require FHWA to provide information on “environmentally-friendly aggregates” for use with reclaimed asphalt and concrete pavements.
- Require U.S. DOT to support neutral decisions that do not promote or provide preference for specific building materials.

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COLORADO
Department of Transportation

CDOT Historical Projected and Actual Data			
Year	Projected Tons	Actual Tons	Percentage
2010	850,930	1,262,716	148%
2011	851,791	1,134,762	133%
2012	1,198,088	1,153,751	96%
2013	1,264,929	1,248,582	99%
2014	1,290,679	1,370,184	106%
2015	1,154,054	1,343,902	116%
2016	1,318,433	1,673,068	127%
2017	1,009,944	1,036,222	103%
2018	997,927	1,437,500	144%
2019	1,259,920	1,130,102	90%
2020	978,270	**	
2021	938,056		

Notes:

** Actual tons for 2020 are still being compiled.

* The Projected tons are based on Region Estimates for Construction Season 2021, and may include tonnage from other FY budgets besides FY 2021.

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CDOT – Asphalt Pavement Actual 2020

REG	2020 ST Planned Tons	2020 ST Actual Tons	Change Tons
1 Denver	64,302	40,182	(- 24,120)
2 Pueblo	232,084	245,134	(+ 13,050)
3 Grand Jun.	188,963	227,280	(+ 38,317)
4 Greeley	241,851	404,062	(+162,211)
5 Durango	263,000	282,293	(+ 19,293)
TOTAL:	990,400	1,198,951	(+208,751)

Design/Build, CM/GC, SB 267:

I-70 PPSL – 80,935 tons; US 50 Pueblo West – 5,000 tons;
 I-25 Gap – 325,000 tons; I-25 North Express Lanes – 50,000 tons;
 Central 70 – 260,000 tons; Powers Blvd. – 70,000 tons,
TOTAL CDOT 2020: 1,989,886 tons



More Information: www.codot.gov/business

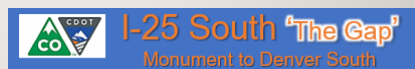
35



\$284M Project
50,000 tons asphalt*



\$1.7B Project
260,000 tons asphalt*



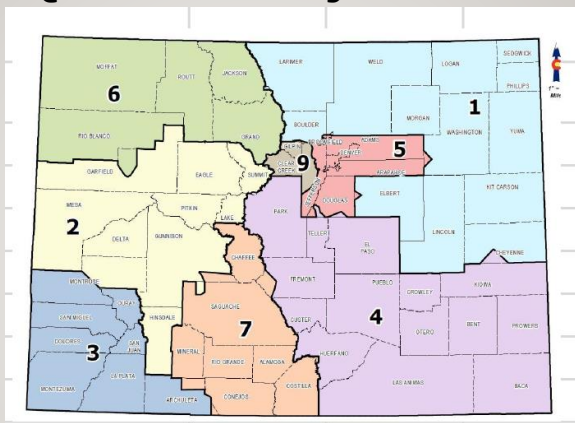
\$325M Project
325,000 tons asphalt*

* - denotes multiyear project with 2020 asphalt quantities

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CDOT Maintenance – Asphalt Quantities Projections - 2020



2019-20 Maintenance Estimated Quantities: {8 Maintenance Sections}

- Nov., 2019 – July 1, 2020:	35,000 tons
- July, 2020 – Nov., 2020:	100,000 tons

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COLORADO

Department of Transportation

CDOT Actual 2020:

28 Surface Treatment Projects	1,198,951 tons
7 D-B, CM/GC, and SB 267 Projects	790,935 tons
CDOT Maintenance/Small Quantity projects	150,000 tons

2020 Actual Grand Total: 2,139,886 tons

CDOT Projected 2021:

32 Surface Treatment Projects	983,657 tons
6 D/B, CM/GC, and SB 267 Projects	750,000 tons
(I-25N, I-25 Gap, Central 70, 550/160 Connection Durango, S. Santa Fe, US 50 Purcell)	
\$150 M of Covid Relief /FY 21 Approp*	150,000 tons
CDOT Maintenance/Small Quantity Projects	120,000 tons**

** - Region 1 plans to contract out for 2021 paving - \$1 M.

2021 Projected Grand Total: 2,003,657 tons

This represents a 6% decrease from 2020

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US 85 (South Santa Fe) Corridor Improvements

- Highlands Ranch Pkwy to 1,200' N. of County Line Rd. to Dad Clark Gulch

Project Budget: \$94 M

Construction Cost: \$55 M to \$65 M

Widen the existing 4 thru lanes to 6 thru lanes plus auxiliary lanes.

Intersections, bridge, bike/ped underpass, trail, retaining walls, water quality structure, storm sewer, utility relocations

**Originally designed by CDOT in PCCP (state highway).
Douglas County, providing 80% of funding, switched to ASPHALT to reduce construction cost and construction traffic impact.**

Two-year project and planned to bid in June, 2021.

SMA – 20,000 tons, HMA – 83,000 tons (PG 64-22, n75)

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FEDERAL COVID RELIEF (STIMULUS FUNDS) \$150 M FOR COLORADO

Project Proposals - Region 2

Region	Project Type	Project Description	Scheduled Ad Date	Funding Need	10-Year Plan	Current 10-Year Plan Status
REGION 2 TARGET \$25.5 M						
2	Capital	SH 21 and Research Parkway Interchange	Immediately	\$ 43,570,000	✓	58 Year 2/3
TOTAL				\$ 43,570,000		

- All of R2's target amount of \$25.5 M will go to the SH 21 and Research Parkway Interchange project. This includes both the PPACG share of \$8.5 M and the remaining R2 flexible dollars.
- A loan from the TC Program Reserve (about \$18 million) to be paid back (assumes Year 3 COPs) will fund the remaining balance for the project.



The SH 21 and Research Parkway Interchange project constructs a grade-separated interchange to improve safety and mobility on SH 21 Blvd including 3 miles of paving. Adds and bike lanes to improve access from elementary school on the east and mid schools on the west.

Region 2:

SH 21/Research Parkway I/C – 30,000 tons

Region 3: US 50 Grand Junction to Delta US 6 Fruita to Palisade

Region	Project Type	Project Description	Scheduled Ad Date	Funding Need	10-Year Plan	Current 10-Year Plan Status
REGION 3 TARGET \$22.3 M						
3	Capital	US 50 Grand Junction to Delta Repairs	2/11/2021	\$ 15,000,000	✓	58 Year 2/3
3	Capital	US 6 Fruita to Palisade Safety Improvements - Clifton Roundabout	1/8/21	\$ 7,300,000	✓	58 Year 2/3
TOTAL				\$ 22,300,000		



Project Proposals - Region 3

Region	Project Type	Project Description	Scheduled Ad Date	Funding Need	10-Year Plan	Current 10-Year Plan Status
REGION 3 TARGET \$22.3 M						
3	Capital	US 50 Grand Junction to Delta Repairs	2/11/2021	\$ 15,000,000	✓	58 Year 2/3
3	Capital	US 6 Fruita to Palisade Safety Improvements - Clifton Roundabout	1/8/21	\$ 7,300,000	✓	58 Year 2/3
TOTAL				\$ 22,300,000		



US 50 Grand Junction to Delta Repairs - This section of roadway between Grand Junction and Delta receives numerous complaints regarding drivability. The project will repair deficiencies in the roadway, like dips and bumps, and provide a new asphalt surface along with guardrail and striping improvements. Vehicles will be able to travel more safely with smoother travel, lowered risk of weaving and leaving lane, as well as load shift as a result of this project.



US 6 Fruita to Palisade Safety Improvements - Project improvements include reconstruction of the surface and safety upgrades to intersections and signals throughout these locations. The Clifton project will install two new roundabouts and the North Ave. project will improve the center median.

Region 4:

SH 385 Philipps/Yuma County Line South, 38,000 tons

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US 550 / US 160 Connection South

D-B Team: Lawrence Construction/RS&H
\$100 M, 2-year construction; 70,000 tons of HMA/SMA

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Local Agencies are responsible for funding and maintaining **72%** of the asphalt roads in Colorado.

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Street Improvement Ballot Initiatives



Issue 1B

PASSED



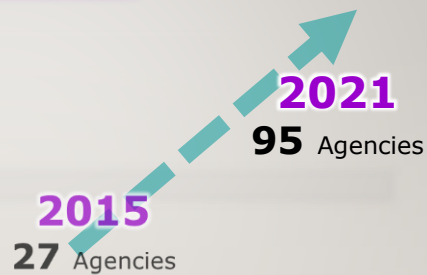
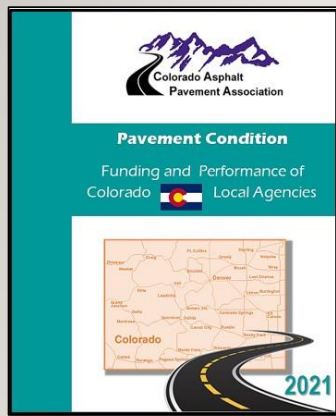
Measure 21

Congratulations! Local Agencies Continue to See Strong Support from Their Citizens for Infrastructure and Increasing Local Street Funding Programs.

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Local Agency Roadway Condition/Funding Survey



Representing 62,000 lane miles
(92% of local agency network)

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Local Agency	Paved Lane Miles	Year	Annual Asphalt Program		PCI	Public Works CIP
			Mill/Overlay + Preventive + Crack Seal	\$ / lane mile		
Boulder	628	2021	\$2,500,000	\$3,981	76	
Broomfield	735	2021	\$5,500,000	\$7,483	75	\$22,532,983
Breckenridge	120	2017	\$750,000	\$6,250	78	
Cañon City	194	2020	\$400,000	\$2,062	37	\$3,500,000
Castle Pines	82	2019	\$1,500,000	\$18,293	75	
Castle Rock	711	2021	\$7,786,075	\$10,951	78	\$4,380,000
Centennial	979	2017	\$7,700,000	\$7,865	79	
Cherry Hills Village	90	2021	\$60,000	\$667	83	\$250,000
Clear Creek County	150	2021	\$470,000	\$3,133	68	\$500,000
Colorado Springs	5688	2019	\$31,155,000	\$5,477	56	\$28,000,000
Commerce City	540	2017	\$2,190,400	\$4,056	69	\$20,147,000
Cortez	109	2020	\$825,000	\$7,569		\$1,005,000
Delta	134	2016				\$400,000
Delta County	781	2020	\$735,000	\$941	73	\$760,000
DEN Airport		2019				\$22,000,000
Denver	5745	2020	\$34,000,000	\$5,918	74	
Douglas County	2793	2021	\$10,800,000	\$3,867	79	
Durango	164	2020	\$1,350,000	\$8,232	63	\$2,700,000
Eagle	77	2019	\$575,000	\$7,468		
Eagle County	286	2020	\$1,470,000	\$5,140	68	
Eaton	62	2021	\$0	\$0		\$1,500,000
El Paso County	2325	2021	\$8,800,000	\$3,785	63	\$8,500,000

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2021 Local Agency Market

\$325 M

Street/Road Maintenance

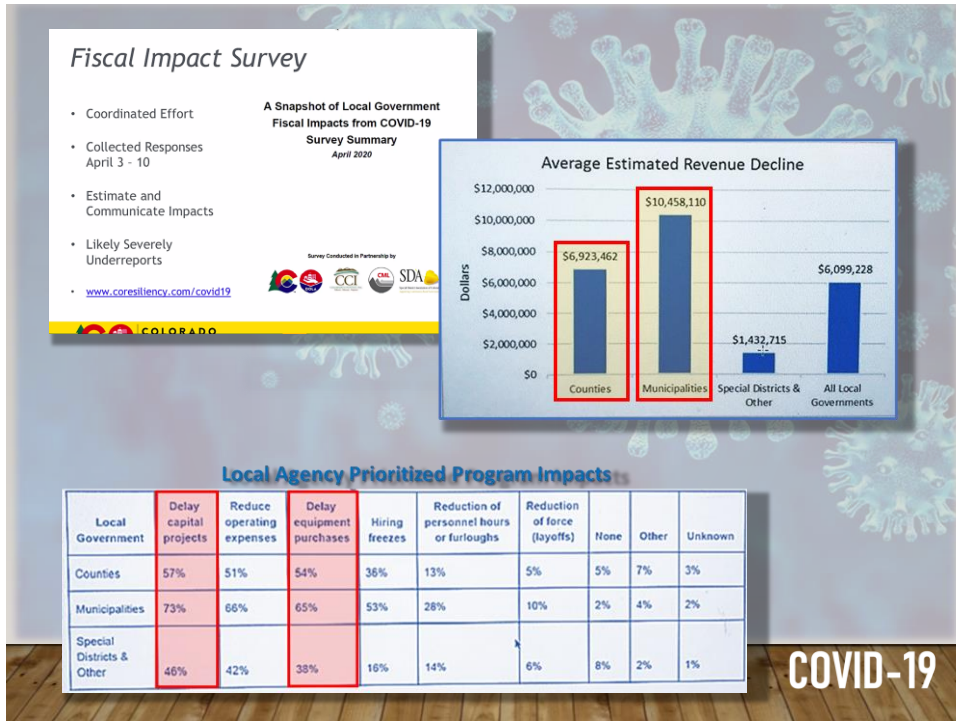
\$358 M

Public Works Capital Projects

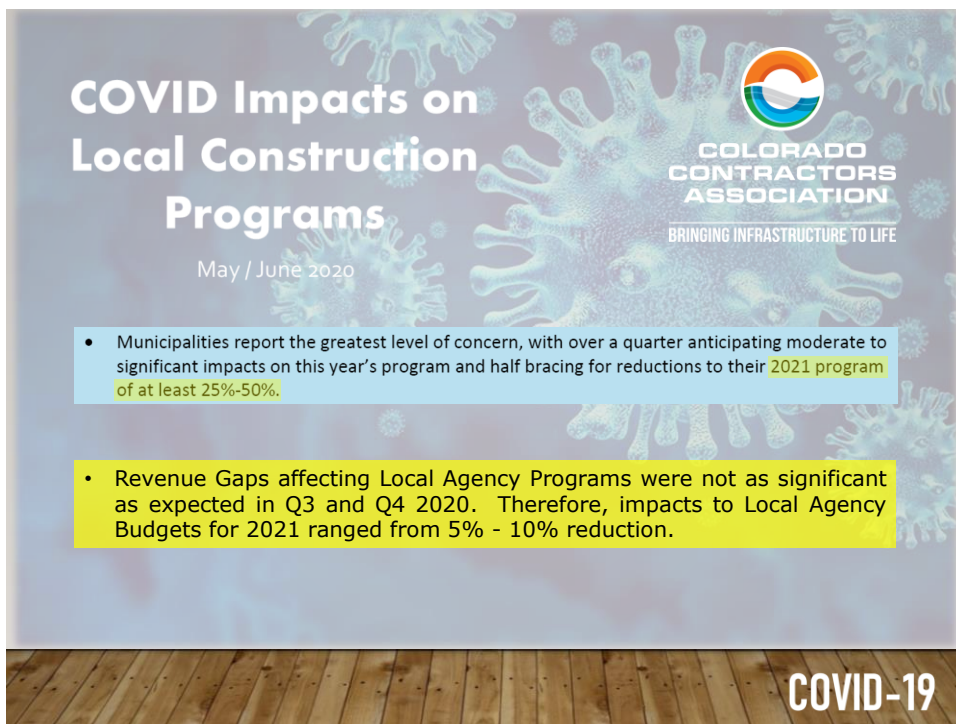
\$683 M

Local Agency 2021 Projects

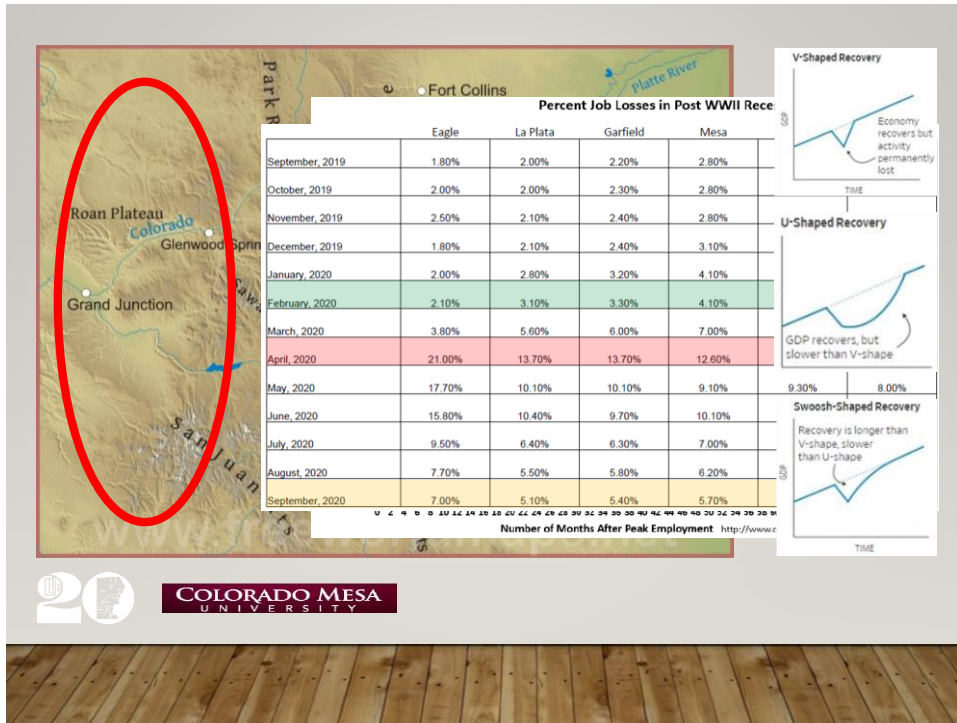
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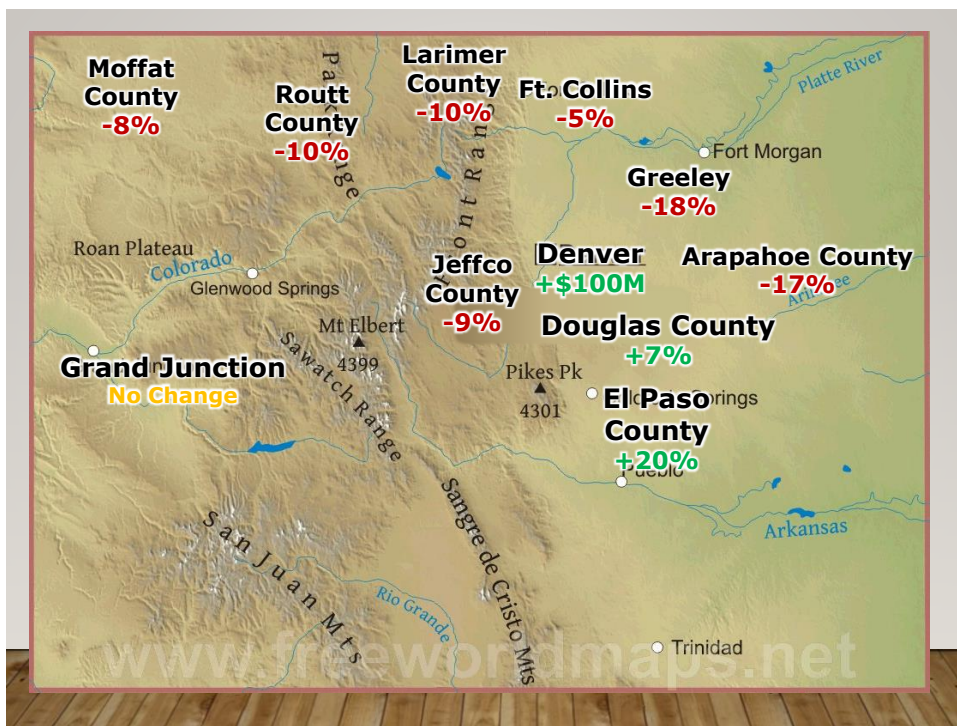
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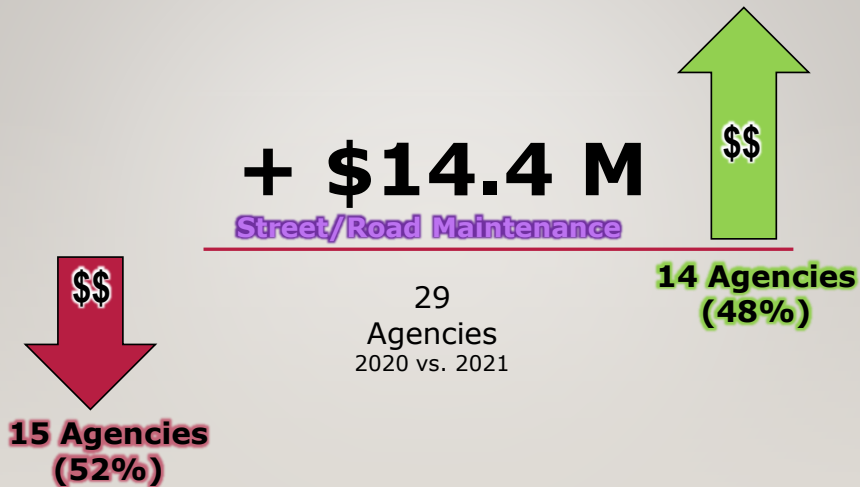


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2021 Local Agency Trends



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2021 Local Agency Trends

29
Agencies
2020 vs. 2021

	2020	2021	Δ 2021	Δ 2020
CIP*	\$122.5 M	\$173.9 M	42%	5%
Mill & Overlay	\$97.8 M	\$101.1 M	3.5%	6%
Maint.	\$20.1 M	\$31.2 M	55%	-12%

*Positive growth for 2021 (+3.5%),
but at a slower rate from 2020 (+6%).*

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2021 Local Agency Trends

Best Practices Asphalt Mixes

(gyrations, binders, % AC)

Partnering

Roadway Funding Efforts
Technical Resources
Lunch 'N Learns



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COLORADO CONSTRUCTION INDUSTRY OUTLOOK – 2021 *Industry Comments*

Asphalt Supplier: “2020 was a GREAT year. We expect 2021 to be good, but not as good as 2020.”

American Road & Transportation Builders Association (ARTBA):

Transportation Construction Market To Shrink In 2021 The U.S. **transportation construction market should shrink by 5.5 percent in 2021** primarily due to the severe economic recession caused by the COVID-19 pandemic, according to an ARTBA annual forecast released December 10, 2020.

Equipment Supplier: “2020 was an exceptional year. We expect 2021 to be strong as work continues at military facilities, wind farms, quarries, and road construction, but more like 2019.”

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2021 Colorado Asphalt Pavement Materials Projected Usage

<u>Construction Type</u>	<u>% Market</u>	<u>Volume of Work Change</u>
City/County:	35%	<i>estimated 3.5% increase in volume</i>
State DOT:	20%	<i>estimated 6% decrease in volume</i>
Commercial:	1/3 of 35%	<i>estimated 14% decrease in volume</i>
Residential:	1/3 of 35%	<i>estimated 8% decrease in volume</i>
Other:	10%	<i>estimated 10% decrease in volume</i>

(12 M tons – 2008; 7.0 M tons in 2015; 7.5 M tons in 2016; 8.8 M tons in 2018;
8.7 M tons in 2019; 9.9 M tons in 2020)

2021 Asphalt Quantity Projection - 9.0 Million tons

This represents an estimated 10% drop in overall market for asphalt materials as compared to 2020.

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COLORADO RIDES ON US

Asphalt.

2021 Outlook: Trends

DISCLAIMER: It is understood that any number of the issues and factors presented may change with or without notice and could result in significant impacts on the accuracy of this information.

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PUBLIC POLICY ISSUES IMPACTING COLORADO BUSINESSES & THE CONSTRUCTION INDUSTRY

- Energy (*Oil and Gas Regulations*)
- Health Care (*Prescription Drug Costs, Public Option*)
- Labor (*Employee Benefits, Minimum Wages*)
- Regulations (*Consumer Protection Act*)
- Environmental (*Recycling/Plastic/Material Selection/Permits*)
- Taxes (*State Tax Reduction, Paid Family Leave*)
- Transportation Funding (*Gallagher Amendment, SB 267 Transfers*)
- Marijuana (*Booming business in 2020.*)
- DBE/WBE (*CDOT – 11.55%, FFY 19 – FFY 21*)

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Environmental Regulations/Legislation Colorado General Assembly

House Bill 20-1265 Increase Public Protection Air Toxics Emissions

This bill, commonly referred to as the **Anti-Suncor Refinery Bill**, would add an extra layer of environmental requirements that are more stringent than currently enforced by the EPA and the CDPHE and add additional oversight standards on the Commerce City Refinery. In addition, it would connect regional air quality standards to individual facility operations. It has the potential of restricting refinery operations and greatly expanding efforts to ensure compliance.

Senate Bill SB20-159 Global Warming Potential For Public Project Materials

This bill died in committee on the legislature's first day back on Tuesday, May 26. The bill was sponsored by Senator Chris Hansen (D. Denver) and would have required CDOT to complete an environmental assessment of the global warming effect when using different construction materials (ie asphalt versus concrete) on highway projects. The FHWA has not established standards for these type of assessments and CDOT (nor any other DOT) has developed criteria to implement the requirement.

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THE BIDEN PLAN FOR A CLEAN ENERGY REVOLUTION AND ENVIRONMENTAL JUSTICE



“I Guarantee You We’re Going To End Fossil Fuel”
Joe Biden (New Castle, N.H. Sep. 6, 2019)

ASPHALT INDUSTRY PERSPECTIVE – Asphalt is a Fossil Fuel

- 100% of all paved streets, roads, highways, runways, parking lots, driveways, etc. are either asphalt or concrete.
- Asphalt is produced through the crude oil refining process and is a fossil fuel.
- Coal, a fossil fuel, is the energy source to produce cement. Cement is the primary ingredient of concrete.
- There aren't any mass produced, economical, constructable alternatives to asphalt or concrete for pavements.
- You cannot use wind and solar energy to fix potholes and pave roads.
- The idea of phasing out or eliminating fossil fuels from a heavy civil construction standpoint is

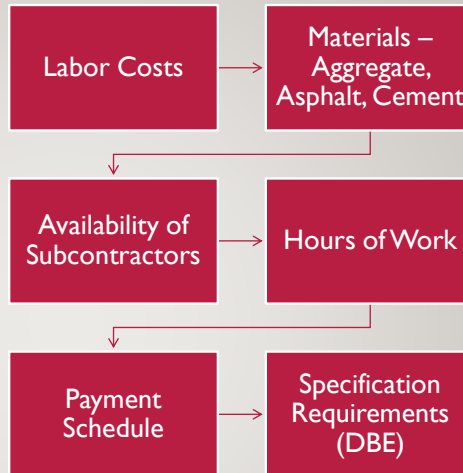
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***How much does asphalt cost? What is the cost of asphalt? We need to clarify cost:
Project – Mix/Material – Liquid Asphalt***

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WHAT FACTORS IMPACT PROJECT COST?



IMPACTS TO COST: wages, materials, Covid compliance and worker safety, employee benefits (paid family medical leave), regulatory and enforcement fees, permitting costs of equipment and material sources.

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Efficiency and Accountability

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.



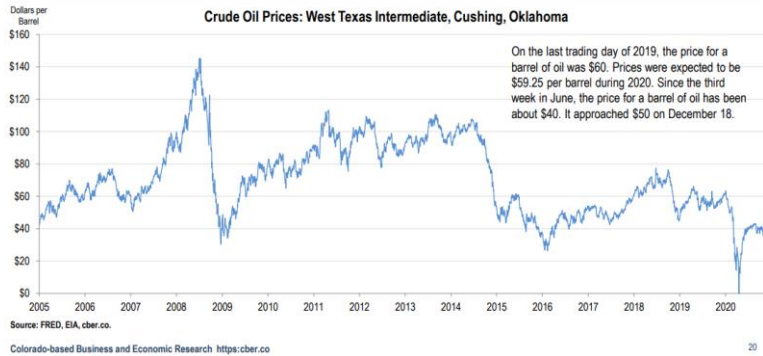
<https://www.codot.gov/programs/your-transportation-priorities/projects-funded>

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Crude Oil Prices West Texas Intermediate



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HollyFrontier runs last barrel of crude at Cheyenne refinery ahead of renewable reformation

HIGHLIGHTS

Cheyenne refinery shut in August for renovation

Two renewable projects underway at Artesia refinery in New Mexico

New York — HollyFrontier ran the last barrel of crude through its 48,000 b/d Cheyenne, Wyoming, refinery as it begins to repurpose the plant to produce renewable diesel, a company executive said Aug. 6.

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CDOT Asphalt Cost Adjustment Index (Monthly Average) 2020

Year Average for 2020 \$178.17 Liquid Ton
 December Cost \$248.17 Liquid Ton
 November Cost \$209.92 Liquid Ton
 October Cost \$ 206.82 Liquid Ton
 September Cost \$ 189.05 Liquid Ton
 August Cost \$ 229.55 Liquid Ton
 July Cost \$ 216.12 Liquid Ton
 June Cost \$ 225.83 Liquid Ton
 May Cost \$ 77.59 Liquid Ton
 April Cost \$ 23.30 Liquid Ton
 March Cost \$ 85.67 Liquid Ton
 February Cost \$ 181.43 Liquid Ton
 January Cost \$ 244.84 Liquid Ton

CDOT Asphalt Cost Adjustment Index (Monthly Average) 2019

Year Average for 2019 \$294.31 Liquid Ton
 December 2019 Cost \$260.11 Liquid Ton
 November 2019 Cost \$281.43 Liquid Ton
 October 2019 Cost \$279.00 Liquid Ton
 September 2019 Cost \$296.91 Liquid Ton
 August 2019 Cost \$286.56 Liquid Ton
 July 2019 Cost \$297.23 Liquid Ton
 June 2019 Cost \$277.55 Liquid Ton
 May 2019 Cost \$348.70 Liquid Ton
 April 2019 Cost \$354.12 Liquid Ton
 March 2019 Cost \$320.58 Liquid Ton
 February 2019 Cost \$301.45 Liquid Ton
 January 2019 Cost \$228.10 Liquid Ton

CDOT AC Cost Adjustment

CDOT Asphalt Index 2012-Present

YEAR	* INDEX AVERAGE	% CHANGE IN INDEX FROM PREVIOUS YEAR
2020	\$178.17	- 60.5%
2019	\$294.31	11.45%
2018	\$ 264.08	1.8%
2017	\$ 259.41	32.3%
2016	\$ 196.02	- 6.8%
2015	\$ 210.26	- 48.8%
2014	\$ 410.65	1.1%
2013	\$ 406.20	0.5%

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CDOT AC COST ADJUSTMENT SPECIFICATION

- New Specification implemented in 2020.
 - Optional (previously mandatory)
 - 10% Trigger (previously 5%)
 - Reference will be Poten & Partners/Argus (previously Western Canadian Select)

RESULT: Nearly every contractor opted out in 2020.

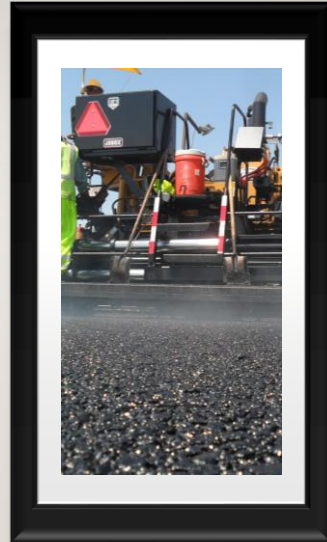


COLORADO
Department of Transportation

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2021 - LIQUID ASPHALT MARKET (COLORADO)

- There is ample supply available for Colorado. (Even though the reduced demand for petroleum fuels has resulted in reduced refinery throughput and the HollyFrontier closure further reduces supply).
- No known disruptions affecting Colorado other than routine scheduled facility maintenance.
- Wholesale pricing rose in both December and January and this trend is expected to continue in 2021.
- Some parts of the country are seeing upward retail price pressure but not yet in Colorado.
- Thus, 2021 asphalt prices are expected to be similar to 2020 levels.



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ASPHALT BINDER SUPPLY & COST DYNAMICS

- Crude Oil Availability
- Refinery Capacity (reduced throughput when lower petroleum fuel demand)
- Refinery Upsets (ie. production problems)
- Demand vs. Supply



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Aggregates:

In 2020, Colorado produced and consumed approximately 52 million tons of aggregate (sand, gravel, crushed stone). This was approximately equal to 2019.

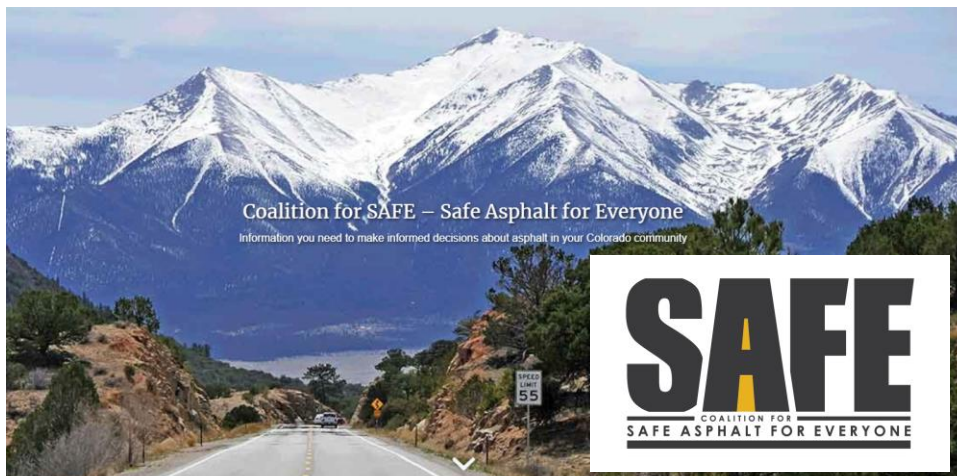
Forecasts for 2021 suggest similar levels of production in Colorado, as all regions of the state show continued strong construction levels.

Local zoning regulations and land-development alternatives continue to have an expanding negative impact on surface mining. These issues are expected to continue and to cause new crushed stone quarries and sand and gravel deposits to locate further away from large population centers, where the material is needed.

NIMBY – Not In My Back Yard

BANANA – Build Absolutely Nothing Anywhere Near Anything

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Asphalt and our Colorado Communities: Be informed

Asphalt pavement is an important element of Colorado's transportation infrastructure. It offers a safe, cost-effective and green solution for our streets, bridges and parking structures. It plays an important role in our communities.

"While the production of asphalt has increased by over 250% in the past 40 years, the emissions from asphalt plants has been reduced by 97%." www.safeasphalt.org

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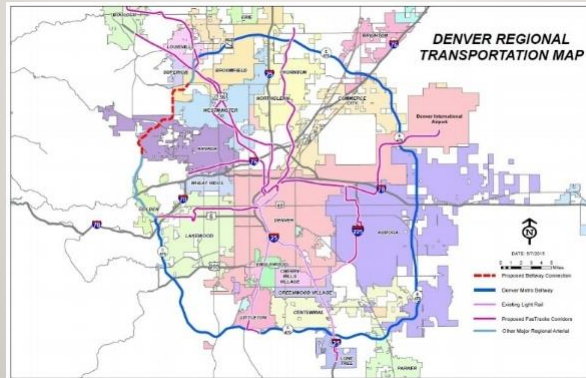
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\$250 M, 9.2 miles. RFQ – Dec, 2018; Draft RFP – March, 2019; selected D/B/M/O/F – Fall, 2019.
2020 Update: **INDEFINITE HOLD**



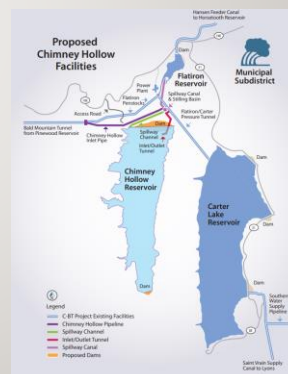
\$90 M, Quincy to I-70, widening, Kraemer NA, Completed in 2020.



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[Barnard Construction Company, Inc.](#) has been selected as the GC for the new **Chimney Hollow Dam Project** located in Larimer County. Chimney Hollow Dam will be a rockfill structure with a hydraulic asphaltic concrete (HAC) core approximately 350 feet tall. The main dam will contain approximately 12 million cubic yards of rockfill and 75,000 cubic yards of asphaltic concrete. Onsite construction is scheduled to start May 4, 2020, and is expected to last four years. The construction cost is being contracted at \$485.4 million.
www.northernwater.org



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NPS.gov / Home / Laws, Proclamations and Orders / Recently Enacted Legislation / Great American Outdoors Act



Great American Outdoors Act

Earlier this year, President Trump called on Congress to send him a bill that would fully and permanently fund the **Land and Water Conservation Fund** and restore our national parks. On August 4, 2020, President Trump signed the Great American Outdoors Act into law, accomplishing those exact objectives.

The Trump Administration worked with Congress to secure the passage of this landmark conservation legislation, which will use revenues from energy development to provide up to \$1.9 billion a year for five years to provide needed maintenance for critical facilities and infrastructure in our national parks, forests, wildlife refuges, recreation areas, and American Indian schools. It will also use royalties from offshore oil and natural gas to permanently fund the Land and Water Conservation Fund to the tune of \$900 million a year to invest in conservation and recreation opportunities across the country.



Paved Roads & Structures¹ and **Trails** have the highest **estimated maintenance needs** by asset category at the park. The figures below do not include the cost of Routine Maintenance.

	\$32 M for Paved Roads & Structures		\$25 M for Trails	\$49 M for all remaining asset categories Driven by buildings (\$13 M) and water systems (\$12 M)
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How Can You Maximize Your Limited Street/Road Improvement Funds?

Get the Work Out Early! The single most effective way to maximize the limited road improvement funds is to advertise and bid projects as early as possible.

Utilize Recycled Asphalt Pavement (RAP): Increasing the amount of RAP used is considered one of the effective ways to reduce the cost of asphalt materials. Most agencies currently specify **20% - 25% RAP** on all lifts (including top lift).

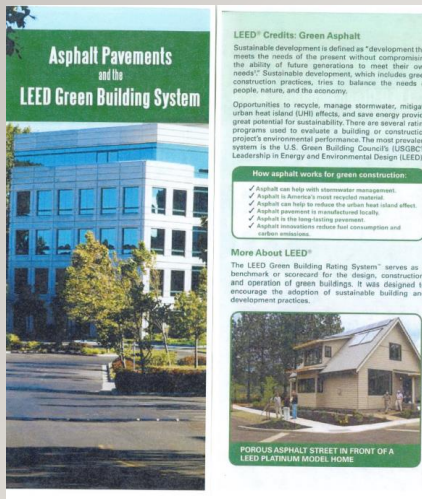
Uniformity and Consistency in Material Requirements: Minor variations in material requirements from agency to agency can lead to increased costs without increased value. The most common asphalt material specifications in Colorado are for **SX 50 or 75 gyrations, PG 64-22 or 58-28, 20% RAP**.

Maximize Work Hours & Project Schedule: Shorter work hours and restrictive traffic handling requirements result in lower production, longer projects, and increased costs.

Accurate Engineer's Estimate: Additional costs are incurred by both the contractor and the agency when projects must be re-bid. Understand what factors should be considered as the engineer's estimate is established.

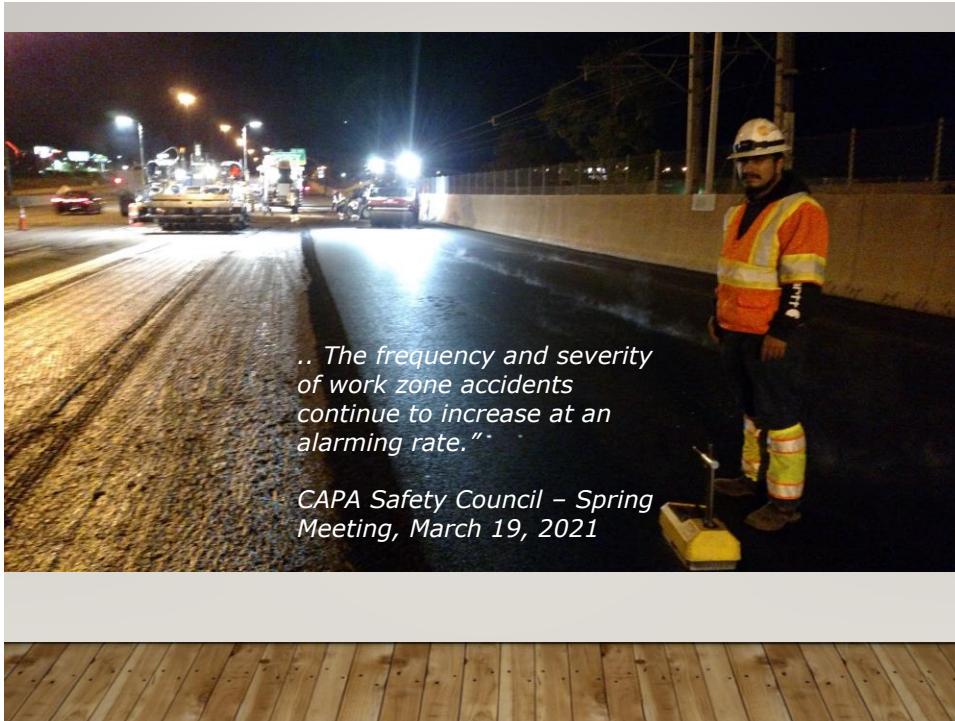
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PAVE GREEN - SUSTAINABILITY



- **Asphalt 100% Recyclable**
- **LEED Credit available when using asphalt**
- **Warm Mix Asphalt**
- **Recycled Asphalt Pavement (RAP)**
- **Perpetual Pavement**
- **Porous Asphalt**

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CAPA Marketing – Social Media Initiative

- Promoting ASPHALT
- Promoting our MEMBERS
- Promoting our INDUSTRY



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Plans for 2021:

- "Top Ten" Virtual Training Sessions
- Starting on Thursday, January 14 and continuing one per week until the end of March. 45 – 60-minute sessions. NO COST
- Focus on construction, maintenance, engineering, SAFETY, and new technology.
- 2 "I Love Asphalt" Appreciation Day & Equipment Expo, April 26 – Bandimere; May 6 – Grand Junction



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"Top Ten" Virtual Training Sessions www.rmaces.org

Paving Complex Projects – US Bank Stadium in Minneapolis

Workzone Safety – Automated Flagger

Women of Asphalt – Inspire, Lead,

Innovations in Asphalt Technology – Yesterday, Today, and Tomorrow

Doing More with Less – The Problem of Deferred Maintenance & Understanding the Role of Pavement Preservation

Using Ground Penetrating Radar for Roadway Applications

Extending the Performance Life of Milling and Overlay (English/ Spanish)

Best Practices for Compaction, including Longitudinal Joints

Paving a Legacy – Workforce Dynamics and Building Careers in the Asphalt Industry & as Public Works Professionals

Crafting a Successful Utility Patching Program- It's an Art!

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"I Love Asphalt" Appreciation Day & Equipment Expo www.rmaces.org April 30 – Bandimere Speedway; May 5 – Grand Junction

- Equipment Showcase:

Caterpillar, Volvo, Wirtgen, Sakai America, Power Equipment Co., Wagner Equipment, Faris Machinery, Bobcat of the Rockies, 4 Rivers Equipment, Volvo, Wirtgen, BOMAG, Power Motive Corp., MacDonald Equipment



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2021 Webinar Series:

- 14 Webinars Scheduled
- No Cost to CAPA Members, APWA, CARSE, CDOT
- All aspects of asphalt pavements



Industry Outlook; workforce development, asphalt paving programs, plants, placement and compaction, wide crack repair, inspection, maintenance, project management, pavement forensics, understanding PG binders.

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Date: Whenever You want it, 2021
Location: At Your Office
Subjects: Asphalt A to Z



Short Course in Asphalt
Technology

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Date: Whenever You want it, 2021

Location: At Your Office

Subjects: Asphalt A to Z



Asphalt Lunch & Learns

Specifications

New Technology

Pavement design

Maintenance

Inspection

Troubleshooting Field Problems

Testing 101

Warm Mix Asphalt

Asset Management/PMS

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**Over 90% of
all pavements
are ASPHALT!!**

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THE ASPHALT INDUSTRY OF COLORADO



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2021 ASPHALT INDUSTRY OUTLOOK “MARKET CONDITIONS, TRENDS, AND NEW DEVELOPMENTS”

PROVIDED FOR CAPA MEMBERS & AGENCY PARTNERS

**Presented by
Tom Peterson, P.E.
Executive Director**



**Mike Skinner, P.E.
Director of Engineering**



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